

Roland Alton-Scheidl, Vorarlberg University of Applied Sciences, ras@fhv.at
Joe Benso, International Media Association, joe.benso@osAlliance.com
Martin Springer, International Media Association, ms@osAlliance.com

The Value of Registering Creative Works

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Abstract

In this paper we present good practices for online registration services at the first COMMUNIA conference on the Public Domain in the Digital Age ([COMMUNIA 2008](#)). Furthermore, we will be going to ask the following questions: Is reliable and simple registration of works the right way to improve confidentiality and trust? How could Rights Collecting Societies benefit from such registries? What kind of governance is required, to run such registries? And do they conflict with public patent laws or authorities? We will conclude with a proposal for either adapting the DMP authority scheme or establishing registration peering and using existing namespaces. The authors are affiliated with Registered Commons, a service initiative launched in 2006.

Improving confidentiality and trust

As copyright is an automatic right, works are protected by copyright across the world from the moment they are created. As long as a creator of a work does not care about his copyright, registration should not be necessary. The purpose of registering works is that an author can produce a verifiable record of his work as it existed before it was published. This record can serve as a proof in case somebody infringes copyright, for instance by publishing a work as their own.

Users in the digital media value-chain frequently have to accept licensing conditions before they can access and use copyrighted content. A certificate that a given piece of content is really the content that has been registered with a trusted agency can

improve a user's confidence that he or she may use this content according to the license terms.

Even where license information is available for example through a web link to a CC license, the relation to a given work is not guarded. Companies who may be interested in the commercial distribution and other uses of the material require legal security for their business, notably in the form of reliable authorship information. Precisely this reliable link to the author is missing from many websites that offer content for re-use. Even if the work has assigned a license with a weblink, or the work is said to be in the public domain: how can one know that the relation is correct and authorship is as claimed?

EMERGING CONTENT REGISTRIES

Registering creative works implies that content must be reliably and unambiguously identified. This task requires specific capabilities, as identification constitutes a key element of trust establishment. The task of content identification needs to be carried out by organizations that are properly accredited with a trusted authority.

Registries are following various goals. First, they provide trust among parties, who would like to use or share works, which have been published. Secondly, registries are being used to furnish evidence of a work's authorship. A typical use case is to prevent stealing ideas or concepts in the creative sector. People tend to lock the own work in a registry under full copyright and do not have the intention of publishing it. They register the work just for the case that a similar idea is evolving, for example after they showed the art work at a design pitch.

Additionally, many registries offer value added services, such as paper certificates, storage of the work or offering a point of sales for usages beyond a sharing license. CC+ allows people to provide a link, where conditions for commercial use are described.

Survey of Registries supporting CC

Creative Commons has started to put a focus on providing value added services through registries, which will be funded by Omidyar Network. "..., the grant will allow us to explore providing fee-based, value-added services, which can benefit our community and help support the organization financially. The registry is our first big project in which we plan to explore these possibilities." says Creative Commons CEO Joi Ito in a press release dated 2008 May 28 (Creative Commons 2008a).

Registration of intellectual property has long been a service reserved only for

authorities like the U.S. copyright office and the Library of Congress. When authors want to provide proof of ownership of a work, proper registration with a trusted party can be a valuable resource.

A traditional registration process can often be costly to an artist. One piece of work can cost \$45, and may be a time consuming process. Now, in an era of digital distribution, the ability to quickly recognize ownership of content is becoming increasingly important. Licensing models like Creative Commons have been adopted by many artists as the preferred licensing solution to their work online. However, with the popular "some rights reserved" licensing of creative commons, there is a growing need to provide users of this content a proof of ownership. This proof is important for all content creators as the copying and distribution of their content becomes increasingly easy.

From the perspective of Creative Commons, it would be in their interest to support a trusted authority for registration of CC licensed material. As the field of CC registries grows the benefits to the artists are being communicated. Possible relationships between registries and the U.S. copyright office or other design, trademark or patent offices worldwide may emerge.

CC has collected profiles for service providers of registries, which support CC licenses. The following table gives a first overview.

