Right of access to contents and intellectual property rights in the Global Information Infrastructure

Antonella De Robbio
Università di Padova
Biblioteca del seminario matematico

Introduction

It is time that the governments of the world have begun to recognise that the areas of telecommunications, of informative services and of information technologies are not only expanding and growing dynamically, but above all they have a strategic role as propulsion engines for the growth and the economic development of countries. The Internet, it was affirmed by Hafner and Lyon in 1996,[1] is the moving power of the Information Society and at the base of this force is its information infrastructure. Lawrence Lessig,[2] jurist of international renown and expert of *cyberight* at the Stanford Law School, says that the Internet is in itself responsible for its innovative feature, since it is based on the "end-to-end" principle.[3] This is the reason why at present the net is "stupid": because those who choose the contents are the end users and not the owners of the cables or the owners of the contents. The net in itself should remain willingly "stupid", that is not capable of discriminating between different shapes of traffic on the network, while "intelligence" should be distributed to its tips, that is delegated to the end users. Even though this architectural principle was originally adopted for technical reasons, it has become immediately obvious that this feature of freedom of the network led to decisive social and economic consequences. For example, the "end-to-end" principle, by its implicit nature, promotes freedom of expression, since it limits the extension within which the holders of rights of the network can censor the contents.
The technology and its products in the progress of the fields related closely to Information Technology and the network technologies play a main role in the development of the GII but, above all, it is the "information" in itself that has great importance. Telephones, faxes, computers, coaxial cables, satellites, optic fiber transmission lines, television sets, scanners, camcorders, printers, or technological supports like compact discs, video, sound, and so on, will be able to coexist in a common environment, in order to make accessible the information in itself, whatever its electronic format. The industries of contents or the digital content producers (content service providers) are now getting ready to offer custom-made services paying strong attention to contents. As fundamental is the premise that, for the accomplishment and development of the GII, the people who usually take care of the creation and the utilisation of the information and codes, information service developers, builders of devices for contents access facilities and everybody who is responsible for the education, the remote learning technologies, or the training of people in the use of some specific equipment, or responsible for information retrieval and diffusion are involved.
The concept of information is rich with different connotations: it can be considered as a corpus of signals, like elements of communication, culture, trial, knowledge, container, or like objects. According to Christine L. Borgman,[4] information is made of things that can be used in information systems, digital libraries included. Likewise, documents are perceived like objects[5] collected and

[1] K. Hafner, M. Lyon, *Where wizard stay up late: the origins of the Internet.* Simon & Schuster, 1996.
[2] Lawrence Lessig was one of the consultants of the United States Government in the Microsoft case.
[3] Lawrence Lessig, *The future of ideas: the fate of the commons in a connected world*.
4 Christine L. Borgman, *From Gutenberg to the Global Information Infrastructure (GII): access to information in the networked world*. Cambridge, Mass., MIT Press, 2000.
[5] Documents-like objects.

organized in a digital library for the benefit of user communities that make use of the information infrastructure through a digital library. Documents containing organized information exist in many different shapes. It is necessary to distinguish between the concept of a digital global library and the global information infrastructure, because the levels of accessibility to the contents can be different and depend on the information infrastructure through which they pass or on information assets in general.

GII (Global Information Infrastructure) and NII (National Information Infrastructure)

