Genero: A Way Out of the Copyright Dilemma

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Meeting:	98. **Audiovisual and Multimedia**

Executive summary:

The current Intellectual Property Rights (IPR) stalemate is a detriment to society and the free Internet, and new modes of collaborative production and dissemination of creative works are not fostered in the current regulatory environment.

Working under the assumption that the current IPR system is far from optimal in providing social welfare, the Genero project was launched to create a new environment for production, reproduction and distribution of creative works. The Genero project will operate in parallel with the InWeave research project, which will investigate which mechanisms provide society with intellectual wealth of the greatest value, by performing research into the entire ecosystem around new modes of production and dissemination.

In a digital world, every use of a work is a copy. As the libraries can lend books to the public but not freely make copies under a strict Copyright regime, the mission of the libraries to make art and science available to the public becomes difficult to fulfill. In contrast, a more liberal regime grants the libraries the necessary permissions to create services to fulfill their mission in the digital realm.

Libraries should focus their attention in promoting the use of free licenses (Free Culture), and should actively participate in shaping the Genero system.

1 - Introduction

The original intent of Copyright was, as the Statute of Anne put it, to be an *Encouragement of Learning* - or as the US constitution framed it 80 years later, *to promote the progress of science and useful arts*[1]. The mechanism chosen to accomplish this goal was to provide the creator with a time-limited, exclusive monopoly on the reproduction and public performance of creative works. As reproduction required an expensive printing press, the law was effectively limited to regulating commercial use of creative works.

Today, a perfect digital copy is reproduced at near zero cost, transforming access to information from a scarce resource to an abundant resource. Anyone with a mobile phone or computer creates thousands of copies of creative works every single day, and the Internet itself is simply one huge copying machine. We are becoming increasingly aware of the consequences of a strict regulatory framework, and the question of whether the current system of intellectual property rights is the best way of providing optimal social welfare arises.

1.1 - The Intellectual Property Rights (IPR) stalemate

We are currently experiencing a series of profound changes in the way digital information is produced, disseminated and re-purposed on ubiquitous digital networks. These changes have led to the introduction of a new model of organizing production that Benkler has described as Commons Based Peer Production (CBPP)[2]. Free/ Open Source Software (FOSS), open content, hardware, innovation or even government are all examples of this new form of production[3] that has as its basis on the assumption that in an interconnected environment information production may be achieved not only by providing incentives, but mainly by abolishing frictions[4].

In order to do this, several objectives must be met. In particular, this ecosystem must be supported by an information management infrastructure that connects consumers of content to the producers of content without creating content monopolies in the process. Also, since participation and involvement in culture is important, there must be a legal framework that facilitates economic compensation in return for reuse of material without pre-written agreements and with low barriers for participation.

The traditional entertainment industry is dominated by a small number of large corporations. These entities operate in a framework of copyright law and rigid legal agreements. Social networks, by contrast, employ non-traditional distribution modes for creative content, and this type of content also forms an important part of social networks. While the two forms of distribution, i.e. the traditional entertainment industry and social networks, are often portrayed as antithetical, in fact they are to a great extent complementary: social networks base a lot of their interactions on commercial content and the latter is more effectively and efficiently distributed over social networks. The problem thus increasingly becomes not how to eradicate one of the two, but how to create hybrid business models where value production may be maximized. Existing research[5] indicates that such models are both desirable and feasible and may be applied in the private as well as in the public sector.

The success of the blogging phenomenon and of web sites like YouTube and Flickr are good examples of how these new distribution modes compete with traditional media. Unfortunately the legal framework that has grown out of traditional media is ill suited to these new forms of content production and distribution, so a new licensing framework is also required.

1.2 - Status of the IPR stalemate

Overall, we may identify two major issues related to IPR regulation and management.

