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Access and reproduction policies of university digital collections

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The access and reproduction policies of the digital collections of 10 leading university digital libraries worldwide are classified according to factors such as the creation type of the material, acquisition method, copyright ownership etc. The relationship of these factors is analysed, showing how acquisition methods and copyright ownership affect the access and reproduction policies of digital collections. The article concludes with rules about which factors lead to specific policies. For example, when the library has the copyright of the material, reproduction for private use is usually provided free with a credit to the source or otherwise mostly under fair use provisions, but commercial reproduction needs written permission and fees are charged. Finally, common practice on access and reproduction policies are extracted and conventional policies are mapped onto digital policies.

1. INTRODUCTION

Libraries are in a transition period from conventional to digital formats and have not yet developed common practices and traditions on policy for digital material. This can prevent cooperation and interoperability in libraries, restricting the usefulness of their services. Conventional policies do not map directly onto digital policies with differences primarily due to the easy duplication properties of digital material.

University libraries have well-established traditions of cooperation and they play a leading role in the production and dissemination of digital material. In addition, university libraries have a leading role to play in using new technologies, such as digital libraries. They have implemented an appropriate infrastructure for the development of digital libraries and policies and they facilitate the use of new technologies by students. Due to their leading position in the academic system and in the scientific community, they have prestige and their practices and policies can be easily disseminated to the rest of the library sector (national, public libraries etc.).

In the study reported here, the access and reproduction policies of the digital collections of 20 leading university digital libraries from three continents were examined and 10 of them are presented here; those which are considered to have the most diversified and innovative access and reproduction policies and are the most active in the area of digital libraries. We were interested in libraries that have large digitization projects and preferably, that use or, even better, develop commonly used software (such as *Greenstone*) to provide their digitized or digital content. In addition, we were interested in libraries which have collections with various *creation types* (digitized, born-digital) or content types of material (video, audio etc.), various copyright owners (libraries, individuals, organizations such as publishers etc.), diversified access and reproduction policies and various acquisition methods (licence, purchase, digitization of library or third-party material etc.). The libraries

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studied, corresponding to the above criteria, are central academic libraries of large universities which act as the coordinating bodies for the entire library system of their universities.

Similar work has been undertaken previously by Meyyappan (2000), who described the status of 20 digital libraries, mentioning also their access policies. Also, Walters (2003) presents an introduction to the acquisition of video media (DVD and VHS) in academic libraries, with an emphasis on the procedures most appropriate for undergraduate colleges. However, no previously studies have focused exclusively on access and reproduction policies.

To collect the data for this study, we derived information from the websites, in some cases supplemented by personal communication with the libraries. In Section 2, we analyse the access and reproduction policies of the university digital collections for each library in turn. In Section 3, we classify the policies according to factors such as the type of the material, its acquisition method, copyright ownership etc., and we present some quantitative data, indicating which factors lead to specific policies. We also analyse how the factors affect the policies. In Section 4, we extract common practice and derive generalized rules on policies for digitized and digital material separately. We present the most common practices on policies which the libraries follow. In Section 5, we map conventional access and reproduction policies on to their digital counterparts and we compare them, focusing mostly on their differences. We examine which conventional policies can be mapped to new digital policies and discuss the advantages and disadvantages of this transition. Finally, concluding remarks are made in Section 6.

Most libraries face difficulties in resolving the problems that arise due to the properties of digital material, such as, for instance, access to university digital collections by students on campus and by distance learners. This article provides useful information on university library practices concerning these problems and about common practices related to access and reproduction policies.

2. POLICIES OF DIGITAL COLLECTIONS

In this section, we briefly analyse the access and reproduction policies of university digital collections for each library studied in turn.

2.1 Policies of Aladin Digital Library (ADL)

The *Aladin Digital Library* (ADL) contains digitized collections, which, except for the *Felix E. Grant Collection* (FEG), are freely accessible for onsite and offsite users through the Internet. In most cases, reproduction for private use is free with a *credit* (mention) to the source. The FEG is restricted to registered onsite users for

personal and educational use. Any *other use* (commercial reproduction, distribution, redistribution, publication, transmission whether by electronic means or other, retransmission, copying, storage in any medium, systematic or excessive downloading etc.), needs written permission from and fees paid to the copyright owner (usually other owners or rarely, the *University of the District of Columbia*) (University of the District of Columbia, 2003).

