

**Response by Sun Microsystems to the  
Communication from the Commission to the European Parliament, the Council,  
the European Economic and Social Committee and the Committee of the Regions  
on Creative Content Online in the Single Market  
{SEC(2007) 1710}**

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EXECUTIVE SUMMARY

The European Commission is absolutely on target in raising the issue of interoperability of DRM systems in this communication on “Creative Content Online in a Single Market.” For there to be a diverse and robust economy supporting the sale and use of creative content, the interoperability of DRM systems is critical, and this interoperability must encompass all necessary functionalities. It is also important that “fair use” rights, user rights, and rights on contract termination be present in all DRM instances and that user interests be considered and fully included.

Before we discuss interoperability in detail, we would like to emphasize this last point. Sun believes that DRM should be a solution *only when necessary*. DRM should never restrict the user's ability to utilize the content in legally-permissible ways. With this in mind, any DRM system must be open, fully interoperable, and free from hidden IP licensing burdens that effectively re-close the system economically. Indeed, in the spirit of the company that supports OpenOffice.org, Sun believes that the Commission's stance should enable it to be possible to create a free version of any DRM system used in the EU!

With the great need for interoperability in DRM systems, we would urge the Commission to consider going further than may be implied from the following statement in the Communication:

“... there is a need in any case to set a framework for transparency of DRMs regarding interoperability. Providing consumers with an accurate and easily understood labeling systems on interoperability and usage restrictions, allowing them to make an informed choice will improve citizens' rights and provide for a sound basis for a wide availability of content online” [p. 7].

While we agree with this statement, we believe that it seriously understates the concern and importance of interoperability. Without full interoperability, users find it difficult and even impossible to listen and view content they have legitimately purchased. Instead users are locked in: forced to listen or view content only on players that have made business arrangements with the content owner. Such limitations on the use of legitimately-owned creative content is an unacceptable abridgment of consumer rights. As important as the issues of control and appropriate compensation for content owners are, interoperability is even more critical for all concerned.

Sun has had long experience in this arena; we are, after all, the company that believes “the network is the computer.” Our work in this area is fundamentally based on open standards,

and increasingly on open source. Sun defines interoperability as the mutual ability of software to communicate and exchange information with other software and mutually to use the information that has been exchanged. This includes the ability to use, convert, or exchange file formats, protocols, schemas, interface information or conventions, so as to permit the software to work with other software and users in all ways in which they are intended to function. This definition is a long and precise one, but for interoperability, the issues are in the details. We urge the commission to adopt such a precise definition of interoperability for use in DRM solutions, and to insist on full compliance on interoperability in DRM solutions.

Sun has already launched an open-source project in DRM interoperability, Project DReaM, whose source code has been released as part of Sun's Open Media Commons initiative<sup>1</sup>. DReaM<sup>2</sup> provides the infrastructure to develop an open digital rights management solution for consumers, content owners, network operators, and device manufacturers that strives to chart a

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1 Sun announced the Open Media Commons (OMC) (<http://www.openmediacommons.org>) initiative in August 2005 as an open source community project to develop royalty-free open solutions for digital content, including digital rights management (DRM) solutions. OMC seeks to drive cross-industry growth and prosperity as well as promote both intellectual property protection and user privacy. OMC's goals include:

- Develop open, royalty-free digital content solutions.
- Promote the creation, duplication and distribution of digital content and assure that creators and owners get compensated.
- Collaborate with like-minded open-source communities.
- Influence standards organizations.

OMC's principles include:

- Innovation flourishes through openness - open standards, reference architectures and implementations.
- All creators are users and many users are creators.
- Content creators and holders of copyright should be compensated.
- Respect for users' privacy is essential.
- Code (both laws and technology) should encourage innovation.

In December, 2006, OMC released Version 1.0 of DReaM-CAS.

