Supporting Limits on Copyright Exclusivity in a Rights Expression Language Standard

A requirements submission to the OASIS Rights Language TC

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These comments are submitted by the Samuelson Law, Technology & Public Policy Clinic on behalf of the Clinic and the Electronic Privacy Information Center.

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Introduction

Copyright law grants certain rights to purchasers and other users of copyrighted works. It is neither a legal nor a practical requirement for users to declare (or claim) these rights *explicitly* in order to enjoy them. While the public's legal rights cannot be altered by Digital Rights Management (DRM) systems *per se*, we can imagine scenarios in which DRM systems may require users to make these kinds of declarations, in order to work around inherent technical limitations. It is therefore essential that a rights expression language (REL) provide the vocabulary necessary for individuals to express, in a straightforward way, the rights that copyright law grants them to use materials. The user's claim of right would provide the essential information for a usage-rights issuing agency to give the user the technical capability to use the work in a particular way.

For the purposes of this discussion we will set aside the question of whether contract law may qualify (or narrow) the rights that a recipient of a work has under copyright law, acknowledging that there are contexts in which a party may wish to narrow the rights it grants to the recipient of a work. Outside the context of the relationships created by copyright between rights holders and users, there are contractual relationships that the REL must also support. For example an employer may want to control employee use of company information. In many instances it is important that both parties in the relationship be able to assert their rights and/or desired terms. True negotiation between parties requires that, at a minimum, the REL provide the vocabulary and syntax to support bi-directional exchanges. Otherwise, the rights transaction reduces to the mere request for and acceptance of an offer of permissions asserted by the rights holder.

This document therefore suggests certain accommodations that DRM architectures, and especially their rights expression language components, must make to adequately express certain core principles of copyright law. Rights holders must have the means to express that a work is available on terms that reflect existing *copyright law*, as opposed to the limitations of a simple contract. The REL must also enable rights holders to express the more generous terms —i.e. copyleft, with attribution — commonly attached to digital resources today. At a minimum, recipients of works must have the ability to assert their rights as recognized under copyright law, and have these assertions reflected in their ability to use the work. Extending an REL to support a broader range of statements that reflect current law is, however; insufficient. The *rights*

messaging protocol (RMP) layer must also be extended to accommodate both the downstream and upstream assertion of rights. We recognize that the RMP layer is not currently within the scope of this discussion, but we believe that the assumption of a one-way expression of rights has in part led to the current deficiencies in the REL.

We will first review the *DRM Reference Model*, a generic view of how current DRM systems operate and the basis for our discussion. Next, we review the general copyright reference model and explore specific exceptions to authors' exclusive rights. We will then discuss and illustrate the tension between the *DRM Reference Model* and the norms of copyright law and practice. In conclusion, we recommend the establishment of a standardized rights messaging protocol and recommend changes to the REL to increase its capacity to support copyright-consistent expressions. While these changes do not reconcile the *DRM Reference Model* with the legal framework of copyright, they will enhance the ability of DRM system specification to accommodate both purchasers and rights holders who are concerned with maintaining fair use activities.

General DRM Architecture

Most commercial-grade DRM systems, including those used for controlling the use of documents and streamed or downloaded multimedia content, follow the general transactional architecture depicted in the commonly accepted *DRM Reference Model* shown below.[1]

Based upon: Bill Rosenblatt et.al., *Digital Rights Management: Systems and Technology* (2001)
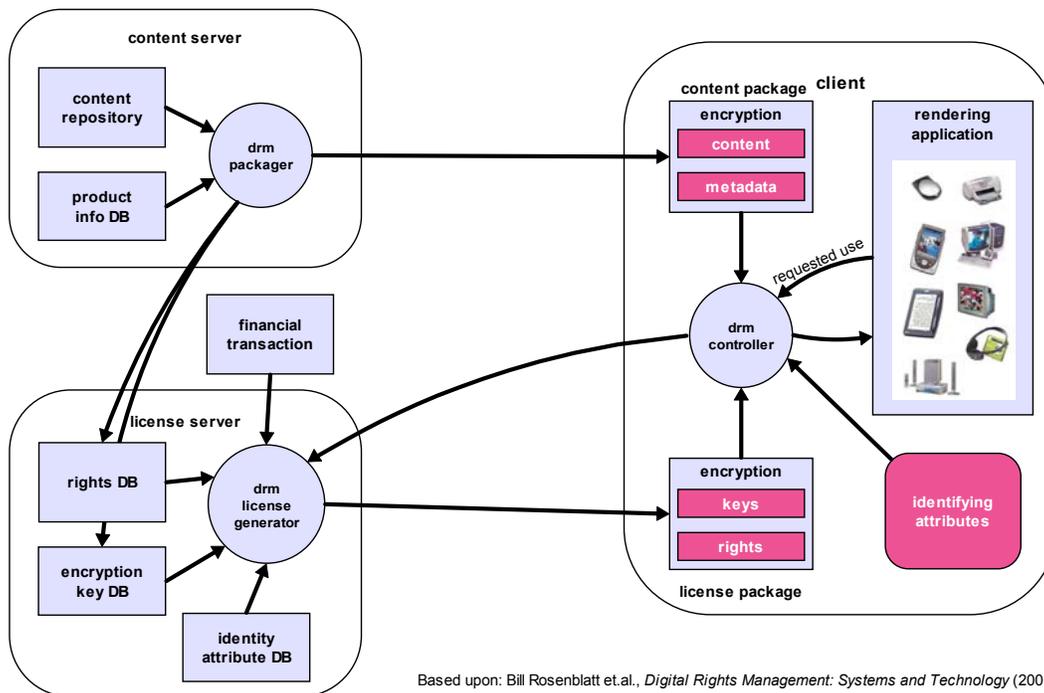
The following outlines the process flow depicted in the DRM Reference Model:

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[1]   See Rosenblatt et. al., *Digital Rights Management: Business and Technology* (2001).

