



MINERVA – Ministerial NETwork for Valorising Activities in digitisation

WP4 Interoperability and Service Provision - IPR sub-group

Italian workgroup “Problems Connected to Data Protection and Intellectual Property Rights in Relation to On-line Accessibility of Cultural Heritage”

DATA PROTECTION AND INTELLECTUAL PROPERTY RIGHTS IN RELATION TO ON LINE ACCESSIBILITY OF CULTURAL HERITAGE. FIRST REMARKS

Working paper

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INTRODUCTION

European cultural heritage and scholarly patrimony is of inestimable public value, and has played a fundamental role in the social and economic development of diverse communities and will acquire even more importance with the enlargement and construction of a united Europe.

The availability of quality digital contents provides an indispensable support in terms of training and information for the development of the knowledge society.

Access to digital content of a cultural and scholarly type represents one of the crucial junctions of the law in the digital era. In a historical phase in which the protection of intellectual property and the personal data seems to be conditioned by technological aspects at least as much by the law, the question of access is at the centre of a deep reflection among the various components of the information society.

In the digital era the variety and wealth of the rights held by both private and institutional entities has increased substantially, and as a consequence there is often a hybrid interaction, and sometimes a conflict of interests.

In the 1990s a lively debate developed on a national and international scale, on the questions inherent in the protection and the management of intellectual property rights. This was determined by the ever more urgent necessity to develop and specify the existing legislation in this sector, in order to achieve adequate legislation for new access modalities and new uses of information.

In order to guarantee high levels of quality in access services to cultural contents, ensuring the economic sustainability and a sure and transparent judicial context, it is necessary to define differentiated solutions for rights management, trying to find a balance among the diverse needs of players with interests in digital cultural content, and above all among the educative and cultural objectives of institutions and the needs of authors and producers.

The multiplicity of actors and the variety of assets, functions and actions developed by holders of historical and cultural collections of various kinds, and the elaboration of ever wider and more interoperable digitisation projects render more complex the scenario in which to investigate the legislative framework. In this complex scenario it may be possible to define a common procedure to guarantee the respect of intellectual property rights and rights to the access of information and knowledge, as well as the citizens' rights to privacy as users of services or holders of works of public interest.

The problem of the protection of works made available to all and the guarantee of authenticity of the data being made available needs to be taken into account.

It therefore appears necessary that the MINERVA network country partners take on the commitment to examine in depth the problems connected to data protection and the safeguarding of intellectual property rights in relation to on line access to cultural heritage and develop shared working proposals for rights' management in the digital context, for the provision of cultural services to citizens and the development of business models in the digital culture sector.

THE ITALIAN WORKGROUP: “PROBLEMS CONNECTED TO DATA PROTECTION AND INTELLECTUAL PROPERTY RIGHTS IN RELATION TO ON-LINE ACCESSIBILITY OF CULTURAL HERITAGE”

The Lund Action Plan supported by the MINERVA project, defines among the others the objective to “*improve the quality and usability of contents, to promote unified access modalities for citizens [...] In order to do so it is necessary to [...] develop coherent models and good practices for the management of rights and assets and develop related business models for digital culture*”.

In the ambit of Minerva’s *work package 4*, dedicated to “interoperability and the providing of services”, specific sub-groups were set up in the United Kingdom, in Greece and in Italy to put the theme of rights on the discussion table to compare opinions. The group worked in agreement and in coordination with the European partners of Minerva and in cooperation with other European projects that deal with similar themes and are headed by the General Directorate for Information Society Technology of the European Commission.

The primary objective is to define possible solutions to achieve a balance between universal use of cultural and scientific heritage on line and rights and data protection, in particular intellectual property rights, in a framework of economic sustainability.

The Italian workgroup is presently made up of representatives of diverse sectors in which MiBAC¹ operates. It is open to representatives from the research community and private enterprise working in the sector. In time the group will be enriched by new professional competences and will open up to the music, cinema, and contemporary art sectors, to regional and local entities, and to holders of ecclesiastic heritage.

The ambit of enquiry is directed towards the activities of cultural institutions and the problems of access to data through a telematic network.

The present document represents the beginning of a reflection and is intended as a stimulus to the other Minerva partner countries for the constitution of similar workgroups.

¹ Ministero per i Beni e le Attività Culturali (Italian Ministry of Culture); <http://www.beniculturali.it>

1 DIGITAL RESOURCES MANAGED BY CULTURAL INSTITUTIONS AND THE REPECT OF RIGHTS

1.1 DIGITAL RESOURCES MANAGED BY CULTURAL INSTITUTIONS

Public cultural institutions manage digital resources illustrated as follows:

- **digital resources of reproduction** of cultural assets;
- **born digital resources** such as journals, encyclopaedia, websites, bibliographies, manuals, databanks (cataloguing, bibliographical, documentaries, images), OPAC, thesauri, controlled word terms, word lists, indexes, Web art, computer art;

Such resources can be produced by the institutions themselves, alone or in collaboration with external actors (institutional, companies, publishers, consultants, etc.) or entirely by external actors of a varied legal nature.

The individuation of the rights connected to the resource is a priority as regards to the organisation and management of services on the part of the cultural institutions, and is closely linked to the actors who have contributed to the creation of the digital resources.