The political public discussion of governments all over the world is now steered toward the accomplishment of projects and initiatives aimed at developing capacities in relationship with the infrastructure of information in the different countries and in connection with the global information infrastructure. The composition of the GII includes local, national and regional networks, so that a *net of networks* can facilitate the sharing of information. Through the interconnection of local, national, regional and global networks, the GII increases the economic growth creating jobs, with new professions already emerging, establishing a global market for information that encourages a wide social dialogue among and between the people of all countries. The *end-to-end* principle already mentioned, respecting competitive neutrality, has deep results in the field of innovation: whoever has a new idea can rely on the fact that the network will treat it in the same manner in which the applications introduced by a big company are treated. Contrary to the communication infrastructures that have preceded the Internet (for example cable television or the telephone) the *end-to-end* architecture creates a common ground of innovation, an open and level playground that allows innovators to compete on an absolutely fair basis. The concept of GII is extended beyond hardware and software, since it is able to use and make relationships between different information infrastructures. The GII's concept is based on a system of applications, activities and connections in which the content finds residence without any relationship to its shape (video programmes, scientific or commercial databases, images, sound records, files of libraries, or other media). The access to contents in any format and in any medium is facilitated, in the vision of GII, by the adoption of standards and of user interfaces and by the transmission of writing codes that facilitate the interoperability between the networks able to ensure, at the same time, the privacy and the safety of both the ongoing information and the networks themselves. The concept of interoperability is very important, defined as compatibility between different applications and services that permits the open talk between subsystems that are parts of a wider system. Compatibility works at specific levels of interaction that obey a set of established rules and protocols, so that information can flow through different information channels. Interoperability allows different subsystems to communicate, so that each application or service is clear to the users in terms of syntax, and also in terms of semantics between subsets. Many countries, first of all the United States, are promoting national initiatives with the common and shared target of ensuring that the potential benefits of progress in the field of information and telecommunications technology are carried out for everybody and that every citizen is enabled to use such benefits.
In 1993, the President of the United States, Bill Clinton, and the Vice-President, Al Gore, began to support the NII initiative (National Information Infrastructure)[6] within the global infrastructure of information. The goals of NII can be summarized with the following key points:

promote investments in the private field;
extend the concept of universal service with the aim of ensuring that information resources can be available to everybody at reasonable prices;
work as a catalyst for the promotion of technological innovation and new applications;
ensure the safety of information and the reliability of the networks;
offer access to governmental information;

[6] National Information Infrastructure (NII), in Italian is *Infrastruttura Nazionale dell'Informazione* (INI).

protect intellectual property rights.

In the NII vision, libraries should be the source of the digital information, offering free access at no cost, improving the flow of electronic information coming from governmental public sources and putting them at the top of the creation process and spread of scientific information.

Information Infrastructures

The information society is evolving towards a tight integration among the different configurations that regulate our daily lives, through the interaction of information needs in the information infrastructures that are ready for access to contents. In this way, to cite an example, initiatives like those of NSF/DARPA/NASA[7] seem to act as excellent launching pad, where digital collections and repositories can make available intellectual and scientific contents not only of great cultural value, but also of social and economic worth. The NII, an information infrastructure like the GII, is made of a complex hierarchy of heterogeneous networks and information systems with a whole range of applications. The applications involved in this arena imply information infrastructures of different environments interacting at two different – national and global – levels. The environments in which the NII applications meet concern the areas of industrial production, electronic commerce, domestic networks, transportation, information infrastructures in the health area and of monitoring of the environment, as well as the areas of education, remote teaching and life-long learning. Moreover, an essential application in this arena is the information infrastructure of governmental services – something that every country should necessarily build, like essential public buildings in a city – in order to grant access to public documentation, but most of all for the benefit of the spread of research and public data.
According to Lawrence Lessig,[8] the communication infrastructure is divided into three layers or sites: physical, logical and the layer of contents. Lessig, <<an example of synthesis between man of law and technological man>>[9] who loves metaphors, uses the image of the communication network layers to compare different communication environments. He begins describing the places of Hyde Park Corner, where Londoners usually meet to expound their ideas, in analogy with the Net, the virtual place *par excellence*, where extended communication exchanges occur. The physical Hyde Park's layer is the park itself, while on the Internet this layer represents the level of cables and machines. The logic layer is the language of individuals, while on the Internet this is given by the protocols that have determined the formal procedures for the use of cables. The third layer is represented by the speeches of individuals that occur in the park, virtually corresponding to the speeches that move about on the Web. <<The risk is that the informative code imposes its rules while people are disenabled of any responsibility of choice. People who use a personal computer on the Web are often passive facing these rules. They accept them because they don't believe that such rules could be eliminated or changed, but they are not ready to undergo the laws approved by the Parliament as well>>.As an example, today the America Online chat software allows a maximum of twenty-three persons to discuss together. In such a situation of monopoly, a real place like Hyde Park, where the *cybernautics* can protest against the supplier of access (access service provider), does not exist. If at a physical level the owners of the infrastructures acquire the power to discriminate at a temporal level the contents that pass through the – wide band Internet – an actual control on the third level (the one of the contents) by the holders of the rights, protected by national and international laws is also possible. According to Lessig, this is a serious risk as the capacity of discrimination in the contents is introduced at an Internet level that formerly was neutral.[10] The communication infrastructure provided the unit toward that and from that all the other components

