Digital Rights Permission Code (DRPC)

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INTRODUCTION

In the wake of the Great East Japan Earthquake of March 2011, I have come to believe that content is spiritual nourishment for people and I consider it indispensable for Japan's recovery.

Content may be family photographs and videos that we shot when our children were still small (user-generated content, or UGC), or comics, anime, TV shows, and movies that we enjoyed in our childhood. Content created in the past by professionals and amateurs is important because it stimulates our memories, while newly fashioned, contemporary content is also important because it continues to inspire the young.

What I have realized in facing this reality is that we must fundamentally rethink our energy policies in the wake of the disaster that struck Japan last March. It is necessary to promote greater energy conservation and so we must avoid unnecessary downloads, redundant ownership of files, and excessively robust security systems built in fear of piracy. It is not difficult to anticipate that cloud computing will gain momentum as a solution to these challenges. Indeed, that is where we need to ensure convenient access to content by consumers while achieving the appropriate distribution of revenues to content

producers and rights holders, if we hope to see the concurrent presence and coexistence of the two parties. Without that, we cannot hope for intellectual and cultural evolution on a global scale.

To realize this vision, a technically and legally common language for licensing will be essential. New terminal devices and new forms of services developed by engineers must be able to understand the licensing conditions defined by content producers and rights holders. Licensing information provided by the rights holder has to be read by these devices.

The Digital Rights Permission Code (DRPC) system created by Dentsu is just such a common engineering and legal language developed for this purpose. Although it was developed in 1997, DRPC has not yet been put into widespread practical use and the reasons for this will be explained later in this paper.

The situation around the world at present does not allow us to adopt a wait-and-see stance any longer. I sincerely hope that this paper will serve as a stimulus to the international legal community and help promote cooperation between you and the engineering community.

ISSUES

1. Fundamental Issue

Needless to say, the discrepancy between technical evolution and copyrights has continued to be a major issue, particularly since the mid-1990s, with the arrival of the Internet.

The distribution of digital content has been made possible by advances in technology, but the theory and interpretation of copyrights have not been able to keep pace with the progress of such services, which has left both consumers and rights holders dissatisfied by the lack of security and certainty regarding the legality of these services. However, the situation cannot be corrected through the efforts of the legal community alone. Because a private contract precedes a copyright in every country, we should take advantage of this legal underpinning more effectively.

Who granted permission properly to use which content to whom under what conditions? We need to establish an information management system that keeps this information up to date at all times.

2. Presence of Rights Organizations

—Meddlesome concept of general licensing—

When I presented the newly devised DRPC system to Japan's largest rights organization in 1997, they pointed out that it was a general licensing system. At the time, no integrated management system whatsoever existed among the various rights organizations and unfortunately the situation remains unchanged today.

Use common ID groups and a common interface to realize efficient operation: the DRPC system created by Dentsu is the concrete manifestation of this proposal. All organizations agree with the proposal in general, but positive discussion stops when confronted with the issue of which organization will take on the role of initiator. In August

2009, the deadlock put an end to Melodies and Memories Global Limited, a company that I founded in April 2001 to promote DRPC. Due in part to reviews of general incorporated associations and public interest incorporated associations in Japan that took place during this time, rights organizations have been going through a period of transition. It would be ideal for individual rights organizations to function well to realize quick processing of licensing information across rights management organizations. Furthermore, it would be more ideal if such processing took place in an instant, horizontally across national borders. However, it is obvious that creators, producers, and rights holders will lose patience and that fewer will agree with this ideal if individual rights management organizations remain wedded to preserving their vested interests for some time to come.

SOLUTIONS

Implementation of the DRPC system

Explanation of the DRPC system

Devised by Dentsu in 1997, the DRPC system is a method of managing licensing information that can deal with the distribution of content in the digital era. In June 2008, it was designated the Japan-proposed international technical standard IEC 62227 following international voting.

This technical standard makes it possible to simplify the elements of complex licensing information related to the rights holders of various content, which is subdivided into usage purpose and usage conditions, among others, using a numerical code, so that the information can be understood by devices owned by consumers, including mobile phones, mobile terminals, household TV sets/STBs, and personal computers. This technical

standard was examined closely and deliberated upon continuously by the Japan Electronics and Information Technology Industries Association (JEITA)[1] from 2004.