The first one is a direct result of the mismatch between the existing regulatory framework and the current material and economic conditions of production. As numerous researchers have indicated in their work (eg. Benkler[6], Lessig[7] and Boyle[8]), the management of information production should be addressing three key classes of issues: (a) coordinating multiple small contributions, (b) re-purposing existing content and (c) collectively identifying relevant information. The problem is not, then, how to provide incentives for the production of information good but rather how to assist in their identification, reuse and collective production by a myriad of creators engaged in such production for their own reasons. A system that seeks to reduce frictions has to be orientated in the reduction of transaction costs at four levels[9], [10]: (a) technological (e.g. ensuring interoperability) (b) legal (e.g. reducing legal barriers, especially uncertainty and incompatibility of licensing terms) (c) organisational (e.g. introducing processes in organisations allowing the more efficient management of collective information processing) (d) normative (i.e. assisting the production of norms providing soft-regulatory mechanisms; e.g. citation norms in the academic community).

The second one closely relates to the form of the current regulatory system that is not in accordance to the regulatory instruments that are best suited to support creativity and innovation in an interconnected digital environment. Laws are extremely slow both in their formation and application. The existing institutional ecosystem is not well equipped to deal with the challenges of the CBPP mode of production. We should instead look at more advanced techno-legal models such as the ones supported by Creative Commons and its RDF/ XML expressions[11]. At the same time we need to appreciate that

most of the regulation of content even today does not happen at the level of law nor that of the end-user contract, both of which are relatively visible and hence make their producers accountable to the business community and society as a whole. On the contrary, regulations about how content is to flow within and between different organizations is regulated by their internal processes, inter-organizational contracts, policies and procedures and in the case of public interest organizations may be governed by circulars or funding agreements that set the baseline for how content is to be disseminated and used.

As a result, when we seek to provide a solution to the problem of the IPR impasse, we should only look at actual legislative amendments as the last target in a chain of other objectives that should first aim at intervening at this gray regulation level that could nevertheless produced the desirable regulatory results. The Genero project, by being able to tackle all the above mentioned four levels of regulatory intervention, is capable of cultivating a regulatory environment most suitable for the current mode of production.

2 - Genero and InWeave

2.1 The Genero project

The main objective of the Genero project is to enable an ecosystem for creative works that fosters creation of alternative business models and encourages active participation in culture and society instead of passive consumption.

The Genero project was launched by the Norwegian non-profit organization FriBit as an attempt to solve the current IPR stalemate. As an active member of the free culture movement, they have been seeking a solution to the copyright dilemma that would cover the needs of creators and consumers, while preserving the free Internet and civil liberties. Inspired by sources such as "Innovation Happens Elsewhere", "Free Culture" and "Long Tail", FriBit launched the Genero project in collaboration with the free culture movement, commercial players, libraries and academia.

The Genero project is an alternative to existing content production and distribution ecosystems, based on a non-exclusive end-to-end principle, much like the Internet itself. It aims to create a new environment and serve as a connector between the various "free culture service providers" such as SourceForge, Flickr, Jamendo and Magnatune. In addition to connect Free Culture service providers, Genero will also provide the complimentary services required for the network to operate, such as financial instruments, legal and regulatory framework, metadata standards and source codes.

No one player creates or controls the Internet, but standardization bodies and legislators create rules for it to work properly. Being distributed like the Internet, the Genero network will rely upon standardization bodies and service providers for its operation. The NPO Genero Initiative will be launched by the end of 2010 to define the metadata standards, rules and licenses for the Genero network. The Spanish for-profit company SafeCreative is the copyright registrar for several such service providers (including Jamendo and Magnatune), and will be a Genero service provider and a strategic partner of the Genero Initiative. Organizations like Creative Commons and the Open Knowledge Foundation play a key role in the production of legal and technical infrastructures