[7] National Science Foundation, Defense Advanced Research Projects Agency, National Aeronautics & Space Administration, *LAURIN analysis and design of the central node*. <http://laurin.uibk.ac.at/reports/d33004.pdf>.
[8] Lawrence Lessig, *Code and other laws of cyberspace*. New York, Basic Books, 1999. <http://code-is-law.org/>.
[9] Emanuela Di Pasqua, *Cyberdiritto e proprietà comune*. In <<Il manifesto>> 13 May 2001.
[10] Lawrence Lessig, *Code and other laws of cyberspace*, cit.

are issued, where the semantic infrastructure, the infrastructure for the protection of information, the infrastructure dedicated to preservation, the user infrastructure and the collaborative infrastructure, all are inserted. These are information infrastructures that the digital global library, the sum of all the interconnected digital libraries, bears on.

The Digital Global Library

Transversely, but with a central role in the connection between different hierarchies and different infrastructural levels, is placed the library / interlibrary / library level information infrastructure. In the proposal of vice president Al Gore, in March 1994 one of the fundamental principles on which the GII action plan[11] was based was the creation of the Digital Global Library, directly involving the interconnection of schools and libraries in any country via the Internet. Making available digital documents online, either original digital-like objects or objects originally on paper, or by conversion from other formats, is a way to open access to an immense public. Digital formats, like any other new technology, represent a compromise between the implicit capacity of their digital nature and the loss of quality that such a condition can allow in documents beginning in other formats (print, film, etc.). This happens when the document is not originally a digital-like object: the content is codified in discrete bits, often to the detriment of images and sounds. The digital container is not "eye legible": it can be opened, read, used, and activated only with adequate codes and technologies. The digital media should be updated periodically and the contents should be converted with the aid of the new technologies in order to preserve the memory for future generations. That's why the preservation of the contents in digital format is one of the biggest challenges in the information era. Increasingly, the role of libraries in the technological future will be to help the public to find information in a fair way. Libraries will continue to coordinate and facilitate the preservation of the records in catalogues (of both new and old type) and to maintain copies of the documents in traditional formats, but above all in digital format. The expression of the intellectual production of every country should be attainable and accessible by the information infrastructure of the library services in each country in the GII platform.

The role of the librarian will change significantly as he or she becomes a manager both of information and knowledge. The management of knowledge, given the peculiarity of a variform role, will involve the librarian in the links of the information chain, acquainting him or her with the process of generation of digital documents. This revolution will increase not only those functions that can facilitate access to contents, but also – and above all – remote teaching and support to remote users in order to educate people to use the programmes of the information infrastructures.

Education and training are basic requirements in order to achieve the NII goals: education in the use of digital libraries in the national information infrastructures and training in order to incorporate these resources within work places and within houses, improving the quality of life of the citizens. Besides, the development of skills on the side of the library automation systems for the management of digital resources is creating a rank of librarians-system managers who are able to move remote electronic resources from one container to another (OPAC, databases, electronic periodicals), while the right of access to information for the use of the contents is negotiated within consortia.

The central subject of the 66th IFLA General Conference held in Jerusalem, in August 2000, under the title of *Information for cooperation: creating the global library of the future* touched the theme of international cooperation in the exchange and use of information. The IFLA lecture put into light how information professionals, foremost the librarians, will have a main role in the GII in order to face the increasing requests for contents coming from different specialized fields, provided that they are able to reach a double organizing dimension, bound to local or national needs – in direct application to a higher goal within the international community.

Browsing without an adequate technology with the purpose of finding information, and then scheduling, making up and distributing it, developing capacities of creating information contents

[11] In the Buenos Aires Declaration.

and spreading them in integrated contexts, making contents accessible in the network with actions of support and promotion of access, digitizing contents in order to protect the past for the future: these are all operations "on the contents" that should be carried out in the local/global dimension, respecting the laws of every single country and respecting the rules in the example on intellectual property rights. It's a unique opportunity for the professionals of the Library and Information area.
In the field of bibliographic exchange, for example, the use of metadata will be the key for the opening of different worlds speaking different languages. Through the metadata different worlds can communicate, they bear relations each to the other. The metadata, or "data on data", are essential components of the information infrastructure, as they include intrinsic data on the document describing the expressed data (the document's story, the property rights, the conditions of preservation, the hardware and the necessary software). There are metadata that are automatically generated, and some others that are manually created by professionals in the field. There are metadata generated at the moment of their creation or digitization, while others increase during the migratory stream in the transportation of the document itself. Considered all together, the metadata supply the mechanisms to describe and represent the documents-objects. They are essential in the organization of each digital library and in the union of digital libraries at intermediate levels in order to build the global digital library.