The DRPC system is comprised of four elements, as described below.

—*Who grants permission to use which content to whom under what conditions?*

Content ID: Specifies content

From ID: Specifies rights holders/license managers

To ID: Specifies distributors, consumers, and devices

N Permission Code: Expresses detailed, concrete usage conditions

By imbedding the above-mentioned four elements (IDs and N permission code) into the content itself (a file or other forms of digital data) at the time of its distribution, it ensures that the content users will use it in the proper manner while enjoying it and that the content owner/rights holder will receive an appropriate usage report. In addition, its common usage across related rights organizations enable sharing of rights among all organizations concerned with accuracy and clarity.

—*Vertically and horizontally*—

Now is a time when content is travelling across national borders. Now is a time when the advent of social media, including Facebook and Twitter, has turned consumers themselves into distributors, content producers, and rights holders all of a sudden.

Taking those two matrices into consideration, the concept of “vertically and horizontally” becomes a prerequisite for global processing of licensing information.

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[1] http://www.jeita.or.jp/english/

1. Method of Specifying Content

Music: How many genres of digital content come under the “music” category? The answer should be at least five, including the following:

Music enjoyed aurally; information recorded on CDs

Music enjoyed visually and aurally; information recorded on DVDs

Music enjoyed visually and by playing musical instruments manually; information recorded as scores

Music enjoyed visually and by singing; information recorded as lyrics

Music enjoyed by arranging with a computer and the like; information recorded as modifiable MIDI data

For the processing of licensing information for music, different processing is applied to each of the above-mentioned genres 1 to 5. The first thing we need to do is establish a globally common issuing method for differentiating and specifying the genres of digital content. The above-mentioned genres 1 to 5 are identified by two initial letters, as shown below, under DRPC’s content ID system.

SM (Sound - Music)

VM (Visual - Music)

IM (Image - Music)

TM (Text - Music)

PM (Program - Music)

After classifying the content genre vertically, a WIPO[2]-defined two-letter country code is added to the two initial letters to enable horizontal identification within each content genre. For example,

SMJP: Sound-Music of Japan (Japanese music enjoyed aurally)

VMUS: Visual-Music of the US (Promotional music video from the US)

IMFR: Image-Music of France (Score of a French song)

TMKR: Text-Music of South Korea (Lyrics of a Korean song)

Application of a common content ID can only be realized by promoting vertical and horizontal classification in parallel. The above-described four-letter code is then followed by a two-letter "center code," to create a code of 16 letters in total.

2. Method of Specifying Rights Holders and Users

In line with the approach to specifying and identifying content, there are two codes for specifying and identifying rights holders and users, as shown below.

Rights Holder: H

Rights User: U

In order to deploy these two classifications horizontally, a WIPO-defined two-letter country code is added to the single-letter code above. For example,

HJP: Rights holder in Japan

UUS: Rights user in the US

[2] http://www.wipo.int/portal/index.html.en

HFR: Rights holder in France

UKR: Rights user in South Korea

Meanwhile, rights holders and users are classified as entity types and vertically integrated using the single-letter codes O, C, and I, as shown below.

Organization: O

Company: C

Individual: I

Adding the above entity codes gives the following examples:

HJPO: Rights holder organization in Japan

UUSC: Rights user company in the US

HFRI: Individual rights holder in France

UKRI: Individual rights user in South Korea

In addition, existing groups of cultural organizations are classified as follows to realize vertical integration into the two categories of H and U.

Groups that manage the text and literature genres

Groups that manage the music genre

Groups that manage the art and image genres

Groups that are responsible for the movie and video genres

Groups that are responsible for the performers genre

Groups that are responsible for the mass communication, advertising, and communications genres

Groups that are responsible for the technical assistance and post-production genres

Groups that are responsible for interactive content and advanced technology genres

In Japan, a private organization associated with the Agency for Cultural Affairs called the Conference on Copyright for Digital Millennium (CCD)[3] took the lead to define identification codes for groups using four-digit numbers. For example,