1. *User obtains content:* The user might receive it through file-transfer or streaming protocols, by way of a direct request to a file server or through p2p file sharing, email, or direct media transfer (i.e. on removable media).

2. *User attempts to use the content in some way:* The DRM client determines, through policies bound to the package and/or implicit in the packaging format, that the requested use requires *authorization*.

3. *DRM Client makes Rights Request:* If the *license package* containing the necessary authorization credentials cannot be found on the user's machine or has expired, attributes of the user's request, including the *usage context*, [2] are packaged and sent to a license server.

4. The license server verifies the submitted client identification or attributes credentials against an identity or attribute database.

5. The license server looks up rights specifications (rules) for this content item.

6. A financial transaction is launched, if none has been recorded and the rules require it.

7. The contents of the license package are assembled: the rights specification, various identifiers or attributes, revocation information, cryptographic keys to the content, all specific to the content and context of use.

8. The license is securely packaged (including authentication information) and transferred to client.

9. The DRM client uses the license to open the content for the particular requested use.

10. The content is rendered or otherwise, as requested.

In the reference model above we assume that the interactions between the *DRM Client* and the *DRM License Generator* are carried out using a **rights messaging** (or *transaction*) **protocol***;* the "payload" of the messages that make up that protocol are composed using the vocabulary defined by the *rights expression language*. We therefore see that the ability to fully express both *rights requests* and *rights grants* (or permissions) must be included in the scope of any acceptable rights expression language. *The exchange of rights assertions and rights requests is symmetric in this architecture*. The *underlying legal right* determines whether a message is an assertion by the copyright holder or a request by the purchaser. The fact that these underlying legal rights are not equal does not imply that an REL should allow only one side of the exchange to express itself.

General Copyright Architecture

An individual typically obtains and uses "physical" manifestations or performances of copyrighted works by a simpler process:

1. Buyer selects the work he wants.

2. Buyer pays for the work, if payment is required.

3. Buyer enjoys the work. Buyer does not, and need not, seek approval from the copyright holder or any other entity before using the work, unless Buyer believes that the intended use may fall outside the exemptions and rights Buyer is afforded under copyright law.

*This "architecture" is illustrated in the following figure.*

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[2] While some information about context can be exchanged, as discussed below, it is insufficient to support distinctions relevant to copyright law.

Copyright law also provides for the *enforcement* of copyrights.

4. Buyer violates some portion of the Copyright Act, perhaps by making unauthorized copies of the work and selling the copies.

5. The violation comes to the attention of Copyright Holder. Copyright Holder may

    a. Contact Buyer, advising him that his activities infringe their rights and requesting that he cease his infringement.

    b. Sue Buyer for an injunction, which will order him to cease his infringing activities.

    c. Sue Buyer for actual or statutory damages.

The remedies available to the Copyright Holder are not mutually exclusive, but they do provide a process by which the facts of the case, according to both Buyer and Copyright Holder, can be sorted out.

In the next section, we explain in greater detail how copyright law creates this architecture.
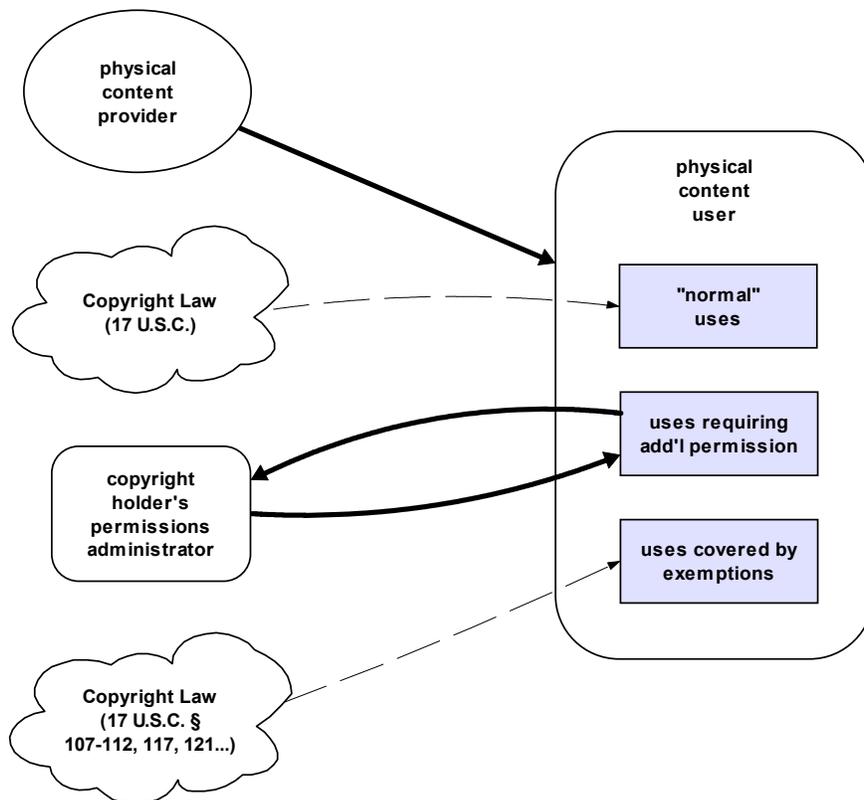
Copyright Specifics

Statutory Limitations on Exclusive Rights

The Copyright Act imposes express limits on the exclusive rights granted to authors, which include the rights to produce copies, distribute copies, prepare derivative works, and render public performances. The express limits on those rights are given in fifteen separate sections of the Copyright Act; in this section we provide a brief review of the exceptions that we believe are most relevant to the development of an REL. Statutory amendments, such as the Digital

Millennium Copyright Act, have also incorporated some specific exceptions which we briefly review.