2.2 Policies of Dartmouth College Digital Library (DCDL)

The *Dartmouth College Digital Library* (DCDL) contains born-digital material copyrighted by the DCDL or licensed (material) and copyrighted by other owners. Due to licensing agreements, many digital resources have a variety of access policies (free, *onsite* [students, faculty and staff] only, on-campus onsite only etc.) (Dartmouth College Library, 2003). Beyond fair use, reproduction requires the written permission of the copyright owner (DCDL or other owners) (Dartmouth College Library, 2004).

2.3 Policies of Harvard University Library (HUL)

Harvard University Library (HUL) contains digitized and/or born-digital material, which is owned, held or licensed by *Harvard University* (HU) and is provided solely for the purpose of teaching or individual research. Any other use requires permission of HU (Harvard University Library, 1999). HU is responsible for the use and reproduction of the material, independently of the copyright ownership. Most digital resources are only accessible onsite. Others are only accessible on-campus and onsite because of the type of the material (e.g. CD-ROMs) or the licensing agreements. Offsite users do not have access to most of HUL's digital resources.

2.4 Policies of Northwestern University Library (NUL)

Northwestern University Library (NUL) acquires born-digital material through licence and/or purchase and digitizes its own copyrighted or free third-party material. Each collection or type of material may have different copyright or reproduction restrictions. Reproduction is on a case-by-case basis according to the copyright ownership. The born-digital material is provided with various access policies (free, onsite only, on-campus onsite only, onsite and some offsite etc.) according to the user category (students, faculty and staff, alumni, affiliates and visitors). The digitized collections are freely accessible, except some cases (e.g. *Video Encyclopedia of the 20th Century*) where the access is restricted to onsite users only (Northwestern University Library, 2003).

2.5 Policies of North Carolina State University Libraries (NCSUL)

North Carolina State University Libraries (NCSUL) digitize their own copyrighted material and acquire third-party copyrighted born-digital material through licence and/or purchase. The copyright of digital material is complicated and varies, as does access (free, onsite only, onsite and some offsite etc.), from collection to collection, however. Only onsite users may reproduce the licensed resources for non-commercial, personal or educational purposes. Any other use is prohibited (NSCU Libraries, 2002). Except for cases of fair use, reproduction requires the written permission of the copyright holder and/or licence fees.

2.6 Policies of Cambridge University Library (CUL)

Cambridge University Library (CUL) acquires third-party copyrighted born-digital material through licence and/or purchase or rarely through voluntary deposition (Department for Culture, Media and Sport, 1998) and digitizes its own copyrighted material. The born-digital material has various access policies (free, onsite only, on-campus onsite only etc.) (Cambridge University Library, 2003). The digitized collections, except for the *Gutenberg Bible* collection, are freely accessible and provided for private study and non-commercial use. Any other use requires the written permission of CU and possible fees or when the material has other copyright owners, written permission from and possible fees paid to the owners, but CUL reserves the right to charge a facility fee.

2.7 Policies of Cornell University Library (COUL)

Cornell University Library (COUL) digitizes its own copyrighted material or acquires third-party copyrighted digital material through licence and/or purchase. The digital collections that are copyrighted by COUL can be used for personal and research purposes only. Any other use, beyond that allowed by fair use, needs written permission from COUL, which will be granted or not, on a case-by-case basis. In addition, a usage fee may be required depending on the type of the proposed use (Cornell University Library, 2003). In digital collections that are copyrighted by other owners, use, beyond that allowed by fair use, requires written permission from and fees paid to the copyright owner. The digital collections have two access policies: free (*Samuel J. May Anti-Slavery Collection* – SJMAS, *Historical Monograph Collection* – HM, *Cornell University Image Collections* – IC etc.) and on-campus onsite only (*Past Masters* – PM, *Patrologia Latina* – PL etc.). However, even the freely accessible digital collections have differences in access, copyright and reproduction terms.