HJPO1000: Groups that manage Japanese text and literature genres

HJPO2000: Groups that manage Japanese music genre

HJPO3000: Groups that manage Japanese art and image genres

HJPO4000: Groups that are responsible for Japanese movie and video genres

HJPO5000: Groups that are responsible for the performers genre

HJPO6000: Groups that are responsible for the mass communication, advertising, and communications genres

HJPO7000: Groups that are responsible for the technical assistance and post-production genres

HJPO8000: Groups that are responsible for the interactive content and advanced technology genres

[3] http://www.ccd.gr.jp/pdf/Report_H16english.pdf

The DRPC system expresses all common IDs, namely Content ID, From ID, and To ID, in 16-digit codes and the above-mentioned entity identification codes accordingly are supplemented with eight zeros to create 16-digit codes.

3. Method of Specifying Consumers

3-1. Specifying consumers by issuing IDs

Consumers are specified as below:

Japanese consumers: UJPI

IDs have not yet been defined for devices owned by consumers and services purchased by consumers. We hope to establish them jointly with the International Electrotechnical Commission (IEC)[4] and the International Telecommunication Union (ITU)[5] through JEITA.

3-2. Toward an era of subrogation of rights holders and consumers

Consumers who hitherto have passively enjoyed content created by professionals are transformed into UGC creators and rights holders all of a sudden. Conversely, broadcasters, who have been visual content creators, are also transformed into users of UGC created by consumers.

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[4] http://www.iec.ch/

[5] http://www.itu.int/en/Pages/default.aspx

UJPI --> HJPI

HJPC --> UJPC

Switching the initial letters of H and U enables the subrogation of one's capacity according to the situation.

3-3. Licensing of consumer information

—Common traits of and relevancy of personal information protection law and copyright law—

Personal information, such as one's medical history, annual income, family composition, activity history, and current location, could be valuable for a company's marketing activities. In some cases, businesses pay for such information or are willing to obtain it legally under certain conditions. It can therefore be said that personal information represents content owned by the individual consumer and that it too should be accompanied by detailed licensing conditions, including how it will be used. In March 2002, Mr. Nicholas R. Givotovsky who was in the US, and Takahito Iida established the above-mentioned concept of licensing by consumers in the US by extending the concept of licensing by rights holders and adopting a "reversal" approach. In July 2011, an international law society began debating for the first time the relationship between the private contract governing UGC and copyright law at the annual conference of the Association Litteraire et Artistique Internationale (ALAI, or International Literary and Artistic Association)[6] in Dublin, Ireland. Further discussions on the approach to consumers' personal information as UGC are expected to take place from now on based on the new concept of licensing by the consumer while taking into consideration its relevance for personal information protection law.

[6] http://www.alai.org/

I would like to see the development of flexible licensing conditions in response to the arrival of individuals who possess the dual character of rights holder and consumer as described in the preceding paragraph. I also expect to see the global deployment of a flexible interface for defining two-way licensing conditions rich in diversity that goes beyond a one-dimensional “black-or-white” approach.

4. Method of Expressing Detailed, Concrete Licensing Conditions

4-1. Summary of the N (Narrow) permission code

The N permission code is comprised of classification and restricting elements and as such enables the flexible description of contract and licensing conditions.

4-2. Classifications (mandatory)

Classification by extent of openness

Open licensing or Closed licensing

Classification by usage purpose

For commercial use and/or Public use and/or Educational use

Classification by charge

With or Without charge

Classification by sponsorship

With or Without sponsorship

Classification by usage

Exclusive licensing

Broadcasting licensing, and/or

Streaming licensing, and/or

Physical rental

Ownership licensing: Described side by side with various restricting elements such as life control, restriction on recording medium, and the like

Without (= free) or With restriction on recording medium

Downloading licensing

Without life control (free) or With life control (Number of plays, Time limit of play, Terms of play)

Secondary use licensing

Move

Life control elements or Elements restricting recording medium

Copy

Life control elements or Elements restricting recording medium

Classification of territory

Japan and/or China and/or Korea ...

These classifications are mandatory. There are six categories expressing details of licensing contracts for using content and they are intended to control the behavior of the device being used with the help of information on restricting elements.

Meanwhile, the restricting elements are optional. When there is a need to apply restrictions to a specific device and/or usage environment, the related information complements licensing details that cannot be expressed by the classification information alone.