Fair Use (17 U.S.C. § 107)

Section 107 states that "*the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.*" Section 107 then lists four non-exclusive factors that are to be balanced in determining whether a use is fair:

1. The purpose and character of the use;
2. The nature of the copyrighted work;
3. The amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
4. The effect of the use upon the potential market for or value of the copyrighted work.

The following aspects of the fair use statute deserve particular emphasis:

- Section 107 draws attention to certain kinds of uses —"criticism, comment, news reporting, teaching scholarship, or research" —that weigh in favor of a finding of fair use.

- Section 107 presents four broad factors rather than bright-line (rigid) rules. Fair use analysis therefore requires a fact-intensive, case-by-case approach. This inquiry is necessary to set the correct balance between the exclusivity of a copyright and the public interest in being able to freely discuss others' works.

- These four factors are non-exclusive, leaving courts free to consider other factors in determining whether a use is fair.

   Example: Bob teaches an art history class at a public high school in a large city. He owns an electronic copy of the catalog for a private art collection. (Hence, all the objects depicted in the catalog belong to the owner of the collection, who also published the book.) Bob wants to print hard copies —one for each of his 27 students —of the few pages that are relevant to the class he is teaching *tomorrow*.

   Example: Bob owns an electronic edition of an authoritative dictionary. To settle a dispute he is having with a friend over the origins of the word "pallid," he looks up the word and sends an extraction of the text of its etymology —which he had correctly recalled —to his friend via email.

   Example: Alice, a music critic, publishes reviews on her own Web site. There is no fee required for access to the site, and Alice attracts enough readers to have attracted the attention of record company executives. Alice's reviews always contain excerpts from the work under review. This week she is reviewing the latest release from a band whose last four albums she has panned. After listening to this new album, Alice knows that her review will be critical. She knows that seeking permission to sample portions of the album will be fruitless, so she simply extracts what she needs and links the streaming audio files to her review.

Reproductions by Libraries and Archives (17 U.S.C. § 108)

Publicly-accessible libraries and archives are allowed to make one copy of a copyrighted work, as long as the reproduction is not for direct or indirect commercial advantage. Libraries may make three replacement copies of a damaged or deteriorating work when copies of that work are not available at a fair price or are available in an obsolete format.

Example: An under-funded public library has been offering access to works on read-only disks of a certain diameter. In the years that have passed since the library purchased its last disk drive, that storage format has been replaced in favor of smaller, higher density disks. New video and audio codecs have also been made available, allowing better compression without loss of quality. The librarians are fearful that their only remaining drive will soon fail. They therefore decide to convert their collection to the new format. The library will continue its practice of making the works available for use only inside the library.

First Sale (17 U.S.C. § 109)

Once a person lawfully obtains a copy of a work, she "is entitled, *without the authority of the copyright owner*, to sell or otherwise dispose of the possession of that copy" (emphasis added). This limitation on copyright exclusivity applies to *everyone* who lawfully acquires a work, not just to libraries or non-profit organizations.

Example: Alice has purchased the electronic version of the unauthorized biography of a major corporate executive. Although she has not yet read it, a co-worker simply cannot wait. Alice lends the book to her co-worker but demands that she get the book back as soon as possible.

Example: After reading a complex mystery story three times, Bob decides to sell his copy on an electronic auction site.

Example: Professor Carole has decided to put several textual and multimedia works from her personal collection on digital reserve for her history course this term. Each of her students must have access to these artifacts for the term of the course, in several popular formats. They will have the ability to include excerpts of these works in their term projects.

Exemption of Certain Performances and Displays (17 U.S.C. § 110)

Under many circumstances, the public display, performance or transmission of a work does not constitute copyright infringement. Teachers and students, religious organizations, persons performing before blind or otherwise disabled audiences, and many other non-profit groups may perform or display copyrighted works without infringement. Finally, even commercial users, such as restaurants and stores, may perform and display copyrighted works, within statutorily defined space and amplification requirements.

Secondary Transmissions (17 U.S.C. § 111)

Many of the performance and display exemptions in Section 110 also apply to secondary transmissions of copyrighted works. Section 111 allows music stores and video stores to perform works in their stores, and also grants hotels permission to relay broadcast television signals to guests' rooms. In addition, this Section provides statutory licenses for certain kinds of secondary transmissions, such as cable television.

Ephemeral Recordings (17 U.S.C. § 112)

Ephemeral recordings are permitted under some circumstances. Broadcasters, for example, may make one copy of a sound recording that is being broadcast, for local transmissions, security, or archival preservation. Archival copies may be preserved indefinitely. Nonprofits and governmental bodies have additional rights of replication and distribution.

Computer Programs (17 U.S.C. § 117)

It is not an infringement of copyright for the owner of a copy of a program to make a permanent backup copy of the program. It is also not an infringement to make temporary RAM copies, or to make temporary copies for restoration during computer maintenance.

Reproduction for Blind or Other People with Disabilities (17 U.S.C. § 121)

Authorized non-profit and governmental agencies are allowed to make copies of published works in "specialized formats exclusively for use by blind or other persons with disabilities.

Example: A non-profit school for the blind owns a Braille printer. The school uses this printer to reproduce excerpts of an electronic version of the biography of an important political figure for some of its students.

Exceptions within the Digital Millennium Copyright Act (17 U.S.C. §§ 1201-1203)

The Digital Millennium Copyright Act (DMCA) provides several exceptions under which "technological measures" may lawfully be circumvented. For instance, nonprofit libraries, archives, and educational institutions may circumvent technological measures in order to evaluate the materials for purchase. (1201(d)). Circumvention for security evaluation and testing is permitted (1201(j)), particularly for law enforcement, intelligence agencies, and government contractors (1201(e)). Likewise, circumvention is permitted for the protection of personal identifying information. (1201(i)).