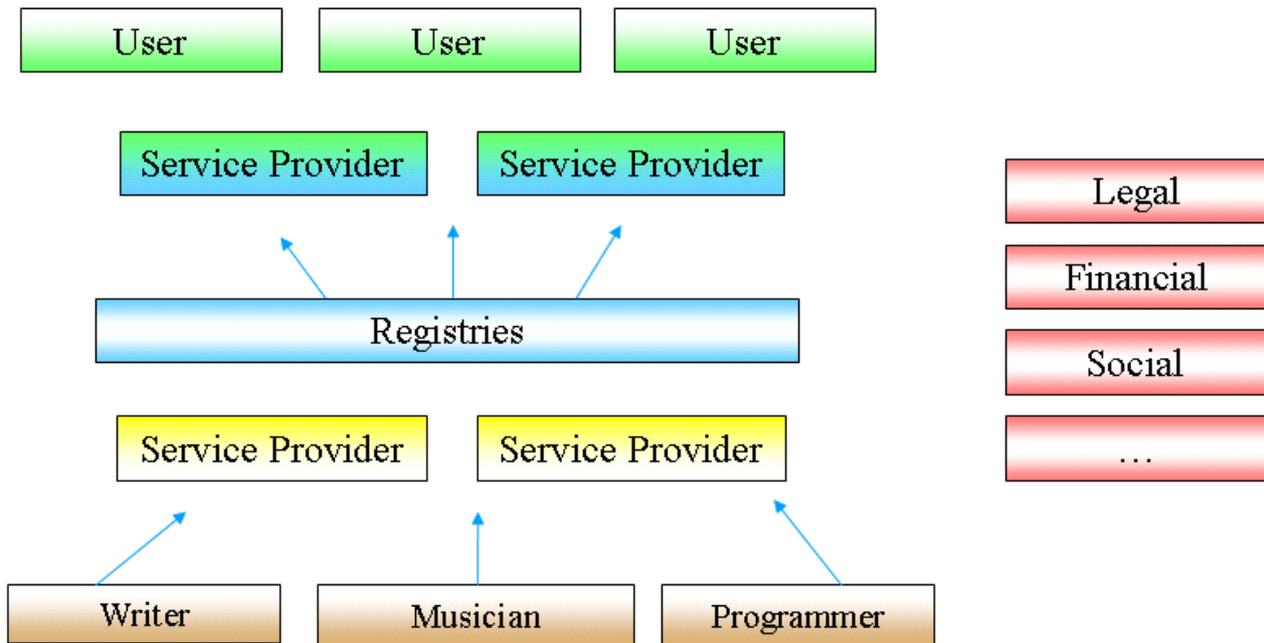supporting the dissemination of free culture, and could help the Genero project to achieve its objectives.

2.2 The Intellectual Wealth and Value project (INWEAVE)

In order to hinder Genero from becoming removed from its objective as technology and markets change, it is imperative that the mechanisms employed by the Genero project be continually measured and evaluated against their objectives. To that end, a separate, ongoing research project will be conducted. The purpose of INWEAVE is to determine which *mechanisms provide society with intellectual wealth of the greatest value*. The mechanisms can be sociological, legal, economical and technical in nature. The project will determine the characteristics of intellectual wealth that are of value to society (low price, high degree of participation, free speech, investigative journalism, etc.)[12] and identify measurable parameters (key performance indicators). For example, as the study by Tsiavos and Korn indicates[12], most memory, cultural and educational organizations using open content licensing seek to produce value that only marginally relates to a monetary objective, whereas the study by Pollock et al. indicates that open data models may be used to produce value in the broader public sector[13]. It will then analyze the Genero model and its compliancy to these mechanisms and propose continual improvements as our understanding of culture, business models, market dynamics and legal frameworks increases. The Genero Initiative will use the INWEAVE research as a basis for changes to the standards, licenses and rules.