4-3. Restricting elements (optional)

Elements restricting recording medium

- Without restriction (free)
- With restriction
  - CDs
  - MDs
  - HDDs (including PCs, STBs, and mobile devices)
  - DVDs
  - SD cards
  - Memory sticks

Specified quality/compression format

- Bit-rate restricting element

Life-control element

- Without life control (free)
- With life control (Restricted number of plays, Restricted terms, Time limit)

Specified security

- Digital watermark and/or Specified DRM and/or Encryption

Elements restricting communication channel

Without restriction (free)

With restriction (Ground broadcasting and/or CATV and/or Internet and/or Wireless)

Elements restricting the location where content is obtained

Without restriction (free)

With restriction (Shop and/or Home and/or PC and/or Mobile device)

5. Legal Positioning of the DRPC System

The WIPO Copyright Treaty was signed by member countries following a proposal by the World Intellectual Property Organization. Article 12 (on Obligations Concerning Rights Management Information) stipulates that "Contracting Parties shall provide adequate and effective legal remedies against any person knowingly performing any of the following acts: (i) to remove or alter any electronic rights management information without authority; (ii) to distribute, import for distribution, broadcast or communicate to the public, without authority, works or copies of works knowing that electronic rights management information has been removed or altered without authority."

The "electronic rights management information" used in this article is defined as "…information which identifies the work, the author of the work, the owner of any right in the work, or information about the terms and conditions of use of the work, and any numbers or codes that represent such information, when any of these items of information is attached to a copy of a work or appears in connection with the communication of a work to the public." The DRPC system clearly falls under this definition.

According to Japan's Copyright Law, "right[s] management information" is defined in Clause 21 of Article 2 as "…information concerning moral rights or copyright…or rights…which falls within any of the following (a), (b) and (c) and which is recorded in a memory or transmitted by electromagnetic means together with works, performances, phonograms, or sounds or images of broadcasts or wire diffusions…:

(a) information which specifies works, etc., owners of copyright[s], etc. and other matters specified by Cabinet Order;

(b) information relating to manners and conditions of…exploitation in case[s] where the exploitation of works, etc. is authorized;

(c) information which enables…[the specification of] matters mentioned in (a) or (b) above in comparison with other information."

In addition, Items 1 and 2 of Clause 3 of Article 113 regard such acts as the intentional addition of false information to "rights management information" and the intentional removal or alteration of "rights management information" as infringements.

The DRPC system is "rights management information" and applying the DRPC system to copyrighted objects can be considered from a legal perspective to be a means of protecting the copyrights of authors and the like.

More specifically, if the DRPC system is designated globally as "rights management information" in the eyes of copyright law, it opens the way for a rights holder to take measures against piracy across national borders more easily by, for instance, embedding DRPC in the content file itself with watermarking technology and the like. This is because the embedded rights management information is likely to reduce the burden of the rights holder's presentation of proof of the infringement, while legal protection is provided in the case of alteration of the rights management information. Moreover, this secures the legitimacy of DRPC from the viewpoint of copyright law as well.

In addition, widespread use of DRPC can be expected to contribute to boosting fair licensing businesses, as well as to strengthening measures for detecting pirated content. We have high expectations for the creation of an international management organization as a coordinator in line with the above-mentioned activity. Dentsu has worked jointly with the Association of Copyright for Computer Software (ACCS)[7] for several years to promote widespread use of DRPC. Since its establishment, the ACCS has made continuous efforts to maintain order for intellectual property through the implementation of antipiracy measures for digital content, including software, in Japan and elsewhere in Asia. The ACCS will remain committed to the monitoring and detection of improper/illegal distribution of digital content while promoting awareness of copyrights, so as to drive further development of legitimate licensing businesses and contribute to the Internet society as a responsible organization that protects intellectual property. The two parties will continue their joint efforts to establish the above-mentioned international management organization.

6. Milestones

As mentioned earlier, the DRPC system was devised in 1997 by Dentsu. It would not be an overstatement to say that Dentsu's unique position was the driving force behind the invention. Dentsu serves to connect consumers and advertisers via the media. Sometimes Dentsu produces content jointly with a media company. Other times Dentsu plans and promotes a new content distribution service together with a client, for instance, a consumer electronics company.