The right of intellectual property

The law of property is based on the availability and on the control of the assets that are objects of property and, in a static economy, the law of property (most of all if it works on material assets) finds its greatest realization. Crisis occurs when the economy becomes dynamic and intangible assets like intelligence are exposed to violations due to the spread of new technologies within everyone's reach. The concept of intellectual property, traceable to the different normative systems (copyright, royalties or something different) should necessarily be extended beyond the boundaries of every single State and it should include, in its possible free uses or rights restrictions, all the connected entities, including the whole body of citizens. Nevertheless, one must keep in mind that often, despite the efforts of WIPO (World Intellectual Property Organization[12]), the legislative system of many countries in the world about intellectual property does not have an organic and consistent legal structure, but it is made of different rules put together in normative bodies that are not harmonized in a global context. Using a metaphor,[13] today the normative international system resembles the railroad system at its beginning, when a train could not pass the limit of one concession, because the next had tracks of a different caliber. To these differences must be added that almost all the national normative systems regulate intellectual property concerning "on paper" contents.
A publisher in the United States can have problems concerning the moral right in French territory for the use of photography, problems that he would never have met in a context of copyright. A publisher in Germany can discover what he considers a theft from its data bank distributed in the United States, when he learns in the meantime that under the Feist's doctrine what he has considered a theft is a right of all American citizens.[14] These differences – not only formal – of the

[12] The WIPO offices are in Geneva, Switzerland. The organization was created in 1967 (Stockholm Convention) with the aim of extending the protection of intellectual property at an international level. The origin of the organization dates back to 1883 (Paris Convention for the protection of industrial property) and to 1886 (Bern Convention for the protection of literary and artistic property).
[13] Bill Strong, *Copyright in a time of change*. In <<The journal of electronic publishing>>, vol. 4, issue 3 (Mar. 1999), <http://www.press.umich.edu/jep/04-03/strong.html>.
[14] The Feist's doctrine asserts that a work, particularly a *sui generis* database, has no protection, because it is not considered a creative work. In the normative system of copyright (differently from the European System) the *sui generis* works are not protected because they are considered not new. Mary Maureen Brown, Robert M. Bryan, *Database protection in a digital world*. In <<Richmond journal of law & technology>>, vol. 6, issue 1. Symposium 1999 <http://www.richmond.edu/~jolt/v6i1/conley.txt>.

normative bodies, work above all in the sphere of moral rights, making clear that a strong coordination at the international level is necessary. In the meanwhile, in order to overcome the differences of the systems connected one to the other in terms of exchange of information goods, in countries with different laws, where intellectual property can be understood and perceived in many different shades, the only solution to the numerous normative incompatibilities is offered by the contractual relationship freely established between the parties (suppliers of contents, libraries, publishers and users). It must also be underlined that the protection of intellectual property, or better the exploitation of the work or of the product of the intelligence, finds another limit in the antitrust legislation of the different countries. This is not a trite question after the recent Microsoft case: it is that the concept of monopolistic power (as it is understood today by antitrust legislation) suits itself to moderate the delicate relationship between the interests of who holds the right of monopoly and the protection of the consumers (information users)?[15] Gervais[16] offers a detailed analysis of the management of rights in a digital environment. Although orientated toward the copyright context, Gervais' analysis is rich in possible solutions carried out through the electronic management of rights application systems operating in the global information networks. Gervais says that the fact of hindering the publication of contents (texts, music, news) through the issuing of rigid rules on royalties and other rights, is not only an economic matter of "fair remuneration" not received from authors, but it has a very simple reason, related to the will of maintaining a monopoly on contents.