The service activities must respect the restrictions imposed by law, but can benefit from limitations and exceptions to rights that the law provides for in favour of services of public interest.

In the case of digital works commercialised by private parties, public use must be regulated by a contract or a license.

In the case of digital works produced within cultural institutions (*born digital* or reproduction of materials owned by them) the institution will define its own policy for making the products available within the framework of the existing legislation.

In the case of products created for and on behalf of third parties, under any form of contract, public institutions retain, according to law, rights of use. In any case it is always appropriate that the rights, including the right to eventually modify the work commissioned, be clearly regulated by proper agreements or contracts at the moment of assigning the commission.

1.2 THE REFERENCE LEGISLATION FOR THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS ONLINE

The development of digital technologies and networks has profoundly modified the framework regarding copyright safeguards, both in terms of the number and diversity of rights that apply to digital resources and affect their owners, both because of the new distribution mechanisms and new uses of content. The ownership of the rights to digital cultural resources can therefore prove to be quite complex due to the contribution of multiple actors of a varied legal nature in their realisation.

The harmonisation of legislation at an international level was initiated in the past because of the intrinsic characteristics of intellectual products, which have always circulated beyond national borders. The digital networks and technologies have accelerated and greatly amplified this phenomenon, rapidly transforming the scenario of use of the so-called works of intelligence.

Since the 1990s, copyright legislation has undergone considerable updating, modification and integration at the national, European, and international levels, in order to adapt to technological developments and the changed reality of the information society. If the changes underway were to lead only to greater limits regarding access and greater restrictions for the use of digital materials covered by copyright, there would be the risk of acting as a barrier to the development of on line access services, and as a consequence limit the potential for spreading knowledge offered by the Internet.

The legislation that regulates intellectual property is segmented over three levels: international (conventions, agreements, treaties), European, national. The report *EUROPEAN MUSEUMS' INFORMATION INSTITUTE – DISTRIBUTED CONTENT FRAMEWORK (EMII-DCF) Workpackage 2, Legal Requirements*² analyses in depth international and European legislation with specific reference to cultural institutions. We, therefore, refer to the document for an exhaustive treatment, while the milestones of the national legislation are stated later.

1.2.1 INTERNATIONAL LEGISLATION

The first and fundamental source for the international protection of copyright is the *Berne Convention for the protection of literary and artistic works*, signed in 1886 and updated many times throughout the years up to 1971³; many countries have adhered to it, among which all the present Member States of the European Union.

In 1967, in the ambit of the United Nations, the World Intellectual Property Organization (WIPO) was founded and it assumed the form as the direct heir of the Convention, “*with the objective of promoting through international cooperation the creation, dissemination, use and protection of products of the human mind for the economic, cultural, and social progress of all mankind*”⁴.

In 1996 two WIPO treaties were signed:

- *WIPO Copyright Treaty - WCT*
- *WIPO Performances and Phonograms Treaty –WPPT*, in order to up date international rules of protection

Both treaties were ratified by the European Union Council in March 2000.

Moreover, in 1995 the WTO – World Trade Organisation promoted the agreement *Trade Related Aspects of Intellectual property Rights - TRIPS*). The agreement takes into consideration all the aspects which are important for commercial ends, therefore covering the whole range of copyright and connected rights and industrial rights (brands, patents, geographic indications, industrial designs etc.).

1.2.2 EUROPEAN LEGISLATION

² EUROPEAN MUSEUMS' INFORMATION INSTITUTE – DISTRIBUTED CONTENT FRAMEWORK². Workpackage 2 Legal Requirements, *Legal Requirements Report and Licensing Agreement Templates*, ed. Naomi Corn [et al.], soon to be published on its site: www.emii-dcf.org. The *Executive Summary* is presently consultable at the: <http://www.emii-dcf.org/dokument/EMII-DCF%20WP02%20-%20Executive%20Summary.pdf>. The Italian translation is currently being diffused.

³ The treaty was signed on the 9th of September 1886 and successively revised (the last time in Paris 24July 1971).

⁴ *WIPO Intellectual Property Handbook*, Genève 2001.

Since 1988 the European legislator has enacted various directives with the objective of harmonising the protection afforded copyright and connected rights in each Member State.⁵

Two directives have a particular importance for the digital context:

- The Directive 96/9/CE, relative to the legal protection of databases, which introduces the right *sui generis*, reserved to the founder of the databases, is of particular interest to cultural institutions;
- The Directive 2001/29/CE *on the harmonisation of some aspects of copyright and connected rights in the information society*, which referring back to the WIPO treaties of 1996, develops principles and rules already defined by previous directives, integrating them in the perspective of the information society. It regulates, moreover, the rights of economic use that take place in the digital environment: reproduction rights, public communication rights and distribution rights. Following in the footsteps of international legislation, it provides various exceptions⁶ that guarantee the public interest, generally foreseeing the payment of a c.d. “*equo compenso*” to rights’ holders; prohibits the circumvention of technological measures of protection, providing for their removal in some cases.

On the 9th of March 2004 a *Proposal for a directive of the European Parliament and of the Council on measures and procedures to ensure the enforcement of intellectual property rights*, COM 2003/46 was approved in a first reading by the European Parliament.