The Genero project performed an initial study that determined that the ideal distribution ecosystem should have the following characteristics:

- **The system must be non-exclusive;** ownership of content must be functionally separate from content distribution. This allows taking advantage of the full potential of hybrid open and closed business models.[14]

- **The system must be built upon an end-to-end principle**[15]; similar to Internet neutrality, the service providers must be non-discriminatory, and the system must be able to account for and handle any type of use for any type of content.

- **The system must encourage new distribution channels and technologies.** Incumbent and established technologies and actors should not be able to hinder the advent of competing business models and technologies.

- **Use and reuse of content must be permitted and promoted.**[7]

- **Regular behavior by regular people must be permitted.** Law must reflect the will of the majority of a population, not criminalize them.[16]

- **Conventional law enforcement must be at a minimum, decentralized and contract-based;** Trust and norms must do the work of enforcement.[17]

These characteristics led to the following distribution model:

User	User	User

Service Provider	Service Provider

Registries

Legal
Financial
Social
…

Service Provider	Service Provider

| Writer	Musician	Programmer

A Genero Service Provider on the production side is an agent that provides aggregation services and handles all the necessary registration tasks on behalf of the content creator who merely needs to state his business terms. An example of such business terms may be to charge a sum of USD 5.00 per copy. The metadata describing the work is registered with a Genero registry along with a link, in some form or other, to a digital copy of the work itself. Other Genero Service Providers on the consumer side may search the registry, retrieve the content they want to sell, and sell it using any business model and technology they like, provided they adhere to the stated business terms of the work. Other creators may create derived works of existing works as long as they give the owner of the parent work a "fair share" of any revenue. What constitutes a fair share is determined by guidelines provided by the Genero license. A Genero Service Provider cannot assume the copyright of the content he distributes, nor demand other exclusive arrangements. This is done to ensure horizontal separation of the value chain. Complimentary services such as legal and financial services are provided independently of distribution.

In order to reduce the need for enforcement of conventionaly copyright law, the Genero system will use the separate trust-based system called Informed Individual. The system allows for easy access to reliable and personalized interpretation of any kind of information, by enabling users to generate a web of trust by selecting trusted sources for interpretation. The system separates the access to, interpretation and distribution of information. Users choose trusted entities to perform subjective interpretations, and, when accessing information they get a drillable, weighted aggregate of the combined interpretations generated by each user´s personal web of trust. Genero will use Informed Individual for anti-phishing, soft enforcement and relevance building purposes.