Completely different is the case of the software industry: Linux shows a different way of approaching marketing that pertains to intellectual property, since the control system is activated through the allocation of information strings as elements of information units that regulate the free distribution of software. Before Linux it was necessary to assemble and combine together different components, coming from different sites, in order to operate a PC. Only trained people were able to put together a working system. At the beginning of the nineties, the appearance of Linux has put the software industry, particularly the software development section, in a very promising trend, either for free access to intellectual contents that – in its turn – can create other intellectual contents, or in connection with the development of the market allowed by such dynamics. Linux's philosophy is not of cooperation, and Linux is not necessarily beyond the commercial world, even though many people wrongly think that with Linux you mean "cooperation" and that OpenSource is always a synonym of free software. Through free software distributors, Linux is available not only in combination with OpenSource programmes, but also integrated with some commercial software. This fact is moving attention more on Linux's popularity than on its freedom, influencing the adoption of OpenSource software based on political choices, which means taking into account the popularity of the product, rather than its technical analysis.[17]

The intellectual right of property, for all the reasons indicated so far, is the focus of one of the most confused, but in the meantime one of the most exciting quarrels of the digital era. Before the Internet and particularly before the Web, it was very hard to point out intellectual property and it was hard to distinguish the message from the medium through which the content of the message was conveyed. So the laws that have governed the use of intellectual property until the birth of the Web were relatively clear, because they were referred both to the content and to its shape/container/support. Since an idea can be expressed through different languages, different from those known and the same idea can have new shapes, involving new document formats, there are many questions that enliven the international debate. "Who owns what?", "What exactly can one own? "What kind of rights are those concerning assignment and transfer of property?" All these

[15] David Boies, *Cyberspace and antitrust*. In *Intellectual Propriety and Cyberspace*, Conference held in Stresa, Italy, May 4-5, 2001. Boies belongs to the firm Boies Schiller & Flexner, NewYork (Napster case).

[16] Daniel J. Gervais, *Electronic rights management and digital identifier systems*. In <<The journal of electronic publishing>>, vol. 4, issue 3 (Mar. 1999). <http://www.press.umich.edu/jep/04-03/gervais.html>.

[17] On OpenSource software see M.J. Radin, *Propriety and cyberspace*. In <<Riv. crit. dir. priv.>> 1997, p. 8; J. P. Barlow, *The Economy of Ideas*. In <<Wired>>, Mar. 1994. J. P. Barlow, S.L. Garfinkel, *Programs to the people*. In <<Tech. rev.>>, Febr. 1991, p. 52.

questions are not easy to answer.[18] Since we are all aware that the issues related to intellectual property could easily change their formal and legal characters in the course of a few years, according to our role, we should anticipate how to face these changes, especially because digital information is global information and, since it is global, it represents a good commercial opportunity.

Many people think that the Internet, but above all the Web,[19] is a threat to intellectual property and so many interested groups are trying to propose changes to laws in order to protect their own economic interests, based on monopoly situations. Considering the fact that the new means of transportation of contents represent a good market opportunity, there are lobbies in the market that ask the governments to enact new rights in order to protect their interests to the detriment of the law of access to information, whereas information should be seen as a worldwide public asset. In this environment of a global economic market, the management of rights becomes a necessity to protect the intellectual right of property. It is one of the key points of the NII targets, but it is considered also an obstacle to the achievement of the NII applications to libraries. There are three significant conditions for the new challenges related to the protection of works on the Web. The first is linked to digital reproduction, easily achievable at low cost, something that leads to the production of an indefinite number of perfect copies indiscernible from the originals. The second depends on the possibility of converting the information, contained in different media, in a single stream, easily rigged, that gives rise to different activities. The third condition pertains to the distribution of digital information that can immediately be uploaded and sent off through the network to thousands of users. Most of all, policies and definite standards are necessary in the digital libraries, in order to build strategies that can ensure a balance between intellectual property rights and the law of access to the contents from the point of view of *copyright*, seen as the right of copy and of *fair use*, seen as a fair payment and universal access.