Owners of a copy of a computer program may circumvent technological measures in order to analyze or create interoperable programs. (1201(f)). Certain categories of researchers developing encryption products or studying encryption are also exempted from liability. (1201(g)).

Regarding copyright management information, law enforcement and government contractors are exempt from liability if acting pursuant to a contract or in particular authorized capacities. (1202(d)).

Immunity for removal of copyright management information is also granted for certain categories of analog and digital transmissions, where avoiding the violation is not technically feasible, creates undue financial hardship, creates a degradation in the signal, or conflicts with government signals.

Finally, these exceptions are regularly evaluated by the Library of Congress, and subject to revision and expansion, based on whether users are "adversely affected … in their ability to make noninfringing uses." The evolving nature of protections for users and rights-holders suggests that any REL must be maximally flexible.

Exceptions within the European Copyright Directive

The European Copyright Directive incorporates many of these exceptions (for instance, the First Sale exception is embodied in Article 28). The European Copyright Directive also mandates that rights holders make "certain exceptions" available to copyright users. These exceptions are being implemented on a national level, and may vary from state to state.

Deficiencies in the Current DRM Model:
Tensions Between the DRM Reference Model and Copyright Architecture

Limited Rights Expression Scope

Today's commercial DRM systems' origins in commercial content management and publishing undermine their generality. As described above, the lack of generality is due in large part to inconsistencies between the *DRM Reference Model* and the copyright legal framework (copyright architecture). Copyright Direct[3], an early effort to use digital technology to streamline copyright implementation, was an example of a copyright management technology that was more consistent with Copyright architecture. It provided a system that allowed individuals to make requests, and rights holders to respond to requests, for use rights that *in the user's opinion* were outside the scope of fair use. The system reduced transaction costs but did so consistent with the copyright architecture.

Within the chosen reference model two omissions further admit this lack of generality.

- First, *de facto* and proposed standards for rights expression languages are either incapable of expressing users' rights under copyright law, or they can do so only with language extensions that are left entirely unspecified.

- Second, RELs under consideration are devoid of lexical support for "upstream" communications, from purchasers or users to license issuers. While copyright law requires no such *ex ante* expression by recipients and users of works, it is imperative that at a minimum DRM systems provide both an REL rich enough to support such statements and a mechanism to support their transmission.

We believe that the rights language "layer" *can* provide the basis for expressing critical rights information and policies, and as such could be useful for a variety of rights messaging applications including:

- Copyright information discovery and retrieval

- Simple policy expression

- Rights negotiation and trading

- The expression of rights agreements and electronic contracts (e-contracts)

However, in order to support the expression of the full range of copyrights, the REL must be expanded as discussed below.

A rights language should provide vocabulary and syntax for the declarative expression of *rights claims* as well as *rights grants* or *restrictions*. In order to guarantee interoperability and the ability to evolve, it is clear that a rights language must be inherently *extensible*: it must provide an open-ended way to express rights concepts not anticipated by the language "core." Such extensions might include *new operations on content* or *new contextual constraints*. **Leaving these extensions entirely to implementers is unlikely to provide interoperability; they must therefore be supported in the REL specification.**

These changes do not address the fundamental tension between the *DRM Reference Model* and the general copyright architecture. As we'll see later, a more expressive, extensible rights request vocabulary is necessary to express the various attributes of the usage context that may be used as *decision factors* in a rights request that is beyond simple commercial "consumption,"

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[3] John S. Erickson, "Tools and Services for Web-based Rights Management" Invited talk for the WWW8 Workshop W7: Managing Intellectual Content on the Web: Use of the Digital Object Identifier (DOI). Toronto, Canada (May 11, 1999). See http://www.ybp.com/yps/presentation/www8_may99/index.htm

but *still falls within the scope of the rights granted to purchasers under copyright law*. In the following section we discuss how an REL that provides a vocabulary for both upstream and downstream communications can fully exploit an open rights messaging layer in the DRM architecture.

Recommendations

Create an Open Rights Messaging Layer

Current commercial DRM solutions and proposed DRM standards have not defined a distinct **rights messaging** or *transaction **protocol*** (**RMP**) that would provide a standardized means for inquiring about and disseminating rights information and policies, transporting rights requests, determining a DRM client's capabilities for enforcement or compliance with particular policies, and issuing rights grants or permissions. The compliance aspect of a standardized RMP would permit intermediaries or agents to describe any rights tracking mechanisms they may use, and the types and strengths of enforcement mechanisms they are able to offer. Some elements of such rights information, supplied independently of the primary content stream, would provide consumers (or agents operating on their behalf) with sufficient information to decide whether to enter an agreement; other elements would enable publishers or intermediaries to determine whether to pass along information items on the basis of that information.

An open rights messaging protocol would provide a way to exchange rights messages between peer-level applications, primarily by way of HTTP-based services. A standardized RMP could be used across a variety of rights management sectors, for commercial and non-commercial rights transactions alike. One could see it working as well for "upstream" business-to-business messaging (e.g. sub-rights transactions) as it might for transactions related to business-to-consumer (e.g. usage rights policy expression) or consumer-to-business (e.g. rights policy discovery, authorization requests). *The important aspect of the RMP concept is that interoperability between services and applications can be established by defining an extensible set of standardized rights messages and a standard way for handling those messages, including their sequencing and routing to applications.*

We recognize that ongoing standards efforts directed toward XML-based web services can provide the basis for a standardized rights messaging protocol. It is clear that mechanisms ranging from XML-RPC and SOAP to the OASIS SAML, XACML and RLTC efforts provide a strong, standardized foundation upon which to build an ecosystem of interoperating rights management services that achieve a variety of goals.