2.8 Policies of the Miguel de Cervantes Digital Library (MdCDL)

The *Miguel de Cervantes Digital Library* (MdCDL) digitizes its own or public domain or free third-party material and creates its own born-digital material on which it has the copyright. In addition, MdCDL acquires digitized and born-digital material through licence, which is copyrighted by individuals or by MdCDL depending on the licence. Access (onsite and offsite) and reproduction for private use are free in all collections. Commercial reproduction is strictly prohibited.

2.9 Policies of the New Zealand Digital Library (NZDL)

The *New Zealand Digital Library's* (NZDL) digitized collections are freely accessible for onsite and offsite users through the Internet and can be searched and browsed with *Greenstone* digital library software. The copyright of the material may belong to various owners or to nobody (public domain). The collections are freely accessible, however. The user can view, download and print the material without restrictions or fees (e.g. *Computer Science Technical Reports*, *Music Library*, *Humanity Development Library* – HDL). Reproduction for private use is free with a credit to the source, but commercial reproduction is prohibited. In fact, the HDL collection is not only freely accessible through the Internet, but is also available on CD-ROM (for a fee), for distribution in developing countries.

2.10 Policies of the Glasgow Digital Library (GDL)

The *Glasgow Digital Library* (GDL) is a distributed digital library based in Glasgow, which contains digitized and born-digital material that is created and maintained by different projects (GDL and other institutional, university and library projects), by organizations, institutions, universities, libraries and individuals. The material is freely accessible for onsite and offsite users through the Internet. The copyright belongs to various copyright owners, such as publishers, libraries, individuals etc. depending on the collection. The metadata of every collection refer to the copyright and reproductions terms. Usually, reproduction for non-personal use requires the written permission of the copyright owner.

3. CLASSIFICATION OF POLICIES

In Table 1, we classify the access and reproduction policies of the university digital collections, according to the type of the material, the acquisition method and copyright ownership. The relations among the factors and the policies are analysed and the diversification of policies that arise are illustrated. The access and reproduction policies used for the digitized and the born-digital material separately are then presented.

Table 1. Factors of access and reproduction policies for digital collections

Collection/ Library	Location	Creation type of the material	Acquisition method of the material	Copyright owner	Off-campus onsite access	Offsite access	Private reproduction	Commercial reproduction		
								Allowed	Written permission by	Fee to
ADL	USA	Digitized	Library	Library	Yes	Yes	Yes	No	N/A	N/A
FEG	USA	Digitized	Library	Library, Individuals, Organizations	No	No	Yes	Yes	Owners	Owners
HM	USA	Digitized	Library	Library, Public domain	Some	Some	Fair use	Yes	Library	
IC	USA	Digitized	Library, Third-party	Library, Individuals	Yes	Some	Fair use	Yes	Library, Owners	Library, Owners
NUL, NCSUL	USA	Digitized	Library, Third-party	Library ^a	Yes	Mostly yes	Case by case	Case by case	Case by case	Case by case
NCSUL	USA	Digitized	Library	Vary	Yes	Some	Fair use	No	N/A	N/A
SJMAS	USA	Digitized	Library	Library	Yes	Yes	Fair use	Yes	Library	Library
CUL	UK	Digitized	Library, Third-party	Library ^a	Yes	Mostly yes	Yes	Yes	Library, Owners	Library, Owners
MdCDL	ES	Digitized	Library, Third-party	Library, Public domain	Yes	Yes	Yes	Some ^b	Library	No
NZDL	NZ	Digitized	Third-party	Library, Individuals, Organizations, Public domain	Yes	Yes	Yes	No	N/A	N/A
HUL	USA	Digitized, Born-digital	Library	Library	Yes	Mostly no	Yes	Yes	Library	Library
			License, Purchase	Library, Organizations	Some	Mostly no	Yes	Yes	Library	Library, Owners
MdCDL	ES	Digitized, Born-digital	License	Vary	Yes	Yes	Yes	No	N/A	N/A
GDL	UK	Digitized, Born-digital	Library, Third-party	Library, Individuals, Organizations	Yes	Yes	Yes	Yes	Owners mostly	Owners
DCDL	USA	Born-digital	Library	Library	Yes	Some	Fair use	Yes	Library	Library
			License, Purchase	Organizations	Some	No	Fair use	Yes	Owners	Owners
NUL, NCSUL	USA	Born-digital	License, Purchase	Library, Organizations	Some	No	Case by case	Case by case	Case by case	Case by case
NCSUL	USA	Born-digital	License, Purchase	Vary	Yes	Some	Fair use	No	N/A	N/A
PM, PL	USA	Born-digital	License	Individuals	Yes	No	Fair use	No	N/A	N/A
CUL	UK	Born-digital	License, Purchase, Voluntary deposit	Organizations	Vary	Mostly no	Yes	No	N/A	N/A