Name	<u>Cost</u>	<u>LENGTH OF</u> <u>REGISTRATION</u>	<u>Types of Works</u>	<u>ONLINE</u> <u>REGISTRATION</u>	<u>Serial</u> <u>Numbers</u>	<u>DOCUMENT</u> <u>STORAGE</u>	<u>SHA-1</u> <u>Hashing</u>	<u>ONLINE</u> <u>VERIFICATION</u>
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TABLE 1: REGISTRIES SUPPORTING CC LICENSES
(CREATIVE COMMONS 2008B)

IN THE NEXT SECTION, WE WILL HAVE A CLOSER LOOK AT SOME OF THE REGISTRY SERVICES LISTED ABOVE. STILL, THIS LIST IS NOT EXHAUSTIVE. THERE ARE OTHER WAYS TO REGISTER CREATIVE WORKS. JUST TO NAME NATIONAL PATENT OFFICES OR THE EUROPEAN OFFICE FOR HARMONIZATION OF THE INTERNAL MARKET, WHICH PROVIDE SERVICES TO PROTECT TRADEMARKS AND DESIGN (OAMI 2008).

REGISTERED COMMONS

A creator who registers a work with Registered Commons benefits from two important advantages. A certificate issued allows the creator to provide evidence for her intellectual ownership of a work. Secondly, and almost as important for evidence of authorship as a certificate, Registered Commons digitally records the exact time of a registration with a timestamp, obtained from a trusted third party. Typical users are musicians or photographers, who are keen on posting individual works on the internet, but who wish to retain control over them, or bloggers and even agencies who prior to giving client presentations, wish to protect their work from plagiarism using the timestamp. These new licensing models render the free distribution of artistic works on the internet considerably easier, as they free the works from the tight corset of traditional copyright management. However they also exhibit their own significant defects. Firstly, they too cannot prevent the unlawful use of works. Secondly, the user's rights of such works for commercial purposes (for example the use of a piece of music under a noncommercial Creative Commons license for the credits of an Independent film) are increasingly more difficult to clarify, as many of these works are published without reliable information on the author and the user's rights needed for commercial uses.

As an included service of the current registration and time stamp process, RC provides an automatic backup of the works by default. These works can be directly linked to by way of embedding the generated code for the RC button  after uploading a work.

Registered Commons is a service established and provided by a public-private partnership. The public partner, the Vorarlberg University of Applied Sciences, located in the Austrian Alps close to the Swiss and German border, provides infrastructure. Private partners are organised in the International Media Association [osAlliance](#) (osAlliance 2008a). Registered users of the service may also become shareholders. The members of the association keep control over the service through their vote in the general assembly. A trademark agreement has been signed with Creative Commons in 2007. The transparency of a public/private partnership and its governance is a core strength of RC to earn the trust of the users.

Registered Commons uses Open Source software and runs with a PostGRES Database, and the SpunQ database modeller on a BSD platform. Hosting is secured by standardized control and surveillance mechanisms and frequent backups.

In 2008, Registered Commons could establish agreements with partners in the creative sector, for which a branded version will be provided. The business model will be slightly adapted in a way that partners may obtain a voucher for their clients or members. The number of free registrations per user will be restricted, unless they use a voucher code.

Registered Commons is working on ways to include other revenue generating models for their users. This model aims to incorporate a value added service that allows users work to be licensed for commercial use as a separate contract. One

platform/partner would be PodPerfect (osAlliance 2008b) as a content clearing service for users who need to license music for unlimited usage. It is designed with music collaboration communities in mind, like CCmixter when it started.

SafeCreative

SafeCreative is a free registration service provided by a company called AAR Futuro. They keep a record of work registered for identification purposes. This allows interested parties to consult the registry and obtain information with respect to the rights of use or the distribution. In their service description they want to dissuade third parties from plagiarism or falsely claiming the work as their own.

AN INTERESTING DETAIL IS THEIR EXPERIENCE, THAT ONLY ONE OUT OF FOUR CHOOSES NON FULL COPYRIGHT OPTIONS.

Table 2: Distribution of Licenses used at SafeCreative
(SafeCreative 2008)

ACCORDING TO THEIR ANALYSIS (SAFECREATIVE 2008), THE PERCENTAGES OF LICENSES USED IN 18,000 REGISTERED WORKS ARE:

72.8% - ALL RIGHTS RESERVED

12.9% - CC ATTRIBUTION NON-COMMERCIAL NO DERIVATIVES

6.3% - CC ATTRIBUTION NON-COMMERCIAL SHARE ALIKE

3.3% - CC ATTRIBUTION NON-COMMERCIAL

2.1% - CC ATTRIBUTION

1.2% - CC ATTRIBUTION SHARE ALIKE

0.7% - CC ATTRIBUTION NO DERIVS

0.4 - GNU LGPL

0.3% - GNU GPL

0.1% - GNU FDL

THIS SEEMS TO BE A CLEAR INDICATION, THAT THERE IS A DEMAND FOR ONLINE REGISTRIES NOT ONLY FOR PEOPLE WHO ARE AWARE OF LICENSE TEMPLATES SUCH AS CREATIVE COMMONS, BUT ALSO FOR COMMERCIAL LICENSING.