Note: A standardized rights messaging protocol will be a critical element in achieving advanced rights management applications involving third parties, such as the fair use infrastructure described by Burk and Cohen[4] (discussed below) or federated rights management systems that accommodate institutional users.[5]

Today's lack of extensible rights expression and rights messaging layers limit the extent to which the Model can be used for alternative rights requests. For example, in the current model a given DRM client is only able to make a limited request to a limited or fixed set of commercial license generator services. In order to implement fair use solution architectures such as those suggested by Burk & Cohen, Stefik,[6] Erickson[7] and others, it will be necessary for DRM clients to discover or

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[4] Dan Burk and Julie Cohen, "Fair Use Infrastructure for Rights Management Systems," 15 HARV.J.LAW & TECH. 41 (Fall 2001).

[5] Mairéad Martin, et.al, "Federated Digital Rights Management: A Proposed DRM Solution for Research and Education." D-Lib Magazine, Volume 8 Number 7/8 (July/August 2002). See http://www.dlib.org/dlib/july02/martin/07martin.html

[6] c.f. Mark Stefik, *The Internet Edge: Social, Technical, and Legal Challenges for a Networked World.* (Cambridge, MA: The MIT Press) 1999. (Chapter 4)

be referred to independent, third-party *rights proxy* services, and to make verbose rights requests according to the requirements of those services. The resulting license packages would be consistent with the technical capabilities of the particular DRM clients, but would enable certain uses under conditions that the commercial transactions would not generally entertain.

An expanded service model of the type we suggest is shown in the following figure.
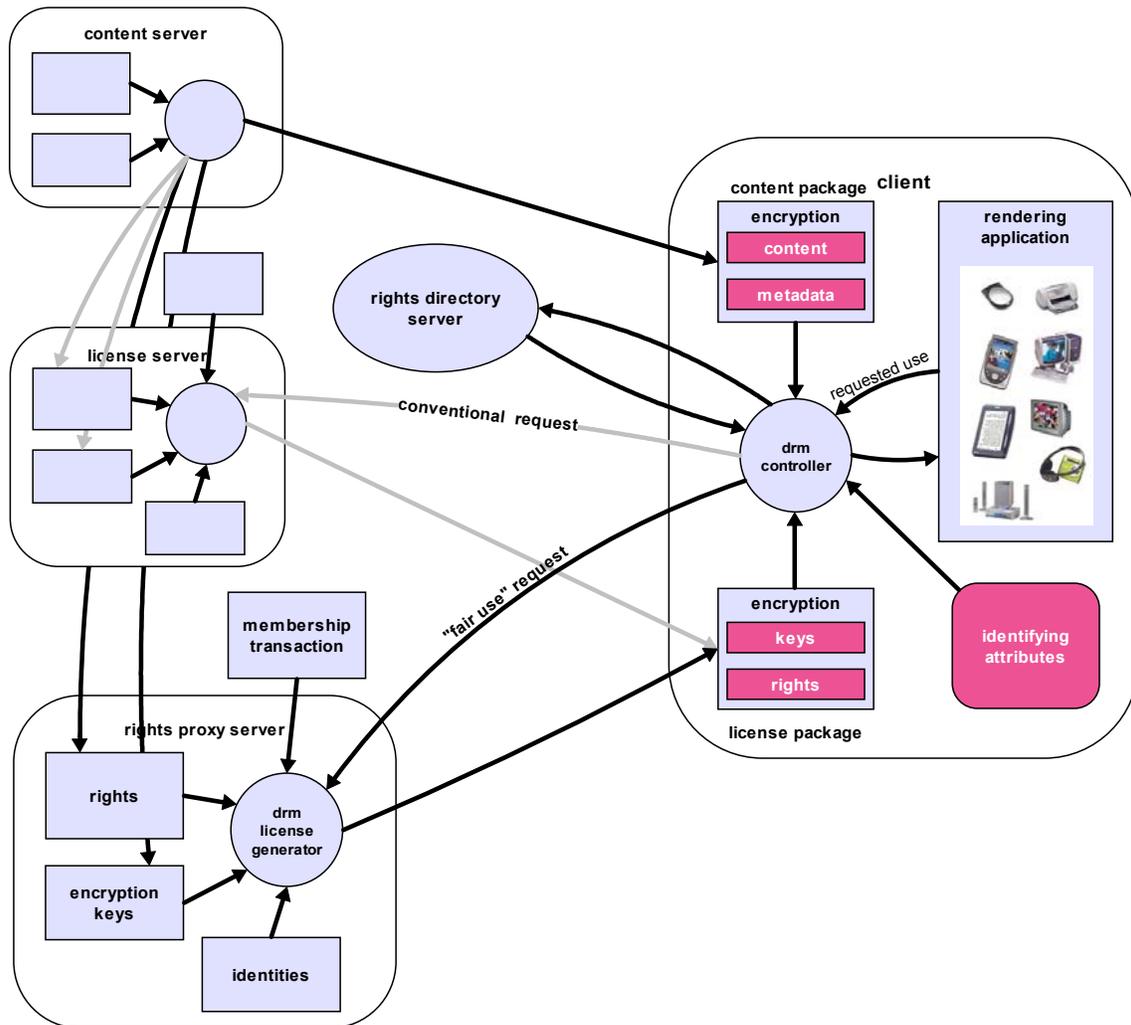
In this view we can see that the DRM controller has first used an expanded rights expression vocabulary to either request available license services for a particular type of transaction, or simply to look-up available services. An appropriately expressive rights request is then made to the selected *independent* rights server, which sends a response based upon its decision criteria. Possible outcomes could be a *deferred decision* (if human intervention is required) or an *immediate decision*, which is more in line with the "spontaneity" requirement of Burk and Cohen's non-algorithmic approach. The need for this additional expression and communication, as well as

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[7]   John S. Erickson, "Will Fair Use Survive our Information-based Future?" (Interactive Media Lab Technical Report) Dartmouth Medical School, Hanover, NH (1995).

limits on how much communication the copyright holder may monitor, are illustrated in the following sections.