1.2.3 ITALIAN LEGISLATION

The Italian legislation regarding copyright has its foundation in the law 633 of 22 April 1941 *Protezione del diritto d'autore e di altri diritti connessi al suo esercizio [Copyright protection and other connected rights in its exercise]* (flanked by the art. 2575-2583 of the Civil Code), which recognises the moral and financial rights of authors on works produced by them in every field of intellectual creation.

While the moral rights end with the author and are inalienable and imprescriptible, the rights concerning the economic exploitation of the works are alienable and are transferred from the author, depending on the case, to the publishers and producers. Authors, publishers, and producers are therefore exclusive rights holders for the use of the works, whether they be in printed form, on an informatic medium or diffused on line. Some exceptions and limitations in name of a greater public interest, represented by educative and cultural institutions, have been established.

The rights connected to copyright are, on the other hand, held by categories of subjects that carry out an auxiliary role in the intellectual creation process and are considered as intermediaries in the production and diffusion of the work: it is a matter of, among others, rights relative to artists who

⁵ The main ones are the following:

- *Directive 2001/84 CE concerning copyright on a work of art on the subsequent sales from the original;*
- *Directive 96/9/CE relative to the legal protection of databanks;*
- *Directive 93/98/CEE concerning the harmonisation of the duration of copyright protection and some connected rights;*
- *Directive 93/83/CEE for the coordination of some regulations on the subject of copyright and connected rights, applicable to broadcasting and transmission via cable*
- *Directive 92/100/CEE concerning lending and hiring rights and some connected rights;*
- *Directive 91/250/CEE concerning the legal protection of computer programmes;*
- *Directive 2001/29/CE on the harmonisation of some aspects of copyright and connected rights in the information society*
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⁶ Dir. 2001/29/ CE art. 5.

interpret and execute the works, to record producers, to radio programmes, to theatrical scenes, to photographs, to written correspondence. Also the external aspect of the work is subject to protection.

The *sui generis* right, relevant to the legal protection of databases, provided for by the Directive 1996/9/CE, was introduced into the Italian legislation with the name of database founder's rights by the legislative decree. 22 May 1999, no. 169.

During more than sixty years of existence, the text of the law has undergone numerous modifications and integrations, introduced with an effect of renewal mainly due to the adoption of European regulations. The most recent modifications were produced by the legislative decree no. 68 of 2003, in adoption of the directive 29/2001 (see § 1.2.2)

1.3 PRIVACY PROTECTION

In giving access to information regarding cultural heritage cultural institutions must give a priority to respecting regulations concerning the treatment of personal data.

The treatment of personal data is governed on a European level by the Directive 95/46/CE, which protects the fundamental rights and liberty of people, and in particular the right to privacy in the treatment of personal data.

In Italy on the 1st of January 2004 the legislative decree 30 June 2003, no. 196 *Code concerning the protection of personal data*, came into force. The decree substituted the Decr. 675/96 in adoption of the directive together with various other legal regulations on the subject.

The code defines personal data as “*whatever information concerning a person, legal entity, body or association, identified or identifiable, also indirectly, through whatever other information, therewith including a personal identification code*”.

Cultural institutions can treat personal data in the following cases:

- For the description of cultural assets (eg.: catalogue of assets subjected to protection);
- For the provision of public services (personal data of users);
- Because it is contained within the asset offered for consultation (eg.: archival documents, collections of letters, photographs).

The following two cases of problems inherent to privacy are given, by way of illustration, in relation to:

1. the consultation of documents held by the State Archives
2. the consultation of the catalogue of environmental, architectural, archaeological, artistic, historical, and folkloric heritage

1.3.1 ARCHIVES: THE “CODE OF DEONTOLOGY AND GOOD PRACTICES FOR THE TREATMENT OF PERSONAL DATA FOR HISTORICAL OBJECTIVES”

The adoption of the European regulations in relation to privacy safeguards with the law 675/1996 produced a lively series of debates on the possibility to protect individuals and guarantee at the same time the conservation and a correct use of the data useful for historical research. The limitations imposed by the law (art. 9, 22, 24) immediately proved to be extremely constraining, as they were listed in such a detailed way as to leave no margin for flexibility compared to the traditional use, which derived from provisions based on the willingness to facilitate both conservation and access.

That is the reason for the formulation of the *Codice di deontologia e di buona condotta per i trattamenti di dati personali a scopi storici* [Code of deontology and good practices for the treatment of personal data for historical objects],⁷ which came about from the “*consideration of the public interest in the carrying out of such treatments*”. The Code contains guiding principles for both archivists (art. 3-8) and users (art. 9-11). It is applied without the need for the user to give his consent for personal data used. This Code aims to ensure a balance between the needs of research and registration of historical facts and the rights and fundamental freedoms of people

The legislative provision that has always guaranteed the protection of personal privacy and that regarding the internal and foreign policies of the State, on the basis of which “*the documents conserved in the State Archives are freely consultable*”⁸ is safeguarded. The access to reserved documentation requires a new procedure: the user will have to present a research project, which, accompanied by the opinion of archives functionaries, will be submitted before to the *Commission for questions inherent to the consultability of reserved archive acts*, set up within the Ministry of the Interior. The latter, as is consolidated praxis, authorises access with a ministerial decree.