^a The library is usually the owner of the digitized material, but sometimes there are other owners or the material is in the public domain.
^b Commercial reproduction is usually prohibited, but in some cases is merely permitted with written permission from the MdCDL.

The table is ordered according to the creation type of the material. There are three blocks or categories: digitized, digitized and born-digital, and born-digital. Subsequently, each block is sorted according to geographical location, and finally, the collections or the libraries are ordered alphabetically for each geographical location.

Columns one and two give information about the name of the collection and its location.

The third column shows how the digital material was created. We have two cases: *digitized* or *born-digital* and a collection can have either one or both types of material. The fourth column shows the acquisition method of the material, which has five values: *library*, *third-party*, *licence*, *purchase* and *voluntary deposit*. *Library* means that the library has created its own digitized or born-digital material. *Third-party* means that the library

has digitized or acquired third-party material. *Licence* means that the library has acquired digitized and/or born-digital material through licence. *Purchase* means that the library has purchased digitized and/or born-digital material. *Voluntary deposit* means that the library has acquired born-digital material through voluntary deposit.

Column five presents the copyright owner, which has five values: *library*, *individual*, *organization*, *vary* and *public domain*. *Library* means that the copyright of the material is owned by the organization that the library belongs to and is administered by the library. *Individuals* and/or *organizations* mean that the copyright belongs to owners other than the library, which can be individuals and/or organizations respectively. *Vary* means that the copyright varies from collection to collection. *Public domain* means that nobody has the copyright of the material.

Access policies are stated in the sixth and the seventh columns. On-campus access for onsite users is always free. The sixth column shows the off-campus access policy for onsite users and the fifth the offsite access policy. In these columns, we have three values: *yes*, *no* and *some*. *Yes* means that the off-campus onsite and the offsite access are both free. *No* means that the off-campus onsite and the offsite access are not provided. *Some* means that the off-campus onsite and the offsite access are provided in some cases. In off-campus onsite access, we also have the value *vary*, meaning that the off-campus onsite access varies from item to item. In the offsite access column, we also have the values *mostly no*, meaning that the offsite access is not provided in most cases, and *reciprocal, mostly yes*, meaning that the offsite access is provided in most cases.

The eighth column shows the *private reproduction* policy (or reproduction for private use), which has three values: *yes*, *fair use* and *case-by-case*. *Yes*, means that private reproduction is free with a *credit* (mention) to the source, *fair use* means that it is provided under fair use provisions and *case-by-case* means that it is on a case-by-case basis.

The ninth, tenth and eleventh columns refer to the commercial reproduction policy. The ninth column shows if commercial reproduction is permitted, which has four values: *yes*, *some*, *no* and *case-by-case*. *Yes* means that commercial reproduction is permitted with written permission from and fees paid to the owner (library and/or other owners), but sometimes (e.g. MdCDL), even if written permission is needed, fees are not charged. *Some* means that commercial reproduction is sometimes permitted, *no* means that it is not authorized and *case-by-case* means that it is on a case-by-case basis.