2.2.1 - Iterative research

- INWEAVE will operate in parallel with the Genero project. As illustrated in the following figure, INWEAVE will use iterative action research, while the Genero Initiative and commercial actors will standardize and implement the findings. This constitutes an implementation of the classic action research cycle[18] in the context of a virtual environment[19]. The research process will entail the following four steps:
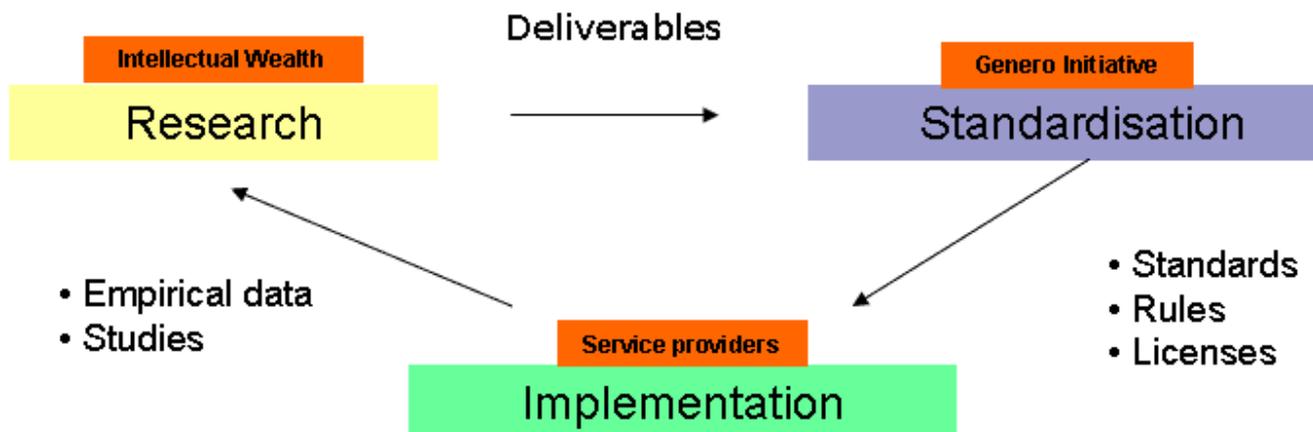
- **Theorise.** INWEAVE will first determine the desirable performance of the Genero ecosystem and determine measurable parameters (low price, high volume, high degree of freedom, high degree of participation etc). Then the project will develop or apply existing theories on how the various mechanisms (social, technical, and economical) should be shaped in order to best achieve the desired outcome. This will be translated into concrete mechanisms (rules, license principles, etc.) and implemented in project deliverables.
- **Standardize.** The deliverables will be adopted by the standards body called Genero Initiative. These deliverables will then go through a standardization process and release various standards and rules. The releases are in the form of content metadata standards, Genero license versions etc.
- **Implement.** Once a change is released, the various service providers (Genero Registries, Genero Service Providers, Genero Payment Providers) implement the changes.
- **Measure.** INWEAVE collects empirical data, qualitative studies, contributions etc from various sources. Based on this data, the next iteration will proceed. Each iteration will be done in a period of one year, and INWEAVE will disseminate its results continually.

3 - The libraries

3.1 - The dilemma of libraries

The purpose of libraries is to make knowledge and culture available for the public. The primary method has traditionally been to choose, catalog, classify and conserve large amounts of paper copies, and lend these to the public. Libraries generally don't have to ask for permission from rights holders to perform

this task. However, in a digital world, every use is a copy, and libraries are not permitted to copy. This is a problem both now as the public expects traditional works to be made available in digital formats, but the problem will also increase in the future as more and more creative works are distributed solely in digital format and never go by the way of a printing press. The libraries need to be able to meet the public in the digital arena. The exclusive nature of copyright makes it exceedingly difficult to create new services, as it entails a massive effort to clear rights. Some libraries have been able to create digital services, but they are generally laden with user-hostile digital rights management (DRM) systems or are available only locally.

The process of clearing rights is costly and restrictive. Some services have all rights cleared to begin with, some start off in a grey area and are granted permissions later, while others never bother to ask for permissions at all. The music service Napster gained rapid popularity and offered a billion dollars up front to the rights holders groups, but the offer was declined[20] and Napster was found guilty of being an accessory to copyright infringement. YouTube was heavily litigated at first, but has now arrived at a compromise with the large rights holders groups (MPAA, RIAA) where YouTube is allowed to operate if they share the revenue of infringing works or remove all content that rights holders claim are infringements (complying to DMCA takedown notices). Some digital services such as Spotify and Amazon spend a lot of effort in clearing rights, and are now capable of delivering popular music services. Other services such as IsoHunt, AllofMP3.com, The Pirate Bay and Newsbin never bothered asking for permission. The libraries generally cannot pay licensing fees and don't have the luxury of moving close to the legal minefield that copyright represents. As the world goes digital, the libraries cannot follow.

3.2 – Libraries and Free Culture

- In order for libraries to be able to fulfill their mission in a digital world, one of two things must happen: **The legislators expand the libraries exception to Copyright law.** The legislators can alter the law so that the libraries are permitted to freely distribute digital works. Such a reform would solve the legal hurdles of the libraries.

- **The libraries focus on creative works with free licenses.** Whereas CopyRight can be described as "all rights reserved", CopyLeft is similarly "some rights reserved". Creative works with free licenses (GPL, Creative Commons etc.) grant any library the necessary permission to create the services their mission requires.