On line services follow the same procedures and regulations, as a specific system of rules has not yet been developed.

1.3.2 THE CATALOGUE OF CULTURAL HERITAGE AND THE PROBLEM OF DATA EXCHANGE WITH EXTERNAL ACTORS

The Istituto Centrale per il Catalogo e la Documentazione- (Central Institute for Cataloguing and Documentation (ICCD) of the Ministry of Culture (MiBAC) has developed, in close coordination with the Territorial Departments for fine Arts and Monuments (Soprintendenze territoriali), the Sistema Informativo Generale del Catalogo del patrimonio culturale (SIGEC; General Information System of the Catalogue of Cultural Heritage), ways of guaranteeing interoperability with the information systems of other administrations⁹ (for example Regions and Local Entities) and the reciprocal exchange of data.

The information collected in the Catalogue of environmental, architectural, archaeological, artistic, historical, and folkloric heritage (automated in the SIGEC) records both public and private property assets and contains personal data according to the definition in the existing legislation.

MiBAC, as a public entity, is allowed to treat such data in order to carry out its institutional functions¹⁰, respecting the requirements and limits of the legislation in force. Moreover, the access

⁷The *Codice deontologico* was promulgated with decr. 30 June 2003 no. 196. The Code is composed of fourteen articles inspired by art. 21 and 33 of the Constitution of the Italian Republic and the pertinent international documents and sources concerning historical research and archives (*Codice di deontologia e di buona condotta per i trattamenti di dati personali a scopi storici*, Preamble, art. 7); in particular:

- a) art. 8 and 10 of the European Convention for the safeguarding of human rights and fundamental liberties of 1950, ratified by Italy with law 4 August 1955, n. 848;
- b) The recommendation N. R (2000) 13 of 13 July 2000 of the Council of Europe;
- c) art. 1, 7, 8, 11 and 13 of the Charter of fundamental rights of the European Union;
- d) the Principle directives for a law regarding historical and current archives, individuated by the International Council of Archives at the congress of Ottawa in 1996, and the international code of deontology of archivists approved by the international congress of archivists, held in Peking in 1996.

⁸ Decr. 29 October 1999, no. 490, *Testo Unico delle disposizioni legislative in materia di beni culturali e ambientali*, art. 107. Decr. 22 January 2004 no. 41, *Codice dei beni culturali e del paesaggio (GU n. 45 del 24-2-2004- Suppl. Ordinario n.28)* art. 122-127.

⁹ In proposito si veda il Prov. 1° February 2001 *agreement between the Minister of Culture and the Regions for the cataloguing of cultural heritage* and the new *Codice dei beni culturali e del paesaggio*, art 17.

¹⁰ Decr. 30 June 2003, no. 196 Art. 18 e 19.

and exchange of data with local bodies, regions, and other public entities, which collaborated in the foundation of SIGEC is permitted in the exercise of its institutional duties or in accordance with the law or regulations¹¹.

However, access to information regarding cultural heritage also interests other types of users, both institutions (Universities, Research Institutes, ecclesiastical bodies, Comando tutela del Patrimonio artistico dell'arma dei Carabinieri¹², Uffici esportazione¹³) and individual users: scholars, researchers, educators etc.. In this case the legislation in force establishes that the communication and diffusion of data is admitted only if provided for by law or by regulation¹⁴. The lack of such a regulation nowadays makes it very difficult to make available the information on cultural heritage managed by the SIGEC.

It is urgent, therefore to address the question of a regulation that governs the criteria for the access and exchange of data with other public bodies in all the cases in which the treatment of that data is not retraceable to their institutional functions, as well as the communication to individuals or public financial entities, as is provided for by the existing legislation on the subject of the protection of personal data.

2 SECURITY OF ASSETS AND DIGITAL CONTENTS

The on line access to data and digital products derived from cultural assets, exemplifies the much wider diffusion of the electronic means compared to traditional dissemination. It takes on particular importance in relation to the security of the assets, from the point of view of both protection and preventive conservation of the assets, as well as in terms of the security of the contents.

2.1 SECURITY OF ASSETS

The information on cultural heritage must be diffused on line taking into account the possible risks their diffusion might cause to the physical security of the assets. The need had also been expressed by the existing Testo Unico on the subject of cultural and environmental assets¹⁵ and is repeated by the Codice dei beni culturali e del paesaggio¹⁶.

Theft of cultural assets in Italy is still very frequent, notwithstanding the continual efforts made to improve the security of conditions of conservation through the direct action of MiBAC, and the institutions which own or contain such assets.

Legislation has yet to be passed on either national or European levels regarding on line access to information that could compromise the integrity of the asset, thereby favouring illicit actions. In order to reduce the risks it has been agreed as a preventive measure, at a national level and in the

¹¹ Decr. 30 June 2003, no. 196 Art. 19, comma 2. the communication by a public body to other public bodies is allowed when it is provided for by a law or regulation. In the lack of such a law the communication is allowed when it is anyway necessary for the carrying out of institutional functions and can be begun if the term has elapsed in which article 39, comma 2, and a different determination has not been adopted therewithin indicated.