Moreover, Dentsu is naturally pursuing its main business activity as an advertising agency, conducting advertising operations (production of advertising, media buying) by utilizing the media. This multifaceted company standing in the middle was faced with narrowly

[7] http://www2.accsjp.or.jp/en/

defined copyright issues and it devised the DRPC system as a way of dealing with this reality.

In the following, I would like to outline the developments that have led to DRPC winning recognition as an international standard.

April 2001: Dentsu founded Melodies and Memories Global Ltd (MMG), through which we undertook aggressive proposal activities regarding standardization in the national and international arenas. (MMG was liquidated in August 2009.)

March 2002: MMG submitted a proposal on the DRPC system to the Conference on Copyright for Digital Millennium (CCD). The Japan Photographic Copyright Association[8] subsequently decided officially to adopt the DRPC system, which had been under review by the organization for some time, acting on the occasion of a demonstration test of a virtual market for copyrighted works conducted by the Agency for Cultural Affairs in October 2003. The association has been utilizing the rights holder ID and content ID in its operations to date.

January 2004: MMG submitted a proposal on the DRPC system to the review meeting (subcommittee) of G DRM dealing with TC 100/TA 8 of JEITA. The development of a technical standard to realize a common description of licensing information opened up in a positive manner.

March 2006: Following three years of deliberations, the CCD released a common content ID and a common business operator ID as the CCD's ID model.

June 2007: A content portal site operated by the Federation of Economic Organization in Japan called the Japan Content Showcase[9] began service using the CCD ID model of common content ID and common business operator ID.

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[8] http://www.jpca.gr.jp/index.html

[9] http://www.japancontent.jp/

February 2008: Through international voting held on the 15th of February, DRPC won recognition as international standard IEC 62227 after three years of deliberations, following the proposal to the IEC by JEITA in December 2004.

June 2008: The specifications of the DRPC system were released on the IEC's website.

August 2008: The IEC's Central Office issued a recommendation letter for the DRPC system.

November 2008: At the IEC's annual convention held in Sao Paulo, Brazil, a proposal for fixed-length coding of DRPC was approved. At a high-level meeting attended by executive members of the IEC, the ITU, and the ISO[10], which was held during the convention, it was agreed to establish a Rights Information Interoperability (RII) ad hoc group promoting licensing information communalization by utilizing DRPC as the basic resource.

January 2009: The Soushakusha Dantai Kyogikai (Association of Creators' Groups)[11] announced that ID issuance under the DRPC system would be employed for the release of its database of rights holders' information.

End of January to February 2009: The IEC released a liaison letter for the DRPC system to the ITU and the ISO at the ITU's IPTV meeting held in Geneva, Switzerland and at the MPEG general meeting held subsequently in Lausanne, Switzerland. Sections handling the issue at the ITU and the ISO were defined.

June 2011: The DRPC system was introduced at ALAI 2011, held in Dublin, Ireland.

7. Conclusion

[10] http://www.iso.org/iso/home.html

[11] http://www.sousakusya.jp/

I was given the honor of making the first presentation to the international law society of the ALAI in Dublin and this paper has enabled me to present a more in-depth discussion. I am very grateful for this opportunity.

Humans are valuable when they are alive. We live feeling joy and sorrow. What we need then is content. Content that stimulates our brain and our five senses.

It is said that the brain of each of the world's seven billion people has 14.5 billion cells. This multitude can communicate every second; this possibility has been secured by advances in technology. UGC made by someone in a faraway country can move people beyond nationality, age, and gender thanks to the advancement of communications technology.

Humans are helpless when faced with a natural disaster. However, as I pointed out at the beginning of this presentation, content gives people courage and helps them put their lives back together. To revitalize content distribution in a legal environment in an easier, more convenient manner, Dentsu and I would like to take this opportunity to make two suggestions, as follows:

Dentsu will establish a global system for issuing content IDs, rights holder's IDs, and consumer IDs vertically and horizontally. To that end, we will seek to collaborate with international authoritative organizations.

Dentsu will establish a format to describe licensing conditions legally for the usage of content and submit DRPC as a working draft to international authoritative organizations.