2 Project DReaM, which began as an internal Sun research effort and then transitioned to a community project with the announcement of the Open Media Commons, strives for a royalty-free approach for driving open standards and implementations to manage digital content. The goal of Project DReaM is to encourage community participation in the development of CAS and DRM/“Mother May I” (DRM-MMI) specifications and open source reference implementations based on Sun's initial contributions from Project DReaM. To expedite the development process and minimize the need for up front formal standards body organizational structures, the specifications were initially drafted by Sun and made available to interested parties who registered with OMC. Simultaneously, open source reference implementations by Sun were made available under Sun's Common Development and Distribution License (CDDL).

Sun has released the “DReaM-CAS Intellectual Property Review by Sun Microsystems” ([http://www.openmediacommons.org/collateral/DReaM-CAS\\_IPR\\_White\\_Paper\\_v1.0.pdf](http://www.openmediacommons.org/collateral/DReaM-CAS_IPR_White_Paper_v1.0.pdf)), which outlines the DReaM IPR and patent review process that has considered a variety of art and initiatives, including, but not limited to:

- Available art from expired patents, known older methods and product/systems and art originally in the public domain, which may provide ‘patent-clear’ paths for DReaM technical specifications and architectural aspects. It may also reveal strategies for appropriately avoiding issues involving patents that may be of questionable novelty or scope.
- Active patents: important for identifying potential ‘patent thickets’ and developing appropriate solutions for avoiding issues they may present.
- Leverage off of and cooperate with entities and initiatives having similar royalty free objectives, which can establish industry support and momentum for DReaM objectives, and provide an opportunity for leveraging existing royalty-free standards and crosslicensing where applicable.

royalty-free approach. This is one solution to the interoperable DRM problem; there are undoubtedly others.

We urge the Commission to consider increasing emphasis on the growing and increasingly central role of users themselves as significant and important creators of content in their own right. User-created content is one of the most vibrant areas of creation on the Internet, and includes blogs, videos, music, and more. In the new digital era, users are active content creators, not just passive consumers of content, and recognizing and embracing this key shift will contribute much to help the Commission place content use, and DRM interoperability, in its rightful and constructive place in the online world.

A vital aspect of enabling creative content is "fair use," the American legal concept that there are some protected uses of creative content which do not need the content owner's permission in order to be used. Although the concept of fair use is not identical to the concept of private copying, some members of the European Union share some similar ideas under "fair dealing."<sup>3</sup> But while the law may protect fair dealing, DRM technology does not necessarily do so. The British Library's submission<sup>3</sup> to the 2006 consultation notes that of thirty licenses submitted to the library by publishers, twenty-eight were more restrictive than the law required, thus technologically limiting what was legally permitted. Such restriction on the use of creative content is not good public policy and any EU policy on DRM should include support for legally-permitted uses of content. We note that Sun has developed draft specifications for supporting fair use within the DReaM system.

An important component of support for user-created content is Creative Commons<sup>4</sup>, which provides licenses enforcing some restrictions on the use of content (e.g., Attribution Required, No Commercial Reuse) while encouraging the sharing of content. These licenses have seen wide international adoption, with licenses available in fifty-three nations (including most members of the European Union). We consider Creative Commons methodologies a useful best practices foundation for the Commission to consider and are pleased to note that Sun's prototype DRM system, DreaM, has draft specifications for supporting Creative Commons licenses within a DRM system.

Enabling the development, use, and dissemination of user-created content should be one of the Commission's goals. It is vitally important that DRM systems not block the ability of users to create and consume content in legally-permissible ways as a result of poorly-designed or purposely restricting technical interfaces that cause technical restrictions.

Another important aspect is the handling of the rights to the content on termination of the contract that the DRM may be attempting to implement. DRM inherently "quantizes" rights, removing the nuanced ability to interpret rights that has traditionally been available. It is especially important both for the cultural heritage of Europe and for the ability of the market to work with the base of cultural material being generated today that DRM systems include the ability to handle "end of life" for services and systems without either removing the rights granted under the contract with the supplier or blocking the ability to exercise statutory

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3 British Library response,

[http://ec.europa.eu/avpolicy/other\\_actions/content\\_online/contributions/index\\_en.htm](http://ec.europa.eu/avpolicy/other_actions/content_online/contributions/index_en.htm).