¹² Division of military police force responsible for the protection of cultural heritage

¹³ Exportation offices that give the permission for the exportation or lending of cultural heritage

¹⁴ Decr. 30 June 2003, no. 196 Art. 19, comma 3. the communication by a public body to individuals or financial public entities and the diffusion by a public body are admitted only when provided for by a law or regulation.

¹⁵ Decr. no. 490/99, art.16.

¹⁶ Decr. 41/2004, art.17.

European context, to obscure information concerning the specific location of the asset in the experimental projects on interoperability among databanks of items spread throughout the country.

While the museum heritage could be considered to be quite well protected, many assets not located in museums and spread throughout the country are held in unsatisfactory conditions of security: the on line diffusion of data concerning their location, could expose them to the risk of theft or damage. Notwithstanding the fact that archaeological areas and parks have recently been defined as open air museums, and are therefore conceptually equivalent to museums in the traditional sense, they present elements of fragility in terms of security and conservation of the assets: Submerged relics offer an emblematic example of the risk of compromising the asset caused by the diffusion of information about their location.

It has been shown that information public administrations decided not to make available on line because it compromised the security of assets, was diffused by private sector creators of digital products derived from cultural assets not held in museums.

The emanation of legislation regarding the on line access of data concerning cultural assets is therefore urgent for the Italian situation, in which the law ascribes to State public institutions the responsibility for surveillance of heritage, whether of public or private ownership, officially declared of cultural interest.

2.2 SECURITY OF DIGITAL CONTENTS: THE ROLE OF THE INSTITUTIONS

The general problem of the fragility of the digital support is particularly serious for *born digital* resources, which therefore lack an original on traditional mediums. This poses the problem of content identity and integrity in that it can be easily manipulated with successive unauthorised modifications of a part or in whole.

Particular situations can be seen in diverse sectors of cultural heritage, such as, for example, the problems of management and responsibility with regard to authors that institutions which conserve works of Web art or computer art have; or those that archives and libraries must face in conservation and management of electronic collections of periodicals, texts and electronic documents.

Today in Italy there is a lack of a policy oriented towards ensuring the long term conservation of digital resources. Legislative instruments, procedures and the indispensable means to guarantee conservation will have to be adopted, so that cultural institutions can carry out their role as guarantor over time of the identity and integrity of the digital resource, once its commercial diffusion is finished, thereby favouring the security of contents in an on line context to the advantage of both producers and users.

2.3 LEGAL DEPOSIT OF ELECTRONIC RESOURCES

The developments of the Information Society, making the research community pressingly aware of the phenomenon of electronic and internet cultural resources, have made the extension of legal deposit to such resources urgent.

The awareness, at the European level, of the urgency and complexity the problem is shown by the various projects financed by the EU to frame the question and propose both technical and legal

solutions, like the NEDLIB and TEL projects¹⁷¹. These two cooperative experiences among the main European National Deposit Libraries, contributed to the creation of a Code for the voluntary deposit of electronic documents in the ambit of the Conference for European National Libraries (CENL)¹⁸ / *aggiungerei in nota la citazione dello Statement tra CENL e FEP (federazione editori europei)*/ In many national experiences the code has revealed itself to be the precursor of national legislation receptive to the need to provide for the legal deposit of electronic or internet documents. The Italian legislation has recently been updated¹⁹ but, in order to evaluate its efficiency regarding digital deposit, it will be necessary to wait for the regulations governing its fulfilment, which will not be emanated before six months.

Certainly the problem of digital deposit has not yet been completely resolved also in those European countries where it has been regulated by law.

Some factors listed below generally hinder a satisfactory solution for cultural institutions and publishers and/or producers:

- technical complexity and financial onerousness in “harvesting” of websites (the last frontier for the pioneers of the transmission of digital knowledge to posterity)²⁰;
- -persistent lack of a legal framework, in some way privileged and ad hoc, for cultural institutions delegated to the collection of electronic resources, to their cataloguing, use, and long-term conservation;
- -considerable private sector economic interests at stake, in comparison with the ever more limited and threatened budgets of the cultural institutions concerned.

Precisely for these reasons it is fundamental that there be a common and interdisciplinary approach by all the concerned cultural institutions, sensitive, however, to all sector needs, with the goal of being able to carve out a space of activity and influence for cultural proposals also in the future market, dominated by economic interests.

3. THE NEED FOR A REGULATION FOR DATA ACCESS

As has been said more than once, the need and urgency for a single regulation dealing with access to cultural heritage data that deals with the problems posed by the need to safeguard assets, intellectual property rights and citizens’ privacy, taking into account the specific nature of the diverse cultural heritage sectors clearly emerges.

The regulation must be a suitable instrument to individuate and harmonize the minimum standards of services to the public provided by the diverse types of cultural institutions.