Many aspects of this thorny and controversial matter were widely treated in a recent international lecture about *Intellectual Property and cyberspace* held in Stresa, Italy in May 2001, where worldwide experts gathered together to talk about the situation[20]. International jurists of renown pointed out the danger of the reinforcement of protection and many other lecturers expressed a strong worry about the destiny of fundamental rights like the freedom of expression and the right of access to information, in case of snaky and imperceptible connections between intellectual property and monopoly. When accumulation of intellectual property occurs, and this is not a proper condition of the authors but of the authorized holders of the rights (content service providers, software houses, recording companies), the reasons that lead to protection of this kind of property find no justification at a moral level and, at an economic level, the competition in itself is in serious danger. This is a true and actual assault on the freedom of access to information, using the pretext of intellectual property, a right that is shot at and bombarded from all directions. Pamela Samuelson[21] sends a warning related to the 2B article proposed as an amendment to the Uniform Copyright Code,[22] that can influence software licenses in a strong manner, protecting the producers of software and the industries of show business against feared piracy, but limiting essential freedom.

In the world of the e-book, with the aid of “shrink-wrapping” devices licenses limiting the freedom of expression could be introduced, for example in clauses that forbid negative reviews of the “open”

[18] Lorrie LeJeune, *Who owns what?* In <<The journal of electronic publishing>>, vol. 4, issue 3 (Mar. 1999). <http://www.press.umich.edu/jep/04-03/glos0403.html>.

[19] IITF Information Insfrastructure Task Force, *Barriers to the creation and use of library applications*. <http://nii.nist.gov/nii/applic/lbr/lbrbar.htm>.

[20] At the Stresa Conference many experts were present. Among them: David Boies, the Napster’s lawyer, Richard Urowsky, the Microsoft’ lawyer, Jean Jacques Gomez, the judge of the Tribunal in Paris, who emitted the judgement on the Yahoo! Nazi-auctions, Guido Rossi was the chairman, Lawrence Lessig of the Stanford University Law School, Guido Calabresi judge of the United States Court of Appeals and Jack Balkin, director of the Information Society Project at the Yale Law School.

[21] Pamela Samuelson, *Does information really want to be licensed?*. In <<The journal of electronic publishing>>, vol. 4, issue 3 (Mar. 1999), <http://www.press.umich.edu/jep/04-03/samuelson.html>.

[22] <http://www.law.upenn.edu/bll/ulc/ucc2b/2b299.htm>.

digital volume. Samuelson says that the attempt to avoid copyright[23] through the mechanism of licenses will lead to an increase in the problems on both sides, the holders of the property rights and the contents users. The grant of the governments for new protections within national laws or within international treaties, leads to a great flowering of rights related to royalties and adjusted for specific situations of the market. This is the reason why, in a European context, these rights are defined as "related to royalties" as a sort of extension of the concept of royalties held by the authors on their works and that they yield or transfer to other people. From Samuelson's statements we can deduce that the mechanism delegated to "license" is not suitable to approach extensive information in a GII context. In this chain conveyance of rights there are different passages since the figures of the digital market that can be involved in the production of contents for the Web are different. The transfer of rights can be carried out in subsequent phases through diversified contacts, over which the author doesn't have any control. In this delicate phase librarians should be aware of the meaning of the acquisition and the treatment of an electronic resource, since there may be different levels of rights for different contents.

The right of access to information

Christine Borgman[24] says that if knowledge is power, the Global Information Infrastructure can make man powerful, improving access to information. Among the promises of the Global Information Infrastructure is the one of improving access to information in any shape and from any place. In access to information there is the potential for the enhancement of the life of man, the increase in social equity, and the acceleration of commercial trade. These are certainly laudable goals, but their accomplishment depends on what one intends with access to information, by whom and where it is accomplished, and also depends on the policies put into action to reach these goals. Access to information is a concept of wide significance, full of behavioural, philosophical, technological and political implications and in the words "free access" seen as an "approach" is contained the idea of "passage". The word "access" has many different shadings of meaning. Most of the dictionaries point a finger at *access* as <<freedom and ability to obtain or to use>>, or as <<authorization, freedom or ability to enter, to approach, to communicate with, to go and to come from>> [Merriam Webster 1993, p. 6][25] and also as <<a means to approach>> or <<to pass>> [Morris 1981]. In the meaning of <<freedom and capacity>> there are fragments of legal language like <<access to property<< and <<access to justice>>. *Access* is also <<a place through which one enters>>, <<capability to enter>>, <<formal procedure for the reading and data recording in a computer memory>>,[26] or <<Possibility of entering a place; of getting closer to a person, to a social environment; of being admitted into a group, an institution>>, <<Place by which one enters. Access to the administrative documents; right, for interested people, to look over the proceedings of public offices>>.[27]