4 See response by Creative Commons Hungary to the 2006 consultation, which describes the benefits and challenges of adopting Creative Commons' methodologies to the EU context, at [http://ec.europa.eu/avpolicy/other\\_actions/content\\_online/contributions/index\\_en.htm](http://ec.europa.eu/avpolicy/other_actions/content_online/contributions/index_en.htm).

freedoms.

Our responses to the questions follow.

## Digital Rights Management

### **1) Do you agree that fostering the adoption of interoperable DRM systems should support the development of online creative content services in the Internal Market? What are the main obstacles to fully interoperable DRM systems? Which commendable practices do you identify as regards DRM interoperability?**

We agree that fostering the adoption of **fully** interoperable DRM systems can support the development of online creative content services in the Internal Market, in cases where DRM is unavoidable.

We believe the main obstacles are neither technical nor to be found in major gaps in the overall regulatory foundations, but are more to be found in the shortcomings, restraining business models and questionable approaches surrounding the overall area of digital media format interoperability.

We disagree with IFPI's comments<sup>5</sup> in the 2006 consultation regarding an unjustified lack of "take up of DRM" by IT and hardware sectors, a sector in which one might include Sun Microsystems, which IFPI characterized in statements like "[a]nother technical issue is the lack of support from the IT and hardware sectors for developing DRM," and elsewhere stating: "It is also important that the IT and hardware industry assist in developing the take up of DRM as there still are many devices that fail to include or support any DRM."

We believe that the DRM interoperability issue masks an underlying weaknesses and in some cases gridlock brought about by over-reliance on RAND (also called FRND)<sup>6</sup> standards. We

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5 IFPI's response in the 2006 Public Consultation on Content Online in the Single Market at [http://ec.europa.eu/avpolicy/other\\_actions/content\\_online/contributions/index\\_en.htm](http://ec.europa.eu/avpolicy/other_actions/content_online/contributions/index_en.htm)

6 Royalty-oriented standards activities related to media formats have in some cases a track record of taking years to release commercial licensing terms, even well after a standard has been deployed, a situation that can lead to business terms that unacceptably disenfranchise or disadvantage stakeholders. One well-known EU-specific example is MHP, see "Safety of patent pool imperiled: After interactive-TV spec fiasco, DVB members ponder fate of open process" (<http://www.eetimes.com/showArticle.jhtml;jsessionid=NV0VZKF0XCC1WQSNDLQCKHSCJUNN2JVN?articleID=197801654>).

A spokesperson for the European Broadcasting Union, a stakeholder and responder in the 2006 consultation, aptly described the MHP situation: "The patent holders got greedy to the point that they killed MHP". The MHP specification itself includes a conditional access interface API among other functionalities, which adds to the cautionary aspect of this experience in the context of developing an effective DRM interoperability initiative in the EU.

This particular experience of after-the-fact price setting on a media-related standard, while far from unique, prompted an inquiry by the European Commission and last November a slight update to DVB's Intellectual Property Rights process, see "DVB TAKES STEPS TO REINFORCE IPR POLICY: MHP Patent Pool Experience Prompts The Addition Of New Procedures To Safeguard IPR Process" ([http://www.dvb.org/news\\_events/press\\_releases/press\\_releases/DVB\\_pr166%20DVB%20Reinforces%20IPR%20Policy%20Final.pdf](http://www.dvb.org/news_events/press_releases/press_releases/DVB_pr166%20DVB%20Reinforces%20IPR%20Policy%20Final.pdf)).

believe these processes introduce unacceptable delays, a tendency to “standards capture” by overly narrow stakeholder interests, and overall commercial uncertainty. The financial costs to implementors of these technologies can be easily on a par with or in some cases even exceed the costs of levies themselves which many vendors question, so we do not agree with the implied sentiment of the IFPI that implementors should be expected to simply foot the bill for DRM interoperability by getting on with the “take up of DRM”. In addition, where either royalty payments or registration are required (in a way that is not sublicensable without restriction) for use of a technology, open source communities are typically excluded by their inability to engage in collective licensing or registration activities.