The tenth column states who gives written permission for commercial reproduction, if it is needed. We have five values: *library*, *owners*, *owners mostly*, *case-by-case* and

N/A. *Library* means that written permission is given by the library, *owners* means that it is given by owners other than the library, *owners mostly* means that it is given mostly by other owners and less by the library. *Case-by-case* means that written permission is examined on a case-by-case basis and *N/A* means that it is not applicable. *Library* and *owners* can appear as value *library*, *owners*, if both the library and the owners require written permission.

The eleventh column states to whom the fee should be paid for commercial reproduction, if it is needed. We have five values: *library* meaning that the fee is paid to the library, *owners* meaning that it is paid to owners other than the library, *case-by-case* meaning that the payment of the fee is examined on a case-by-case basis, *no* meaning that a fee is not charged and *N/A* meaning that it is not applicable. If the value *library*, *owners* appear, the fee should be paid to both library and owners.

3.1 Factors and policies for digitized material

Some general rules for the handling of digitized material can be derived from Table 1 and its discussion, showing that there is a variety of arrangements depending on ownership of the material and its copyright. Off-campus onsite access is free when the library digitizes its own material and has the copyright (e.g. ADL, SJMAS). Offsite access is usually free (e.g. ADL) or sometimes it is not provided (e.g. HUL). Private reproduction is free with the sole requirement to *credit* (mention) the source (e.g. ADL) or rarely under fair use provisions (e.g. SJMAS). Commercial reproduction is allowed with written permission from and fees paid to the library (e.g. SJMAS) or sometimes it is not authorized (e.g. ADL).

Off-campus onsite access is free or limited, or not provided when the library digitizes its own material but the library and/or other owners and/or *nobody* (public domain) has the copyright (e.g. NCSUL, HM, FEG). Offsite access is limited (e.g. HM), or not provided (e.g. FEG). Private reproduction is under fair use provisions (e.g. NCSUL) or, rarely, it is free with a credit to the source (e.g. FEG). Commercial reproduction is not authorized (e.g. NCSUL), or it is allowed with written permission from and fees paid to the library (e.g. HM) or to other owners (e.g. FEG).

Off-campus onsite access is free when the library digitizes its own and third party material, and the library mostly has the copyright (e.g. NUL, CUL). Offsite access is mostly free (e.g. NUL, CUL). Private reproduction is free with a credit to the source (e.g. CUL) or it is on a case-by-case basis (e.g. NUL). Commercial reproduction is on a case-by-case basis (e.g. NUL), or it is allowed with written permission from and fees paid mostly to the library or sometimes to other owners (e.g. CUL).

Off-campus onsite access is provided on a limited basis when the library acquires digitized material through licence and purchase, and the library mostly has

the copyright (e.g. HUL). Offsite access is mostly not provided (e.g. HUL). Private reproduction is free with a credit to the source (e.g. HUL). Commercial reproduction is allowed with written permission from the library and fees paid mostly to the library or sometimes to other owners (e.g. HUL).

Off-campus onsite access is free when the library digitizes its own and/or third party material or acquires digitized material through licence, and the library and/or other owners and/or nobody have the copyright (e.g. NZDL, MdCDL, IC). Offsite access is free (e.g. NZDL) or, rarely, it is provided on a limited basis (e.g. IC). Private reproduction is free with a credit to the source (e.g. MdCDL) or, rarely, under fair use provisions (e.g. IC). Commercial reproduction is not authorized (e.g. NZDL) or, rarely, it is allowed on a limited basis with written permission from the library (e.g. MdCDL), or it is allowed with written permission from and fees paid to the library or to other owners (e.g. IC).

The university libraries of the USA allow private reproduction mostly by applying the fair use doctrine. The rest allow private reproduction with reference to the authors. Similar observations hold for the born-digital material.

3.2 Factors and policies for born-digital material

Similar rules apply to born-digital material. Off-campus onsite access is free when the library creates its own born-digital material and has the copyright (e.g. DCDL). Offsite access is limited (e.g. DCDL), or not provided (e.g. HUL). Private reproduction is free with a credit to the source (e.g. HUL) or under fair use provisions (e.g. DCDL). Commercial reproduction is allowed with written permission from and fees paid to the library (e.g. HUL).