Recommended Changes to the REL

Fair Use

Original works form the basis for more than passive enjoyment. Works may be praised, criticized, parodied and generally *transformed* in more ways than can be anticipated by anyone, even a work's creator. To restrict these transformative uses by requiring authorization from the copyright holder is to extinguish vast amounts of creative activity. *The broad factors that determine whether a use of a copyrighted work is fair do not lend themselves to automated decision-making.* It is worth repeating here that a fair use of copyrighted work is:

1. An unauthorized use;

2. A use which requires no compensation to the copyright holder.

Although it may be impractical to create an REL able to express machine-readable policies that would enable a processing system to accurately and deterministically identify a fair use, we believe that the OASIS RLTC *can* adopt an REL that would allow systems to better approximate fair use workflows than the current proposal.

Recall the example of the music critic from the discussion of statutory limitations on copyright: the critic made a fair use of a copyrighted musical recording by including excerpts of the album in a published review. The critic neither sought approval for this copying nor compensated the copyright holder. These are difficult cases for an REL, but they *are* representative of the kinds of problems that must be considered under 17 U.S.C. § 107. We find that the general fair use problems that this scenario illustrates point to severe deficiencies of XrML in expressing fair use concepts.

Although certain elements of the *XrML Core and Standard Extension* would be useful in providing for fair use, *XrML provides no means of making fair use the "default" for a license*. Part of this problem arises from XrML's goal to be a general-purpose REL, making no assumptions and imposing no limits on the kinds of works to which the REL can restrict access. This generality leaves the `right` element and `Right` type abstract, except for a limited number of derived `Right`s "which are related to the domain of XrML2 itself" (i.e., `Issue`, `Revoke`, `PossessProperty`, and `Obtain`).

In a related problem, XrML provides only a limited number of ways to identify a work. The Core Specification contains an instance of a `Title`, which processing systems must not interpret semantically; the `Title` is a human-readable string that is provided for convenience in application. The Core Specification also specifies a `DigitalResource` element, which allows the `License` to mark "arbitrary binary data" as being the "target object of relevance within the `Grant`."

Both of these shortcomings limit the ability of license issuers and recipients to express the *context* of use.[8] Such expression would seem highly desirable to a general REL, since all uses occur in some context. These contexts, in turn, determine the legal rights of users. Thus, an REL must provide vocabulary sufficient for the expression of a use, and its evaluation within the applicable system of copyright law. This expression is especially important for DRM that will implement non-algorithmic determinations of fair use and other public rights under copyright; the REL must be able to capture sufficient context about a use and the applicable system of law to make an *ex post,* judicial evaluation of a use feasible. By enriching the REL's standard vocabulary for context

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8   Curiously, the XrML Core Specification for the Authorization Algorithm considers as part of its input "appropriate contextual information." *See generally* Section 8 of the Specification. Yet context is omitted from the rest of the specification.

expression, the REL could do a great deal to capture data sufficient for such evaluations under different national systems of copyright, or under national laws whose contours are still being determined.[9] Leaving to implementers the decision about how to express context will exacerbate the interoperability and compliance problems discussed above, in connection with RMP. Omitting context-expression vocabulary from an REL specification is a recipe for vendor lock-in and copyright holder oversight. This omission will also frustrate the expectations and rights that purchasers have under different nations' copyright laws.

Recommendations (Fair Use)

Add a "Work" element

To address these shortcomings, XrML could define more specific elements for digital works that correlate specific kinds of works with specific `Rights`. A new element that provides some of the human-readable convenience of Title with the semantic power of `DigitalResource` would facilitate `Licenses` that grant these permissions. In particular, the XrML could define a "`Work`" type, which would have concrete descendants, such as "`Book`," "`Film`," or - as or music critic would want - "`MusicalAlbum`." Although this level of specification would contrast with the emphasis that XrML places on being applicable to any kind of digital work, this contrast is superficial. To specify a few concrete kinds of `Work`s does not suggest that a `License` should be required to use one of these concrete types, or a `Work` element mandatory in a `License`. We merely suggest that REL specifications accommodate both purchasers and rights holders who are concerned with maintaining vibrant fair use activities.

The `MusicalAlbum Work` suggested in our example points to certain `Right`s that should accompany this `Work`. The above discussion indicates that a purchaser must be able to play the work without restriction, and also to copy parts of it. Thus, if a `Work` is a `MusicalAlbum`, the default interpretation of the `License` must be that the `Principal` - the music critic, who bought the album - must be able to play the album without restriction, and to copy arbitrary parts of the album. This suggests that a concrete `Work` would impose certain default `Right`s, which would be granted by a given kind of concrete `Work`. In the case of a `MusicalAlbum`, this would include "`Play`," "`Rewind`," "`Seek`," and "`Excerpt`" or "`Copy`" `Right`s. Similar default `Right`s are easy to specify for different kinds of `Work`s.

Prevent Rights Holders from Extracting Payment for Fair Uses

The suggestions above would go far towards ensuring that purchasers of works will be able to make unauthorized uses of them where appropriate, but XrML and other RELs must go further still to ensure that these uses remain *uncompensated*. Some integration of the `Fee`s currently described in the *XrML Standard Extension* in the `Work` might be adequate to express the expectation that the use of a lawfully obtained work is not subject to oversight by the copyright holder.