How can the industry and the Commission move forward constructively beyond somewhat vague references to the cause of “DRM interoperability” or acquiescence to consumer labeling as a poor substitute for full DRM interoperability? We recommend a forward-moving strategy based on four basic foundations:

- **User-centered Principles:** recognizing and further enabling a user-centered right to use content on multiple clients, archives and devices; a user-centered right to assert license and ownership as expressed in techniques like Creative Commons, and a user-centered right to know license and usage restrictions (and associated costs) on both content and the media technologies needed to use the content. These principles are already recognized, albeit sometimes in a backward content-owner-first way, by existing EC Directives, treaties and regulatory frameworks.
- **Adequate Stakeholder Scope:** Implementing meaningful DRM interoperability requires consideration of not only multiple devices, services, and archives, but also multiple networks and associated business models. We believe it is important to consider both the technical and business model similarities between DRM and conditional access<sup>7</sup>, and to consider that similar obstacles have limited interoperability in both domains.
- **Acceptably Inclusive Methodology:** We believe that royalty-free (while reserving defensive rights), open-source, and ex-ante standardization processes for DRM interoperability are the best, most fair, fastest, most inclusive, and most certain route to meaningful DRM interoperability as envisioned by the Commission.
- **Recognition of Cultural Priorities:** We believe that the longer-term needs of European culture for access to cultural artifacts need prioritisation alongside commercial issues. This would mean, for example, ensuring that “locks” on rights can be removed at contract termination, or when a service provider leaves the market, so that interoperability can still be achieved even in the absence of the original provider.

The need for more open media formats and related capabilities that are not encumbered by non-sublicensable royalty-bearing standardization processes and interests and therefore can enfranchise more effectively a wider range of stakeholders is gaining wider recognition. For

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However, we question whether voluntary ex ante disclosures alone will be sufficient to assure potential implementors of DRM interoperability related specifications, which involves an even wider range of potential stakeholder interests, that they will not face similar after-the-fact “ship now, discover price later” scenarios of unacceptable commercial uncertainty and inequities. We assert that a preferable ex ante royalty free process is more appropriate for network security technologies, which have already widely eschewed “security through obscurity” and royalty-bearing specification processes in favor of peer-reviewed, best-practices network security methodologies as was used in developing AES, SSL, PKI, and other security techniques.

<sup>7</sup> Footnote 53 of the staff report alludes to the fact that there is an extent to which DRMs are a form of conditional access system, and that the Commission will assess to what degree the Conditional Access Directive (98/84/EC) has or could facilitate the roll out of DRMs.

example, the W3C's HTML 5 Working Draft<sup>8</sup>, released in January 2008, includes a proposal for embedding and controlling audio and video content. The Working Draft notes that

"It would be helpful for interoperability if all browsers could support the same codecs. However, there are no known codecs that satisfy all the current players: we need a codec that is known to not require per-unit or per-distributor licensing, that is compatible with the open source development model, that is of sufficient quality as to be usable, and that is not an additional submarine patent risk for large companies."<sup>9</sup>

In a similar vein, the W3C organized a workshop on Video on the Web in December 2007<sup>10</sup>, at which numerous proposals were presented that could facilitate greater interoperability in user-level access to otherwise non-interoperable media formats and metadata-like rights-management information.

In other quarters there is also growing support for the use of open-source, royalty-free and sublicensable media formats, for example the "Play Ogg" campaign<sup>11</sup>, and open-source and royalty-free codecs such as those from Xiph<sup>12</sup> and Dirac<sup>13</sup> are gaining wider consideration for broader use and standardization.