RIGHTSAGENT

IN ADDITION TO THE REGISTRATION OF WORKS, RIGHTSAGENT OFFERS UNIFIED FEEDS TO TEXT, PHOTOS OR VIDEOS, WHICH ALLOWS TRACKING USES OF WORKS (RIGHTSAGENT 2008). VALUE IS GAINED BY BUILDING A REPUTATION SCORE AND BY COLLECTING FEES FOR COMMERCIAL LICENSE AGREEMENTS OR WHEN USING THE CC+ OPTION.

PUBLIC DOMAIN REGISTRY IN CANADA

THE CANADA BASED CLEARING SERVICE ACCESS COPYRIGHT HAD ANNOUNCED A PARTNERSHIP WITH CREATIVE COMMONS AND THE WIKIMEDIA FOUNDATION ON THE CREATION OF A CANADIAN PUBLIC DOMAIN REGISTRY (GARLICK 2006). ACCESS COPYRIGHT'S ROLE IN THIS PROJECT WAS TO PROVIDE BIBLIOGRAPHIC INFORMATION ON CANADIAN PUBLISHED WORKS CONTAINED IN ITS RIGHTS MANAGEMENT SYSTEM (RMS). THIS LIST OF OVER 300,000 WORKS, INCLUDING WORKS THAT ARE CURRENTLY IN THE PUBLIC DOMAIN AND THOSE THAT WILL ENTER THE PUBLIC DOMAIN IN THE FUTURE, WAS PROVIDED TO CREATIVE COMMONS AND THE WIKIMEDIA FOUNDATION IN SEPTEMBER 2007. SINCE THAT TIME, BOTH ORGANIZATIONS HAVE USED THIS LIST TO BUILD THE REGISTRY'S DATABASE. A BETA VERSION OF THE PUBLIC DOMAIN WIKI IS NOW BEING TESTED BY ALL THREE PARTNERS. THE ORGANIZATIONS ALSO HAVE EXTERNAL TESTING TEAMS IN PLACE TO ENSURE THAT THE WIKI IS AN ACCURATE AND USER-FRIENDLY RESOURCE. ALL PARTIES WILL CONTINUE TO WORK TOGETHER TO ENSURE THAT THIS RESOURCE IS SUCCESSFULLY LAUNCHED TO THE PUBLIC.

ONCE TESTING IS COMPLETE, THE REGISTRY WILL LOOK SIMILAR TO THE ONLINE ENCYCLOPEDIA WIKIPEDIA. IT WILL BE A GLOBALLY SEARCHABLE DATABASE OF CANADIAN WORKS, INCLUDING THOSE IN THE PUBLIC DOMAIN. IT WILL ALLOW USERS TO SEARCH AND EDIT RECORDS IN THE REGISTRY TO PROVIDE ADDITIONAL INFORMATION ABOUT INDIVIDUAL CREATORS, THE HISTORY OF THE REGISTRY'S WORKS AND TO ADD ADDITIONAL WORKS TO THE SYSTEM. THEIR HOPE ACCORDING TO THEIR PUBLIC ANNOUNCEMENT IN JANUARY 2008 IS THAT IT WILL BE A MODEL FOR SIMILAR PUBLIC DOMAIN REGISTRIES AROUND THE GLOBE (ACCESS COPYRIGHT 2008).

OPEN KNOWLEDGE REGISTRY CKAN

According to their web site CKAN is a registry of open knowledge packages and projects — "be that a set of Shakespeare's works, a global population density database, the voting records of MPs, or 30 years of US patents." (CKAN 2008).

CKAN is looking for people to register 'packages' that is collections with some kind of structure rather than individual items. So a substantial set of photos, datasets of all kinds, the writings of Shakespeare but not an individual blog, or your flickr photo collection (unless its very big).

The material should be free to use, reuse and redistribute without major restrictions, referring to common open definition guidelines (Open Knowledge Foundation 2008). Even if search engines could also be restricted to open content search results, CKAN offers extended metadata on the collections and reuse of the material.

What kind of authority is required to run such registries?

In order to guarantee that content identifiers are unique one has to make sure that there is one and only one root authority – called Registration Authority (RA) which may have responsibility for more than one Registration Agencies (RAs). A Registration Authority is responsible for allocating namespaces to Registration

Agencies. The Registration Authority will appoint Registration Agencies on the basis of general rules.