Continuing with our example of the music critic, we now focus on the purchase of a `MusicalAlbum`. In this case, the `Fee Condition` should contain at most one `PaymentAbstract` derivative, and that derivative should be set to `PaymentFlat` by default. Each Grant within the License must have this same Fee Condition, and the interpretation of this collection of Fee Conditions must be that the purchaser of a `MusicalAlbum` would make a one-time payment for the recording, and would then have permission to use the recording as specified above. Furthermore, all that the REL should require for a processing system's decision to allow or prohibit a proposed use of a `Work` is a comparison of the exercise with the exercises permitted by

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9   United States copyright law furnishes two important instances of how the expression of context is crucial, even within a known body of law. The contours of fair use, of course, are always subject to change. The interpretations of parts of the DMCA are also far from settled, and this interpretation will be hampered if RELs perforce exclude the expression of context.

the `Work` (i.e., the `MusicalAlbum` should grant `Play` permission), and verification that the required one-time fee has been paid. *The processing system should make no inquiry into the extent to which the user seeks to exercise the permission.*

This requirement in turn suggests that instances of a concrete `Work` trump the effect of other XrML elements. In particular, elements such as `TrackReport`, `TrackQuery`, `SeekApproval`, various flavors of `ValidityIntervals`, and `Territory` should be given no effect by the processing system. *By making particular kinds of concrete `Work` trump these potentially invasive inquiries into the uses of a DRM-restricted work, the REL would render fruitless any attempt by rights holders to reach beyond the provisions of copyright law in monitoring the uses of the `Work`s.*

Finally, the XrML and other RELs must address the distribution of works that fairly use other copyrighted works. In the music critic example, this problem arises in the context of the critic's readers, who must be allowed to play streams of the excerpts that the critic wishes to discuss in his review. The *XrML Core Specification* provides some support for this end in the form of the `forAll` option in `Grant`s. We suggest that concrete `Work` types provide a `LicensePart`, granting universal use permissions appropriate to the kind of `Work`. In the context of the music critic example, there could be a `LicensePart`, referring to the excerpts that the critic includes in his review, which would permit any user to play the excerpts. This requirement imposes similar overrides of XrML elements that could be used to restrict access to the excerpts in a manner that is inconsistent with fair use. Alternatively, RELs could include an element that allows purchasers to change to format of the work. Although this kind of permission places some risk on the right holder of copying beyond the limits of fair use, that risk is explicitly allocated by the fair use statute. Other concrete `Work`s require similar permissions for users of works that incorporate the copyrighted original, but we do not discuss them here.

It could be argued that the critic could obtain these Rights by negotiating with the entity that issues the license. *This suggestion, however, severely interferes with the values that Section 107 of the Copyright Act codifies.* First, a purchaser would need to declare the uses that he plans to make of the work. In general purchasers cannot make these predictions. Our music critic, for example, has no way to know, *a priori*, which segments of the album she will use before she listens to it. But even if a purchaser such as the music critic were equipped with precise plans for her use of a copyrighted work, requiring her to declare and license those uses is inconsistent with a fundamental purpose of fair use: *permitting unauthorized uses that might be chilled if copyright law required that the fair user seek approval from the copyright holder*. The music critic who plans to issue a negative review of an album provides a particular example of how critical and parodic uses of copyrighted material are likely to suffer if fair uses are replaced by declared, licensed uses.

First Sale

Section 109 of the Copyright Act authorizes a person who has lawfully obtained a copy of a work to "dispose of the possession of that copy" by sale or otherwise. Thus, the copyright holder retains no control over copies after the "first sale" to purchasers. First sale encourages people to explore new works by using them as they see fit, and then transferring possession to another party. When this transfer involves a sale, the seller recovers some money to apply to another purchase, if she wishes. The buyer obtains a copy of a work, perhaps at a discount from price that the original buyer paid. XrML and other RELs should define language elements that permit analogous post-first sale transfers of digital works.

A workable implementation of Section 109 requires not only (1) that no permission be obtained from, nor any compensation paid to, the copyright holder but also (2) that the seller no longer be able to use the copy that she has sold. Thus, the basic problem for an REL is to *indicate that a work has been transferred without tracking transfers of the work, or providing the right holder with an opportunity to interfere with the transfer.* This kind of balance raises privacy concerns, which are best handled by a broader consideration of a license processing protocol. That discussion is

in the section on privacy below. Here, we outline REL vocabulary that lays the foundation for post-first sale transactions.

Recommendations (First Sale)

Create a Transfer Right

Within the context of XrML, the core `Right`s should include a "`Transfer`" Right. Transfer should be part of all `Grant`s by default. Although `Transfer` may be inconsistent with certain kinds of transactions, such as rentals, overriding the `Transfer Right` should be left to those particular situations. Exercising a `Transfer Right` would trigger a mandatory response from the processing system, as described below.

Require that Processing Systems Issue New Licenses for Transfers

License processing systems must honor `Transfer` exercises. As Section 109 of the Copyright Act makes plain, a copyright holder has no right to restrict the alienability of copies of a work after the first sale. To preserve this separation between rights holders and users, processing systems must not reject `Transfer` requests. In effect, we suggest that processing servers be required to issue new licenses upon the request of a holder of the current license, with the effect that the previous license is terminated. This information could be recorded by maintaining a record of keys or digital signatures that are valid (or invalid) for use with a given work. However, no information about the buyer or seller should be recorded as an incident of this transfer.

If a right holder wishes to restrict transfers of copies of the work, he must do so by reaching some agreement with the purchaser that removes the default `Transfer Right` from the `Grant`. Allowing the purchaser to specify a processing system would help to enforce this behavior, as discussed below.

Un-Copyrightable materials

It is crucial that REL designers recognize that not all manifestations of works receive the protection of copyright. Two important examples are *facts* (as opposed to the expression of a fact) and works that reside in the *public domain*, either because the author dedicated the work to the public domain, or because copyright protection on the work has expired. XrML and other RELs should specify elements in the REL that help to identify such works.