In section 2.3 "Interoperability and Transparency of Digital Rights Management Systems (DRMs)," the Commission discusses the ability to transfer content from one owned device to another. We would like to push that thought a bit further. It is restrictive, and quite counter-intuitive, to have content usage tied to a device. If interoperable DRM systems are to exist, we recommend that these devices tie to "identity"; when a person buys a song or a movie, they can watch it in any device they want, through a networked digital "identity." The network enables the digital version of what we are currently accustomed to with records, videos, and DVDs, and is completely appropriate for the online world.

**2) Do you agree that consumer information with regard to interoperability and personal data protection features of DRM systems should be improved? What could be, in your opinion, the most appropriate means and procedures to improve consumers' information in respect of DRM systems? Which commendable practices would you identify as regards labeling of digital products and services?**

We agree that consumer information with regard to interoperability and personal data protection features of DRM systems should be improved. We would urge consumer input in public fora, including the development of Commission-supported online sites where consumers could both learn and provide information on the interoperability of different platforms and devices.

Labeling alone, however, is not enough to protect consumers from the risks created by

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8 <http://www.w3.org/TR/2008/WD-html5-20080122/#video0>

9 <http://www.w3.org/TR/2008/WD-html5-20080122/#video0>

10 <http://www.w3.org/2007/08/video/>

11 <http://www.fsf.org/news/playogg.html>

12 <http://www.xiph.org>

13 <http://dirac.sourceforge.net/>. In addition to W3C, Xiph, and Dirac, other groups that have made progress developing open, royalty-free media format specifications and IPR processes include The Khronos Group (<http://www.khronos.org>), the Digital Cinema Initiative (<http://www.dcmovies.com/>), and the Web3D Consortium (<http://www.web3d.org>).

inadequate standards and methodologies for DRM interoperability. We believe that it is important to note that the "Digital Rights Management" Report of an Inquiry by All Party Internet Group cited in the Commission staff working document in supporting the proposition that an accurate and easily understood labeling system will improve citizens' rights and provide for a sound basis for a wider availability of content online also goes further in noting that labeling alone will not protect consumers from potential data loss from the discontinuance of proprietary vendors' products, and recommends

**"that the OFT labeling regulations we proposed, in #105 above, should ensure that the risks are clearly spelled out, at the point of purchase, whenever consumers could lose access to digital content if systems are discontinued, or devices fail, or players are replaced by systems from a different manufacturer."**<sup>14</sup> (emphasis in original)

**3) Do you agree that reducing the complexity and enhancing the legibility of end-user license agreements (EULAs) would support the development of online creative content services in the Internal Market? Which recommendable practices do you identify as regards EULAs? Do you identify any particular issue related to EULAs that needs to be addressed?**

We agree that the information on EULAs should be made much more explicit and clear. We believe that Creative Commons licenses have established a simple, compelling, and clear best practice for making licensing and usage rules clear, meaningful, and user-empowering, and the Commission should model EULA practices taking the Creative Commons experience into close consideration.

Moreover, when considering EULAs and DRM interoperability, we believe that Article 7 of the Copyright Directive<sup>15</sup> establishes obligations protecting rights-management information, providing legal protection against the removal or alteration of any electronic rights-management information; including information about the terms and conditions of use of the work. We believe that Creative Commons licenses have established a simple, compelling, and clear best practice for making licensing and usage rules clear, meaningful, and user-empowering, and the Commission should model EULA practices taking the Creative Commons' experience into close consideration. It would be appropriate for the Commission to require that the set of terms in EULAs under normal review (a few minutes in a shop or on the Internet) be comprehensible to the average consumer --- not the average lawyer --- or else they should not be enforceable.

**4) Do you agree that alternative dispute resolution mechanisms in relation to the application and administration of DRM systems would enhance consumers' confidence in new products and services? Which commendable practices do you identify in that respect?**

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<sup>14</sup> "Digital Rights Management" Report of an Inquiry by All Party Internet Group, p. 18.

<sup>15</sup> Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society. Protection of Rights Management Information is also reflected in Article 19 of WIPO Performances and Phonograms Treaty (WPPT, <http://www.wipo.int/treaties/en/ip/wppt/>) and article 12 of the WIPO Copyright Treaty (WCT, <http://www.wipo.int/treaties/en/ip/wct/>), with 62 and 64 contracting nations, respectively.