¹⁷ NEDLIB Networked European Deposit library <http://www.kb.nl/coop/nedlib/> , The European Library TEL www.euopenlibrary.com

¹⁸ Conference of European National Libraries http://www.bl.uk/gabriel/about_cenl/

¹⁹ L. 15 aprile 2004, n.106 *Norme relative al deposito legale dei documenti di interesse culturale destinati all'uso pubblico* (G.U. 27 aprile 2004, nr. 98)

²⁰ The most recent example of trans-national cooperation to coordinate Web harvesting has been given by the IIPC Consortium (International Internet Preservation Consortium) which has the participation and financial contribution of the following institutes and/or national libraries: Library of Congress, British Library, Bibliothèque nationale de France, Koninklijke bibliotheek, Biblioteca Nazionale Centrale di Firenze, National Library of Australia, NWA (Consortium of National Libraries of :Norway, Iceland, Finland and Denmark) Internet Archive [http:// netpreserve.org](http://netpreserve.org)

The many years of experience matured by archives and libraries in the field of on line access to data on conserved heritage can provide an important contribution in the elaboration of common policies that take account of the diverse specificities of the distinct ambits of cultural heritage. OPAC and descriptive archival information systems made available on the web, in fact, have constituted since their appearance, fundamental instruments of intermediation between the user and the patrimony or the other sources of knowledge and information, thereby expanding access to bibliographic or archival documents, whether they be on a traditional medium or computerized one.

4. TECHNOLOGICAL MEASURES FOR COPYRIGHT PROTECTION AND DIGITAL RIGHTS MANAGEMENT SYSTEMS

To safeguard rights on line it is above all appropriate to adopt elementary precautions, as for example attaching a note (*copyright notice*) to the publication of contents on line, that clearly explains the rights to the material and their holders and possibly specifies which treatments of the information are allowed and which are forbidden; for images it can be limited to on line low definition publication.

Copyright can be further protected by using technological measures, subject to approval of the procedures from the holders of the rights.

The existing technologies (*watermarking, fingerprinting, encryption of images with the distribution of the corresponding keys only to registered users*) offer partial solutions to the problem of on line protection of copyright: They discourage access or the non-authorized use of data making it complex or expensive, but while functioning as deterrents they are incapable of stopping every abuse due to the impossibility of anticipating every way of copying material that is accessible on line. Moreover, one can never be sure that an authorized user will make an inappropriate use of the data legitimately acquired.

4.1 I DIGITAL RIGHTS MANAGEMENT SYSTEMS (DRMS)

The definition of *digital rights management system* is not yet unequivocal, as it is a question of evolving instruments. There are at least two accepted definitions:

- Systems for the management of digital rights: they are first generation DRM systems, they work through the coding of contents and the conditioned distribution of access keys, so as to preclude the illegal access to the contents;
- Systems for the digital administration of rights: it is the definition officially adopted by the W3C,²¹ and corresponds to the more recent generation of DRMS, which do not limit themselves to controlling the security aspects concerning accesses or illegal duplications, but also supervise the description, identification, commerce, protection, checking and tracing of all the forms of transfer of rights to the use of a specific content.

4.1.1 DRM: THE BUSINESS MODEL

²¹ World Wide Web Consortium (W3C), www.w3c.org, is the international consortium for the development and promotion web technology standards.

A DRM system, in its second and wider acceptance, allows:

- The management of intermediary distribution if there are third parties between the owners of the contents and the end user;
- The counting of accesses to contents and the relative fees due to all actors involved in the chain;
- The codification of the contents at source and their decoding for the end use according to the validity of the digital licence the user has and the modalities the said licence contemplates;
- The control of the distribution of the digital licences-certificate, to whoever, having paid the established fee, wants to accede to content.

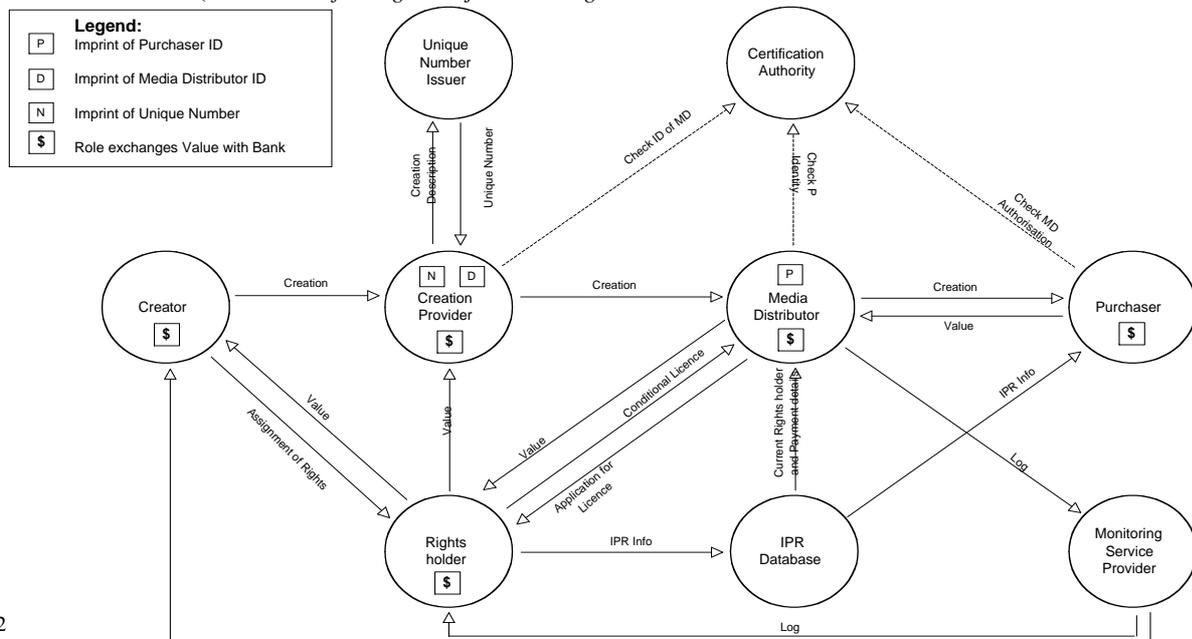
The requirements for the implementation of such systems are the individuation of the rights connected to the resources to be managed, and the presence on these of interoperable sets of metadata for the management of rights and the definition of a set of rules (the *business model*) in agreement with which the diverse components of the system operate.