The concept of access to information finds its roots in library services, in the politics for telecommunications, and in many other arenas and it can be understood in terms of connectivity to a computer network and to the consequent access to contents. Accessibility is not always synonymous with availability, since they are two different concepts although closely related. The concept of accessibility is wide and it involves also the availability of the document, but an available document is not always accessible. I have tried to sort briefly, framing in rough categories, the factors or the conditions that limit access to the contents. There are four categories: a) documents, b) persons, c) countries, d) legislation.

[23] Samuelson refers to the United States normative context about the Intellectual Propriety known as DCMA Digital Copyright Millenium Act, but her statements are valid in any other normative context.
[24] Christine L. Borgman, *From Gutenberg to the Global Information Infrastructure (GII)*, cit.
[25] Ibidem.
[26] Nicola Zingarelli, *Vocabolario della lingua italiana*, a cura di Miro Dogliotti e Luigi Rosiello. 12. ed. Bologna, Zanichelli, 1999.
[27] *Dizionario italiano Sabatini Coletti*. Edizione in CD-ROM. Firenze, Giunti, 1997.

a) accessibility to content is given by various factors or conditions of the document that houses the content, and they are grouped in three categories:

> One of the decisive factors is the necessary technology to read or to open the document: it can be too sophisticated or too heavy to be within everybody's reach.
> Another condition limiting access to the content of a document is the electronic format in which it is presented, or the format in which it is placed on the net. There are formats that are not accessible to disabled users, and also many government web sites that are not available on the Web.[28]
> If the document is accessible with payment or asks for a payment for software, this is a factor that can limit free access. Usually, it happens inside a "monitored" environment, where there are documents under protection in terms of intellectual property. The availability (affordability) is related to the role of who supplies the information (commercial service provider).

b) Accessibility can be limited also because of conditions that do not depend on the documents, but on the actual cultural conditions of users and citizens:

> The user does not have the proper knowledge to reach the information sought and therefore a condition of inaccessibility is established in a broad sense.
> There is a problem of the linguistic barriers not yet overcome by a multiethnic society (this is partly due to the fact that a lot of documents are available only in English).

c) In general, we speak about limitation of accessibility to the intellectual contents and about limitation of the right of access to the information in the following three leading conditions depending on different countries:

> Where geographic barriers exist that hinder meeting of the people.
> In the countries where there's no freedom of expression or where access to the Internet is restricted or filtered (at present in about twenty countries).
> In the developing countries where the concept of NII is not operating due to a lack of information infrastructures.

d) The legal matters related to the laws that regulate intellectual property are placed on a meta-level:

> At a national level, for each country.
> At a group level (European directives, for example).
> At an international level, with relationship to the harmonization of the different systems or normative bodies, or in agreements and treaties.

Intellectual property and right of access to the contents

The balance between the right of access to the contents and the protection of intellectual property is played all on the normative level, not only at a single national level but most of all at a supranational level. There is a strong implicit contradiction in the fact that countries that support the global right of access to information, through politics of development of information infrastructures within the GII, are those same countries that impose on the technologically less advanced countries choices aimed at protecting their economic interests. The developed countries of the world, through

[28] W3C warnings on access to Web contents. WAI-IT Study group on equality of access to library services. Italian translation available on AIB-WEB site. <http://www.aib.it/aib/cwai/cwai.htm>.