The primary role of Registration Agencies is to provide services to Registrants - allocating Identifier name prefixes, registering Identifier names and providing the necessary infrastructure to allow Registrants to declare and maintain metadata and state data.

In general, identifier management policies can be defined on a community-by-community basis. The OASIS committee [proposes](#) that a resolution community chooses to create a community root authority (OASIS 2008). When a community changes the root authority it should define policies for assigning and managing identifiers under this authority. Furthermore, it should define what resolution protocol(s) may be used for these identifiers.

The Digital Media Project ([DMP 2008a](#)) has published [Approved Document No. 6](#) (DMP 2008b), which proposes a list of Procedural and Operational responsibilities for Registration Authorities and Agencies. This list can serve as good starting point for the steps that need to be performed for setting up and running Content Registries.

As an existing example in the music industry, the "Global Release Identifier" (GRid, IFPI 2007) scheme has been established by rights collecting societies.

A GRID CONSISTS OF 18 CHARACTERS, MADE UP OF AN IDENTIFIER SCHEME ELEMENT FOLLOWED BY AN ISSUER CODE ELEMENT, A RELEASE NUMBER ELEMENT AND A CHECK CHARACTER AS FOLLOWS:

- IDENTIFIER SCHEME ELEMENT (2 CHARACTERS)
- ISSUER CODE ELEMENT (5 CHARACTERS)
- RELEASE NUMBER ELEMENT (10 CHARACTERS)
- CHECK CHARACTER ELEMENT (1 CHARACTER)

WHEN A GRID IS WRITTEN, PRINTED OR OTHERWISE VISUALLY PRESENTED, THE FOUR ELEMENTS OF THE GRID SHALL BE SEPARATED FROM EACH OTHER BY A HYPHEN. THE HYPHENS DO NOT FORM PART OF THE GRID. IT IS RECOMMENDED THAT WHEN A GRID IS VISUALLY PRESENTED, THE FONT USED SHOULD CLEARLY DISTINGUISH BETWEEN THE NUMBER 1 AND 0, AND THE LETTERS I AND O.

EXAMPLE: A1-2425G-ABC1234002-M

Where: **A1** - Identifier Scheme element

2425G - Issuer Code element

ABC1234002 - Release Number element

M - CHECK CHARACTER ELEMENT

The Identifier Scheme Element distinguishes the GRid Identifier Scheme from any other Standard identification scheme which adopts the same or a similar structure.

Registered Commons has adopted this approach by simply issuing codes on the identifier scheme RC. Thus their identification scheme should be rather called RCid. An administrative authority to manage namespaces for the Identifier Scheme element is missing, a simple directory service would be efficient.

A peer-to-peer protocol combined with globally unique IDs may be also sufficient to identify any registration process as a singular, retraceable activity. We will not go into detail with this approach within this paper, for an introduction see Wikipedia 2008.

How could Rights Collecting Societies benefit from such registries?

Traditionally Rights Collecting Societies of Collective Management Societies (CMS) managed the exploitation of any of the rights-holders rights. According to the principle of territorial exploitation, the applicable law is the law of the place of exploitation. For some forms of exploitation (e.g. cable retransmission, making of sound recordings), collective rights management is compulsory but in principle an author can choose between individual and collective management of his rights. The CMS usually administers, monitors, collects and distributes the payment of royalties for an entire group of right holders, on the basis of the national law of its territory, with respect to that territory.

In order to be compensated by CMS authors must register works in the country of their residence. Across Europe more than 70 different CMS manage authors' rights. Within the European Union, most CMS are allowed to retain a monopoly status or have conferred them a monopoly position in relation to their specific fields of activity. The reason is economically persuasive. For users, it is simply more expedient to be directed to one collective body which manages one specific type of right. Since decades, Collective Management Societies are being criticized for intransparency (not really controlled by their members, such as artists) and for their unbalanced distribution schemes, preferring blockbusters and the Top-10.

CMS currently use different schemes to identify works and store the corresponding data in proprietary systems and databases. They wish to protect their assets and defend their monopolies to register and manage works. Many European CMS oblige their members to collectively license all forms of distribution for a certain category of works and thus prevent that authors venture new forms of individual licensing.