Recommendations (Un-Copyrightable Materials)

Facts

The `DigitalResource Resource` of an XrML `Grant` would appear to lend itself to an expression of where a fact is located within a work. We suggest that XrML contain a sibling `Fact` type, derived from `Resource`, which could be used to mark the parts of a work that the copyright on the work as a whole does not protect. Although adding this markup to licenses would involve some effort and expense, this effort would introduce tremendous value by marking information that can be freely shared, without a cloud of uncertainty as to copyrights claimed in the information.

Public Domain

The access restrictions that DRM systems place on copyrighted works must not be used to restrict access to works in the public domain. XrML and other RELs would likely meet with wider approval if they provided a robust mechanism for marking public domain works. This

specification could be quite simple. We propose a `Grant` sibling, `PublicDomain`, which would grant permission to all `Principal`s to exercise all `Right`s relevant to the `Resource`. A `PublicDomain` type would contain no `Condition`s.

Privacy

When a person buys, rents, or borrows a copy of a creative work fixed in a tangible medium, he does not expect that his identity or use of the work will be monitored by the seller or the right holder. An author, for example, cannot count how many times a reader flips to a given page, nor can a movie studio determine how many times a home viewer watches a given scene. Purchasers of physical copies of works also expect that any intermediaries, such as retailers or libraries, will not reveal data about who has bought which work. These expectations support a robust exploration of ideas.[10] These expectations have been somewhat undermined by the data collection practices of some Web sites. But the more applicable set of expectations here are those of "physical" purchase or borrowing, that is, of transactions between two parties that involve an *explicit understanding about what each party is providing the other.* There may be some revelation of personal information at the time of a purchase, but the exchange of information is *incidental to the transaction*, not somehow tied to the purchaser's ability to acquire or use of the work. Purchasers of digital works will expect that DRM systems not cross these boundaries.

Recommendations (Privacy)

The rights expression language specified by the OASIS RLTC must minimize expressions of personally identifying information.

Set limits on the Principal element

One way in which an REL can limit the expression of personal information is to specify a concrete type derived from the Principal type. The `Principal`-derived type should identify only the work, not the individual who purchased it. Thus, the `Principal` in this context need be no more complicated than some unique alphanumeric string. The specification should prohibit extensions that allow the expression of information that is tied to the person who purchases the work.

Prefer ternary decisions about use and limit retention of data

Threats to users' privacy may also arise from elements that are necessary to enforce certain licenses. Creating a rights specification with an "expiration date," for example, obviously requires that the REL be able to express the time interval during which the work may be used. XrML should specify, however, that the program evaluating the rights specification may receive *only the elements necessary to support the transaction,* and to use them *only for the purpose of rendering a ternary decision* - that is, granting or denying permission to use the work in the way the user requests, or granting permission if no other `Condition` exists preventing its exercise. The processing system must not store or otherwise use this kind of information outside the context of transient decisions about use permissions. *Although it may be impossible to include this restriction in a REL itself, the REL could still make honoring such a restriction a condition of compliance with the REL's specification.*

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[10] Julie E. Cohen, A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace, 28 Conn. L. Rev. 981 (1996).

The REL must allow users to select license processing systems

REL designers should note that traditionally, intermediaries have provided a natural buffer that often protects individual privacy; this is an attribute of the physical world that RELs and the protocols that use them should support. Generally a rights holder has no direct access to the personal information that intermediate parties might collect about purchasers; the RLTC specification should preserve these private data "firewalls" whenever possible. While the preceding discussion provides suggestions which, if implemented, would severely restrict rights holders' access data that becomes available as a byproduct of DRM restrictions, the REL should do even more. The following section contains more specific suggestions for how the REL can promote user privacy.

License issuers and licensees of digital works must be able to trust the entity that processes the terms of their licenses. While a license issuer has an obvious interest in ensuring that the terms of a license are executed, the licensee of rights to a work may also require that the processing system not use their personal information for any purpose other than rendering a yes/no/maybe decision on the proposed use of a work. *It is therefore essential that the REL allow users be able to control the choice of processing system, whether the user possess a physical copy of a work or accesses it via a "locker services," which permit users to access works upon authentication and authorization.*

XrML's support for multiple Issuers of licenses suggests an analogous construction for license processors. In particular, the REL should declare and define a `Processor` type, which would specify the location of a trusted (by the issuer and the end user) license processing system. The Processor must not be assumed, by default, to be identical to a license Issuer. The license must be able to contain multiple `Processor`s. Furthermore, the REL must allow the user to select this processing system, and to change it at any time after purchase. Finally, RELs should specify that the processing system may not store any data related to a use request beyond the time required to render a ternary yes/no/maybe decision. It is expected that this time will be very short, lasting only as long as the license evaluation. REL specifications should also require that information generated as an incident of transactions not be shared with any entity outside the processing system.

Data Destruction Rule

Conclusion

The vocabulary and structure of rights expression languages is of central importance to digital rights management systems. The creation of an REL that protects copyrights in a balanced way for copyright holders and users is a significant challenge. Creating an REL that reflects the limitations on copyright exclusivity, if only approximately, is even more difficult. REL designers must confront this challenge if DRM systems are ever to gain widespread public acceptance.

The ability of published works to be examined and used as their lawful possessors see fit — without specific authorization and without surveillance by rights holders —is the basis for much of the demand for these works and, more importantly, is a *core feature* of our copyright architecture. RELs must support the ability of creators and users to provide and gain access to copyrighted works in a fashion that is consistent with social norms and the limitations of copyright law itself.

We look forward to working with the Committee to resolve these concerns.

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