the power of their economic supremacy – GATT agreement, General Agreement on Tariffs And Trade,[29] or threats on commercial relationships (embargo) – have brutally obliged the rest of the world to approve rules and laws incompatible with cultures and local traditions, laws that have the purpose of guaranteeing to everybody the rights of intellectual property, rights that for us have been expected for centuries. The only advantage is for a market that does not take into account cultural and social differences. Perhaps we have forgotten that intellectual property drifts, for its existence, from a social approval that involves all the parts in the game: copyright – like royalties – is a social contract and suggests a strong cultural component. In China, intellectual property is grafted onto a cultural layer that had seen "imitation" as one of the necessary and basic activities for two thousand years in order to learn and convey culture through generations. In the former Soviet Union capitalism has taken the place of the state as an entity that seeks to impose some rules on the traffic of intellectual property. That's why the Soviets have developed, during their cultural and political life, an increasing fear and intolerance, almost hatred, for any form of control on access to the contents, considering rather valuable the free circulation of ideas. Needless to say that speaking about royalties or fair remuneration is rather tough in these countries, as the rules on intellectual property are seen in a negative sense, like a limitation on the freedom of expression. In Africa, where peoples have lived immersed in the oral culture for millennia and where artistic expression has been almost totally religious in its leading characterization, copyright is now seen as a colonial concept, abstract and contradictory. These countries have a perception of *control* like an *attempt* made by the rich countries to maintain the old colonialist system.[30]

Freedom of expression and intellectual property in the digital era was the provocative theme proposed at the Stresa meeting by Jack Balkin,[31] who underlined the close relationship between freedom of expression and intellectual property. <<The matter of the intellectual property should be considered a bottleneck in the chain of information and knowledge and in the fruition of some assets [goods]; whoever finds himself in the bottleneck has duties of public nature. It's an acrobatic game for men of law who are in the position of defending inviolable laws, sometimes masked in the confusion carried by the new economy>>. Balkin supports the thesis that the duration of protection, as the opposite of what has happened and is still happening in various countries, should be drastically reduced. Recently, such duration has been raised from fifty to seventy years. Balkin says that a reduction like that (twenty years) would result in a considerable stimulus to cultural growth. Balkin's statement, which is very pragmatic, bears on the space/time coordinates. He says that the space or the field of protection should be broadened to defend intellectual property in terms of originality of the creative work of the authors, so there will be little place for plagiarism. The temporal coordinate is the condition that acts on the duration of the shape protection of an idea and it should be limited in time to give way to the original idea to come out of protection and freely return in the flow of moving ideas among people. An idea closed within its protection for ninety years cannot be good for technological innovation, neither can it carry other ideas for an extensive cultural growth. In these cases, says Balkin, the freedom of expression is exposed to the risk of degrading and from fundamental principle it can become just an obstacle that prevents the lobbies from asserting the rights they hold. <<The sovereignty of the States today is threatened, since the regulation or the architecture of the network that monitor the cyberspace are a concurrent sovereignty to that of the State. But the cyberspace codes could create different values compared to those traditional of our legal normative systems, and they could be violated, oppressed and overcome by opposite values. And this is the reason why the fundamental problem of the cyberspace is legal and particularly of general theory of the State>>. <<Who emits sentences>> said the American judge Guido Calabresi at the Stresa Conference[32] <<cannot then forget the effects that those sentences will produce in the society and in the life of everyone, as people who makes bombs must think about where they drop them>>. Certainly this is not a reassuring scenario,

[29] GATT includes also the TRIPs agreement (Trade-Related Aspects of Intellectual Property Rights).
[30] See note 13.
[31] Stresa International Conference, cit.
[32] Guido Rossi, *I nuovi diritti del cyberspazio*, Stresa International Conference, cit.

says Lessig, when he outlines the possible risks of an increasing protection. Lessig urges the judges to be cautious and not lose their presence of mind since, in sending out the laws on copyright or on intellectual property in general, they have the responsibility to prevent freedom of speech from manipulation and from a reduction to a true and actual veto on the development of innovation. A mistake of that kind would be serious and it would represent an attack on innovation and on democracy.

I want to conclude by quoting Lessig's favourite example taken from the real world and to which you can find a reference on the Web.[33] In the thirties when architect Robert Moses was engaged in joining Long Island to New York, he planned the construction of narrow bridges in order to hinder the buses full of poor black people from reaching the beaches and the parks of the island. Long Island, in Moses' planning design, would have been attainable only by the rich or middle-class automobiles. The technological architecture of the global information infrastructure should lean on foundations of freedom where barriers to the right of access to information and to the expression of freedom should not exist at all. The use of architecture, mostly in the construction of bridges and roads, can be an instrument of strong limitation and, in the network, these obstacles can become even more dangerous, since barriers are almost always invisible.

[33] *The master builder: how planner Robert Moses transformed Long Island for the 20th century*. <http://www.lihistory.com/7/hs722a.htm>.