While a few years ago legitimate commercial media offers were absent from the Web, and media content was shared via p2p filesharing networks, companies today appear to have figured out new business models taking advantage of the "long tail", taking advantage of user created content and micro-advertising. Apparently this "new deal" is that consumers (users) generate content and use data and the commercial

companies use these data for their web services. Consumers can use these services either for free or under the condition that they pay attention to advertisement content. The fact that these are the only business models just indicates that the current technical infrastructure is missing an interoperable platform for the management of copyright, the rights-clearing and the micropayment of services.

Network operators, CMS and providers of Web2.0 services appear to be quite happy with the status quo which preserves their monopolies. Therefore they maintain technical and legal obstacles e.g. by operating proprietary subscriber management/billing systems or granting access to their services through end-user license agreements (EULAs) which are a mystery to the average consumer. The interesting thing is that in P2P time (Napster and before) there was still some money flowing back to creators. With Web2.0 there is none. Service providers control the business. Essentially they do not intend to prop up creators by providing them with the means to benefit from their creations, they simply subscribe to the idea that there is "money to make" from those who create. Too bad that creators do not benefit from publishing their creations on the web. We can ask ourselves why the demand for rights clearing and micropayment has decreased in the past. If the only viable business models on the Net are flat-rates for services and advertising for content it is clear that Users/operators don't require micropayment.

Meanwhile publishers contract artists directly or creators publish content on their own websites. Theoretically, end-users who want to access this content could be charged directly through the publishers' web services. Still, no generic solution for the rights clearing and payment of content is on the horizon, which is cross platform and cross vendor compatible. After all, from the perspective of creators and end-users the best solution would be a decentralized system where individual peers (creators and end-users) can register content and negotiate with each other the usage terms and conditions of content.

With Content Registration services, converging networks and p2p environments in place there will be a new need for micropayment. We predict that either the Open Source community, CCplus or other independent initiatives (e.g. dmin.it) will develop and deploy the tools to operate these services. Rights Collecting Societies could benefit by contributing to their development and opening their repertoires.

A registration service only for Creative Commons licensed content?

A creator of a work is free to choose the licensing conditions. The decision will usually depend on several factors, for instance if the licensee will use a work for commercial or non commercial purposes or if the licensee obtains an exclusive license to use the work. One can also imagine that licensors want to change conditions after a time, because they find out that another license is more suitable for

their business model. The decision about the licensing follows the initial registration of a work. Since content registration precedes the licensing, a registration authority exclusively for commercial content or only for Creative Commons content would not make much sense. Therefore we believe that the setup of a Content Registration Authority/ Agency should be independent of the license.

This raises the question if a service like Registered Commons, being a service which promotes publishing of works under a CC license would be in contrast with a service that allows many different licenses. One approach could be that the registration of works which will be released under an open license (such as CC-by) is free of charge whereas registrants would have to pay a fee for the registration of their works if they intend a commercial deployment or want reserve the right to decide on the license at a later date. A common technical platform for content registration and licensing of copyrighted content could be developed as an open source project. This would benefit public interests through non-commercial dissemination of content as well as commercial interests. Any co-branding would be neutral in the sense that it would not favor or penalize digital media business models.

A registration service for commercially deployed works would contend with existing service the CMS are offering to their clients. Actually, some CMS (e.g. the Spanish SGAE) are providing on-line services for the electronic registration of works. However, the SGAE [Membership Agreement](#) (SGAE 2008) implies that members could not publish their works under a CC license, since SGAE owns the exclusive rights for the reproduction and distribution of their members' works. On the other hand, by fresh ideas and new registration services, the existing CMS monopolies could be stimulated to innovate their activities and business models. The CMS BUMA/STEMRA in the Netherlands has a one-year test phase allowing musicians to publish their work under a non-commercial CC license whereas KODA in Denmark is the first allowing CC licensing to all their members (Philapitsch 2008).

What are the challenges going forward in the digital registry space?

The first challenge is to develop policies for Content Registration Authorities/ Agencies that are accepted in many countries, by all value-chain players, including the major rights-holders and CMS.

Small and independent digital registries could issue different identifiers for copyrighted works. This is not a problem as long as the identification of content is unique and identifiers are accepted everywhere. Large registries operated by major rights-holders or the CMS could misuse their monopolies by requiring proprietary technical platforms. As a consequence not every value-chain player could process content identifiers managed by the CMS. National societies could decide to refuse content identifiers issued elsewhere.