A *business model*, or *reference model*, describes all the actors involved in the exchange of digital resources, and all the transactions that occur among them. Once defined, the *business model* is used to implement the hardware and software structures that make up a DRMS.

In the *business model* project rules management takes on a fundamental role: a rule, or *policy*, is a line of conduct for the DRMS, in other words, a declaration that describes how the system must behave in response to actions made on a digital resource by a user. The *policy* describes the typology of user to whom it refers, the content to which the appropriate action is applied and the possible conditions which must be satisfied so that the action occurs.

The *business model* must be developed taking account of the particular context in which the DRMS will be used, choosing the number and type of actors present, the list of possible transactions and the applicable rules, starting from the definition of the roles that can be taken on by public cultural institutions.

One of the first *business models* studied in the European ambit is the one developed in the European project ESPRIT 20676 IMPRIMATUR (www.imprimatur.net); the corresponding scheme is shown below. The same model was adopted also by the project IST 21031 TRADEX (*TRial Action for Digital object EXchange*)



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The DRMS, once it has identified the intellectual property of multimedia content, and defines the rules of use, operates in order to guarantee the application of those rules by way of an enduring

protection that lasts for the “life” of the content. The protection of a DRMS goes further than the simple control of access to content by authorised users, extending to the respect of the restrictions of use of content by the end user.

In order to reach this objective a DRMS system provides for a set of technological measures for the protection of intellectual property rights, the integrity of the digital items, and the control of their use that in the technical field are defined as *technical protection means* (TPM) or *digital rights enforcement* (DRE).

Presently, the TPM implemented in the various research projects and sector industries use the following technologies:

- Systems to control access to the operating systems and the computer network (as for example the methods for managing access privileges to files by the operating system);
- Encoding of the data transmitted, in such a way as to make it unusable by a non-authorised user;
- digital watermarking of multimedia content that allows the direct insertion inside the content of information that is useful in the protection of intellectual property and the control of the use made of the item; such as data on the owner or on the acquirer. In order to protect privacy it is possible to encode the information inserted directly inside and therefore make it accessible only to those authorised: it is necessary to take it into account in the formulation phase of the *business model*;
- systems that control the use made of the protected content, called self-protecting digital containers, they allow the use of content while maintaining it in a protected form (for example, an image can be view on a screen but not printed or copied).

4.2 MINERVA’S POINT OF VIEW ON DRMS

Technical measures that restrict access to data and protect intellectual property rights are an important strategy in as much as they help guarantee the identity and integrity of digital products.

DRMS can be valuable tools when certifying the authenticity of information, as well as in every phase of the complicated management of digital resource rights. However, in order for this to be the case, the focus must be shifted from solely protecting rights to completely managing them. Relying on the aptitude of the system to prevent the intrusion of technical barriers creates a risk of blocking access to services, digital contents, and their conservation.

A valid DRM system must not simply imitate the traditional distribution methods of the physical world. It must also be capable of adapting to the numerous ways that digital contents can be licensed, outnumbering the options available for the same contents with a traditional support system.

Special attention should be paid to system development, and to the inherent risk in every automated control system, and in monitoring the use of digital resources to avoid the infringement of the users’ privacy rights.

5. THE USE OF DIGITAL RESOURCES: THE DEVELOPMENT OF E-COMMERCE AND SCHOLARLY COMMUNICATION

5.1 FOR A SUSTAINABLE MODEL OF DIGITISING PUBLIC CULTURAL HERITAGE

The simultaneous evolution of technology and the demand for content and services in the cultural field has brought about a considerable increase in the value of royalties and intellectual rights held and generated by museums, archeological sites, libraries, and archives. As cultural institutions expand their range of activities, general and holding rights are also expanded.

Cultural institutions can be suppliers or purchasers of digital cultural products and subject matter and have complete or partial ownership of rights, sometimes working in cooperation with other public or private organizations. After obtaining a license, cultural institutions can manage digital resources when the rights are held by third parties, and make the resources available for use. Cultural institutions can license others to use their name, or logo on products and pictures, as well as provide the space, the means of production, and various other services.

On the other hand, conversion, compression, and distribution technology makes owning rights to collections that traditionally had low profit margins both appealing and profitable. This applies to the following mediums: paper, vinyl, photographs, slides, films, sound recordings, and tapes. Copies can be distributed and sold on-line at low cost.