When the library acquires born-digital material through licence and/or purchase and/or voluntary deposit, and other owners have the copyright (e.g. DCDL, CUL, PM, PL), off-campus onsite access is provided or is limited or varies according to the collection. Offsite access is mostly not provided (e.g. DCDL). Private reproduction is free under fair use provisions (e.g. PM) or rarely with a credit to the source (e.g. CUL). Commercial reproduction is not authorized (e.g. PL) or it is allowed with written permission from and fees paid to the owners (e.g. DCDL).

When the library acquires born-digital material through licence and/or purchase, and the copyright belongs to the library and other owners or varies from item to item (e.g. HUL, NUL), off-campus onsite access is limited or it is free. Offsite access is not provided (e.g. NUL) or, rarely, it is limited (e.g. NCSUL). Private reproduction is free with a credit to the source (e.g. HUL), or under fair use provisions (e.g. NCSUL), or it is on a case-by-case basis (e.g. NUL). Commercial reproduction

is not authorized (e.g. NCSUL) or it is allowed with written permission from the library and fees paid mostly to the library or sometimes to other owners (e.g. HUL), or it is on a case-by-case basis (e.g. NUL).

3.3 Quantitative analysis of table and remarks

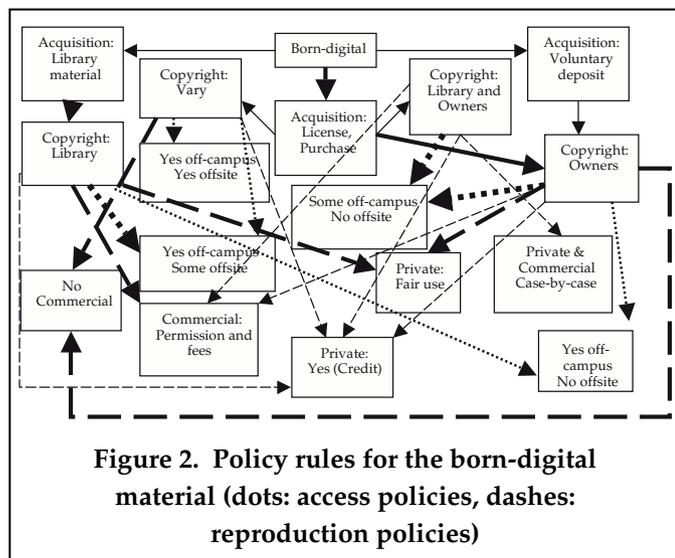
From the analysis above, we see that specific factors lead to specific policies. We can derive some quantitative data about which factors lead to specific policies which are usually related to the copyright factor.

3.3.1 Acquisition and copyright

- Libraries seem to prefer (79 percent) digitizing their own material on which they have the copyright.
- Libraries also often digitize free third-party (43 percent) or public domain (21 percent) material.
- Born-digital material is acquired mostly (70 percent) through licence and/or purchase from copyright owners (organizations, individuals etc.).
- Sometimes (in 30 percent of cases) libraries create their own born-digital material on which they usually have the copyright.
- Born-digital material is rarely (in 10 percent of cases) voluntarily deposited.
- When the acquisition of born-digital material is mostly through licence and/or purchase, then the copyright belongs to other owners (43 percent of cases) or to the library and other owners (approximately 29 percent) otherwise it varies from item to item (approximately 28 percent).

3.3.2 Copyright, off-campus onsite and offsite access

- In 68 percent of cases, off-campus onsite access is provided. 22 percent provide it in a limited sense. Only 5 percent do not provide off campus onsite access and, in 5 percent of cases, it varies according to the collection.
- 42 percent of the libraries provide full offsite access. 21 percent provide limited access and 37 percent do not provide access at all.
- When offsite access is limited or not provided, there are licensing restrictions and/or the copyright belongs to other owners. Sometimes (in approximately 11 percent of cases), even if the library is the copyright owner, offsite access is limited or not provided because the library provides only onsite access.
- In 47 percent of cases, off-campus and offsite access are different. In such cases, when off-campus onsite access is limited, offsite access is not provided due to licensing and copyright restrictions. In addition, when off-campus onsite access is provided, offsite access is limited or it is not provided because either the library provides only onsite access or the copyright belongs to other owners. Finally, when off-campus



onsite users only with a credit to the source and with written permission from and fees paid to the owner (library and/or other owners) respectively. Another frequently used practice is the prohibition of commercial reproduction.