As mentioned above, Registered Commons has prepared the technical means to incorporate other registries that could support the [RCid](#) code. GRid provides a system for the unique identification of "releases" of music over electronic networks. The Registered Commons service provides an API to exchange queries for GRids. [Fasttrack](#), an alliance of major music CMS provides tools to exchange information about their members' works by means of a global decentralized database network. A web interface to their [ISWC Network](#) provides a search tool for [ISWC](#) identifiers. It is noteworthy that GRid only identifies the electronic release of a work whereas ISWC identifies a work independently of its manifestations.

The second challenge is to develop a technical infrastructure based on open standards for the protocols and interfaces to communicate with content registries.

In the Digital Media Project ([DMP 2008](#)) we have contributed to the development of technical specifications for content registration and management services. [Chillout](#) (DMP 2008c) is a reference implementation of the DMP specifications. Some of the DMP specifications have been standardized in MPEG (e.g. ISO/IEC 23000-5 Media Streaming MAF, ISO/IEC FDIS 23000-7 Open Release MAF).

We believe that it should be commons sense to implement the technical infrastructure for copyright registration and management services using Open Source software to minimise security risks and gain transparency.

HETEROGENOUS BUSINESS MODELS

The third challenge is to develop business models to finance registration services. Digital content registries may offer value added services to users in the digital media value-chain. Primary services may include the secure and reliable storage of digital content for rights-holders. If necessary, the registry must be able to prove that a first fixation (a "digital original") of a work has been deposited at a given time.

We also found that there is an interest of creative sector promoters to offer secondary services. Incremental access restrictions with advanced access for owners of a voucher are attractive to various stakeholders. For example, the Austrian Chamber of Commerce or the City of Linz, both promoting the Creative Industries (<http://creativwirtschaft.at>), have agreed issuing vouchers to their members for the content registry "CreativDepot" (to be launched in 3Qu08). It will include a personalized feed by way of RSS, or Atom - feed to track users of registered works from individual users-artists.

The following use case describes a secondary service of content registries which could be offered to users who intend to re-use existing works for their own creations.

In order to produce a remix, sampling artists conduct an exploratory creative process, copying different samples from different musical works, adapting and merging them. All this is legal as long as all is kept private. Samples clearance must only take place when the creator wants to make the resulting creation public, i.e. to publish it online or to produce and distribute copies. Verification and rights-clearing of digital content for sampling artists could be provided through the connection of musical pattern analysis with a content repository. The business model is based on a small fee for collecting and redistributing payments.

Some Conclusions on Trust and Governance

As different registries emerge, the challenge of separating practices and maintaining quality standards and trust with different registries approaches.

Registry services should certainly not undermine copyright in the sense that only registered works are protected. As soon as we publish a work it shall be copyrighted, unless we say that we grant specific usages, expressed by licenses like one of CC. However, we want to be able to define for each work or for sets of works usage rules and those must be described somewhere. Automatic enclosure of license related metadata e.g. for pictures would be used by many photographers if it were really easy to handle. Still, the photographer needs to sign her works in a trusted way, when publishing the pictures.

How can we achieve trust? Registration services need to be able to verify, that a person's net identity can be tracked down to real life identity. This can be assured by a web of trust such as CAcert or by testing the user's postal address and bank account with a pro-forma credit card payment. However, most registration services also offer a simple check of the existence of an e-mail address. This method of identifying a creator may be efficient for the publisher, but not for the commercial user, who needs full trust, that the work is claimed to be by the author and nobody else. Fraudulent claims of copyright could not be solved effectively either, at least a conflict resolution procedure needs to be offered. Better user identification would result into less frauds. Following the guidelines of implementing Digital Timestamps (RFC 3161), a revocation procedure needs to be provided for objects which have been signed erroneously or by fraud.

Which organizational structures are providing trust? We need to ensure operating terms for decades and we need to show transparency for the processes. According to economic theory, long term institutions are either public or have incorporated democratic control elements. Purely profit oriented enterprises may be sold sooner or later, refocus their business or just go out of business. In that case, their limited liability will not be of any use for registrants or users of registered works, unless another registry is taking over the data set, which may be a cumbersome issue for

personal data protection. National registries tend to be rather inflexible and non-profit organizations may not take the opportunity to do business.

For Registered Commons, a public - private partnership between an academic institution and a for-profit business co-operative of design and IT experts was found to be an ideal structure for running a registry. The co-operative is being steered by the general assembly, a board of directors, a controlling board and an agency for co-operatives. All four levels guarantee high performance, effective conflict resolution and reasonable quality control.

Independently of the organizational structure, any registry needs to work out a shutdown scenario, which needs to be agreed with the users in the terms of use. An authority to issue global identifier scheme elements would probably be an independent organisation such as ISO or the WIPO.

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