The Lund Principles would like to preserve our cultural and scientific heritage and make it available to the public. Given that open access to an initial level of information has been sanctioned by UNESCO, it is also possible to consider development strategies that will allow cultural institutions, which invest in the creation, production, conservation, protection, and digitalisation of materials, to benefit from commercial sales via e-commerce.

E-commerce solutions are still at an experimental stage of development even in the sphere of national and European projects. Positive outcomes are a key to the preservation and the subsequent digitalisation of materials, and cultural subject matter, that will lead to the potential globalisation of communication and information in the future.

The e-commerce models will be based on diverse user and service typologies and will take account of the specificity of the institutes' cultural and educative duties, individuating appropriate tariffs and services for educative and research uses.

5.2 SCHOLARLY COMMUNICATION

The use of digital communication methods to share the results of research, which is done in the scholastic environment (reports, manuals, bibliographies) is increasing. These methods can also be used by cultural institutions. The development of networks and the world-wide web has heavily influenced the way cultural information is shared, which has changed research methods, and the way information is used, making traditional methods of sharing the same materials obsolete.

The development of institutional repositories supported by *open source* software, has opened the way to an interesting, cultural, scientific, sharing strategy. These repositories were created to facilitate access to documents and their subsequent use. The objective of the repositories is to manage and share digital documentation produced by their members, and offer related services. These sharing strategies use methods of managing and protecting intellectual property rights that are developed to satisfy the institution's educational needs.

Institutional repositories are primarily being developed in university environments at the moment, nevertheless, similar methods of managing and sharing scientific and cultural works, can be

extended to include library publications, museums, and archives thereby increasing the variety of services offered.

CONCLUSIONS AND RECOMMENDATIONS

Cultural institutions (archives, libraries, and museums) preserve the memory of Europe's cultural and scientific history. Their collections represent an incomparable heritage of knowledge, which is found at the core of European identity and culture. Cultural institutions have an important role in providing information and knowledge to society. Although they are affected by the fluctuations of the market, they should reach their goals and fulfil their educational obligations.

The development of networks and digital products makes it possible to give European citizens, and the rest of the world, access to collections, but the problems related to managing digital resources can slow the creation of new subject matter, the development of on-line access services, and the long term preservation of digital resources.

Regarding the conservation of digitised cultural heritage, The UNESCO Charter asks Member States to cooperate with the most important organizations and institutions, in article 2, and encourages them to create laws and policies that establish a balance between the author/creator's rights and the interests of every type of user with the intention of allowing ample access. The Charter emphasises that the goal of preserving the digitalised cultural heritage is to guarantee its availability to the public. The willingness of European countries to pursue that goal must be reflected in their regulations, and technical research.

The MINERVA project intends to contribute to the well developed debate on how to secure the role of cultural institutions as the managers of information and knowledge, by proposing that the political and administrative institutions of the European Union and its Member States consider particular lines of thought. The following points have been recognised as priorities:

- Forming indispensable national regulations regarding on-line access to all types of information on cultural heritage, and related to the protection of: intellectual property, privacy, and goods.
- Acknowledging cultural institutions as a resource of specific public interest both for its role in conserving memory as well as for its educative and information services.
- Promoting European coordination of legislation dealing with digital copyright of digital resources. Furthering the harmonisation of procedures, avoiding the fragmentation of services, and encouraging the development of new informative services with easy access.
- Establishing a single European platform to discuss, and design licensing contracts, and a fair compensation system for every possible use of digital resources with organisations that represent the holders of rights. It has been observed that the institutions normally represent the weak side, in the process of negotiating the licenses. In order to reinforce the weak side, consortia are being formed in Italy, especially in universities. These consortia aim to strengthen the institutions' position in the negotiation of contracts concerning the use of digital works (for example periodicals) to benefit personnel or users.

- Agreeing on a licensing contract template that benefits the institutions of preservation (archives, museums, libraries), that will also be used by The European Ministries of Culture. The contract must respect both public and private interests, and all the parties involved, and at the same time give citizens from all countries the right to access information and cultural works. The agreement will allow cultural institutions to continue functioning as resource managers and service providers.
- Promoting international agreements between institutions and producers, in order to give assurances on the quality of available services and clarity about the pricing system.
- Promoting investments in projects that develop cost effective DRM systems, and contributing to the furthering of their use in small and medium sized institutions.

On the basis of the contents of this report, this phase of research, and project MINERVA, it is recommended that the task evolves through further discussion and debate in order to:

- Define national, community, and international initiatives to form a starter set of information that can be freely accessed on-line, which applies to various types of goods and products with distributable images, as was done in the metadata Dublin Core set.
- Promote the use of administrative metadata, in addition to the use of descriptive metadata, in rights management.
- Set a minimum standard for services offered to on-line service users, and provide a common scheme of priorities.
- Create a pricing system (for levels beyond the initial free one) based on the type of user, and the destined use of materials and services, which is divided into four main categories:
 - General users
 - Educational users (didactic and educative objectives)
 - Academic users (research institutions)
 - Business users (commercial objectives)

It is recommended that institutions work in a cooperative environment towards: planning and creating new on-line access services, testing their organization, and observing user reactions. The aforementioned activities will provide the grounds to verify the validity of the plan that has been recommended.