Most libraries acquire born-digital material through licence and/or purchase with organizations (e.g. publishers) and individuals. Most libraries have decided to acquire licensed born-digital material if they will be responsible for the use of this material. Common practice shows that other owners usually copyright the licensed material. Another reasonable approach is that libraries and other owners have the copyright of the licensed material. A reasonable choice would be for libraries to provide their own copyrighted born-digital material with free onsite and some offsite access, to permit private reproduction under fair use provisions and to require written permission and fees for commercial reproduction.

When there are licensing restrictions and the copyright varies (libraries and other owners, other owners only etc.), the common approach is the provision of free on-campus, some off-campus and no offsite access. Common practice shows that private reproduction is either permitted with a credit to the source or under fair use provisions, and commercial reproduction is not authorized. Another alternative reasonable choice is the provision of commercial reproduction with written permission from and fees paid to the owners.

5. MAPPING BETWEEN CONVENTIONAL AND DIGITAL POLICIES

Conventional access and reproduction policies were mapped onto and compared with their digital counterparts. Differences were apparent. Conventional access

inside library premises for printed material corresponds to Internet access inside library premises for digital material. However, Internet access (digital material) can be concurrent and simultaneous through workstations inside library premises, unlike conventional access because of the restricted number of copies (printed material). Conventional library loans for on-campus onsite users corresponds to on-campus onsite Internet access. Unlike conventional loans for which the user must visit the library, on-campus onsite Internet access is remote (e.g. campus room, workstations outside of the library).

Conventional ILL corresponds to off-campus onsite and the offsite Internet access. However, ILL is complicated, time-consuming, restricted to users of specific affiliated libraries and needs the intermediation of the librarian. In contrast, off-campus onsite and the offsite Internet access is simple, rapid, and can be remote, independent of the user's affiliation or location and without intermediation. In general, libraries can implement more liberal digital policies than with conventional material, because of the relaxing of the physical copy restriction or the protection problem. However, copyright limitations may restrict the policies.

Digital reproduction (with a credit to the source or under fair use provisions) corresponds to conventional reproduction (photocopying) inside library premises under fair use provisions and to conventional document delivery procedures. However, the librarian can restrict the extent of conventional photocopying or document delivery procedure and enforce limitations on local users. In contrast, limitations on digital reproduction cannot be enforced and it is the user's responsibility to respect the fair use doctrine. However, in cases where there are licensing and copyright limitations, the library may forbid not only reproduction but also remote access.

6. CONCLUSIONS AND FUTURE RESEARCH

The relationship among the factors (creation type of the material, acquisition method, copyright ownership etc.) and the access and reproduction policies of the digital collections of leading university digital libraries have been examined. Policies were analysed and classified and we concluded with some generalized rules about which factors lead to specific policies. For example, when the library has the copyright of the material, private reproduction is free with a credit to the source in 50 percent of cases. In addition, copyright ownership defines policies for commercial reproduction, which, when allowed, needs written permission from, and fees paid to, the owner. Finally, we extracted common practice on access and reproduction policies, and mapped and compared conventional and digital policies.

For future research, it would be interesting to link

the motivations of libraries, when they decide to provide digital content, with the policies. The motivations refer to the thoughts and the reasons that lead the decision makers of libraries to provide digital content. The library may desire to provide digital content in order for it to be widely and permanently accessible or easily preserved, for example, or to accommodate students with concurrent multiple digital copies, or to use new technologies, or to get exposure and fame by digitizing and providing its special collections etc. These motivations may define and impact on access and reproduction policies. Finally, we can compare the usage of conventional versus digital material and correlate usage with policies.

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