No response.

**5) Do you agree that ensuring a non-discriminatory access (for instance for SMEs) to DRM solutions is needed to preserve and foster competition on the market for digital content distribution?**

In cases where DRM is unavoidable, we agree that ensuring a non-discriminatory access (for instance for SMEs) to DRM solutions is needed to preserve and foster competition on the market for digital content distribution. We believe that open-sourceable, royalty-free DRM solutions, techniques, and standards are the best means to achieve this objective, because this approach enables the broadest range of stakeholders to implement DRM interoperability solutions and capabilities and enables the broadest range of business models without blocking or disempowering particular business models (much like royalty-free HTML specifications from the W3C enable a wide range of stakeholder industries)

**Multi-territory rights licensing**

**6) Do you agree that the issue of multi-territory rights licensing must be addressed by means of a Recommendation of the European Parliament and the Council?**

No response.

**7) What is in your view the most efficient way of fostering multi-territory rights licensing in the area of audiovisual works? Do you agree that a model of online licenses based on the distinction between a primary and a secondary multi-territory market can facilitate EU-wide or multi-territory licensing for the creative content you deal with?**

No response.

**8) Do you agree that business models based on the idea of selling less of more, as illustrated by the so-called "Long tail" theory, benefit from multi-territory rights licenses for back-catalogue works (for instance works more than two years old)?**

No response.

**Legal offers and piracy**

**9) How can increased, effective stakeholder cooperation improve respect of copyright in the online environment?**

We believe that support for open, royalty-free and widely implementable DRM interoperability methods that are not beholden to a narrow range of stakeholder interests will increase effective stakeholder cooperation and engage and empower consumers as knowledgeable, empowered participants in online content use and creation. It may be time to re-visit the "social contract" that undergirds the intent of society offering these rights to



stakeholders. Continuing to apply patches to law that was framed prior to the existence of peer communications technologies has the unfortunate side-effect of reinforcing the commercial standing of incumbents and discriminating against innovative newcomers.

**10) Do you consider the Memorandum of Understanding, recently adopted in France, as an example to followed?**

No response.

**11) Do you consider that applying filtering measures would be an effective way to prevent online copyright infringements?**

We strongly recommend against filtering as a measure to prevent online copyright infringements. The beauty and quality of the design of the Internet lies in its neutrality as to content. The United States has already seen several examples of ISPs inappropriately filtering content; Comcast slowed --- and stopped --- traffic to a BitTorrent site. (BitTorrent is a P2P filesharing program. Although illegal filesharing often occurs through P2P sites, there are many uses of P2P that do not involve illegal filesharing --- indeed, distribution of Sun's Solaris software is one such.) This action by Comcast was essentially net censorship for its own business purposes<sup>16</sup> which harmed many stakeholders doing legitimate activities. While AT&T has said that it is interested in doing this filtering, Verizon, another large U.S. carrier has said it will not because of the dangers such actions present, including to customer privacy.<sup>17</sup> We believe that a solution involving filtering would be a serious technical, cultural, and business mistake --- and because this "solution" involves building technology into infrastructure, it would a mistake from which it would be difficult to recover.

As we close, we want to emphasize that DRM systems without full interoperability would likely lead to (i) markets for devices and content being severely hampered, which, in turn, could easily lead to a monopoly situation, and (ii) consumers will be greatly restricted in their ability to use content they own. Neither of these situations will serve culture, business, or democracy particularly well. The rights and interests of users are particularly important for European culture in the digital age. We urge the Commission to focus even more strongly on the interoperability user issues in the DRM market.

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16 Peter Svensson, "Comcast blocks some Internet traffic Tests confirm data discrimination by number 2 U.S. service provider," October 19, 2007, <http://www.msnbc.msn.com/id/21376597/> [last viewed February 6, 2008].

17 Saul Hansell, "Verizon Rejects Hollywood's Call to Aid Piracy Fight," New York Times, February 5, 2008.