During the last hundred years, copyright has only become more restrictive. As an example, the current policy debate in Norway is solely on how to stop illegal file sharing, and few other considerations are taken into account. It seems unlikely that the libraries will be granted the required legal exceptions in near future. In contrast, CopyLeft is becoming more and more popular. As an example, Flickr passed 100 million CC licensed photos one year ago, and 35 million have been added since[21]. Academia and the libraries have increasingly focused upon open access, which is also the theme for the IFLA 2010 congress. As a conclusion, the long term strategy of the libraries would be a concentrated effort towards promoting free culture.

In the last ten years, non-profit organizations and for-profit companies have begun to position themselves within the free culture arena. If the libraries are to focus on free culture, what would be a natural role for the libraries to assume?

In order to answer this, we must first have a look at existing roles in the free culture ecosystem and the libraries field of opportunities.

- **Create licenses.** Examples are Free Software Foundation and Creative Commons. This field requires a very special area of expertise and adoption. Also, more licenses is not necessarily better. The libraries should simply leave this field to others.

- **Create channels.** Examples are Jamendo for music, Flickr for images, Wikipedia for encyclopedias. The libraries have successfully created some channels and should continue to do so. The Norwegian Reaktor service is a good example in this case. The service is based on open source and permits anyone to use the code to create new channels. One should note that this is generally not a core competence of the libraries.

- **Create technologies.** Examples are Apache, FireFox and Ogg Vorbis. The libraries have involved themselves, e.g. with the development of Semantic Web. This work is important as the amount of information is growing, and building relevance will become paramount. This work should not be left to commercial players alone.

- **Create standards.** Examples of standardization bodies are OASIS for ODF, W3C for HTML. This is an area where the libraries can play an important role. They have long traditions in categorizing information and making it relevant. It is of great importance that the libraries do so in close cooperation with free culture actors, and not create content standards purely for use by the libraries.

- **Create and manage archives.** Examples are the Internet Archive and Europeana. This is a core area for the libraries. Given the recognition, competence and history of the libraries, few can do this job better. When it comes to providing access to these archives, it is important that the libraries understand the principles of open data and 3rd party access through open API's. There are examples of costly projects being conducted, where access to public domain books was made in image format, only available through library websites from IP addresses within the country.

- **Promotion.** Examples include individuals and organizations such as Cory Doctorow, Richard Stallmann, FriBit and Electronic Frontier Foundation. The libraries are well positioned to remind politicians of the original intent of copyright, and take an active role in opposing a stricter copyright regime. Activities to promote the use of free licenses in general could be hosting and attending conferences, responding to public hearings, arranging contests for artists using free licenses, and so forth.

The digital evolution is leading a paradigm change across both research, education and private institutions worldwide. The Internet is becoming a new arena for democratic participation, cultural understanding and innovation, and it is important that libraries continue their mission of enlightenment

in the digital realm as well as the analog. A strict copyright regime restricts the possibilities of the libraries to participate in this arena, while a liberal copyright regime expands them.

3.3 - Libraries and Genero

What Genero does is to create a common ground for creative works with free licenses, and reduces dramatically the transactional costs related to production, distribution and re-use of creative works. Genero provides a basic connectivity framework, which can be used for many purposes related to archiving, searching, relevance-building, production and distribution. It creates a contract-based copyright regime rather than a permission-based regime.

With Genero, anyone can participate, sample and create services as long as they follow the rules. Genero represents just the liberal copyright regime required by libraries, and it seems natural that libraries take an active role in shaping Genero. Creating Genero registries, setting up Genero service providers hosting public domain works, contributing to content and format standards, and participating in InWeave research are only some examples of activities the libraries should initiate or partake in.

Attributions

This paper is based on the InWeave research proposal, located at www.inweave.org.
Special thanks to Dr. Prodromos Tsiavos at the London School of Economics.

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