

Cultural and Linguistic Diversity in the Information Society

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Published in 2003 by the United Nations Educational, Scientific and Cultural Organization (UNESCO),
7, place de Fontenoy F-75352 Paris 07 SP

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(CI-2003/WS/07)

Preface

UNESCO has fully supported the World Summit on the Information Society (WSIS) preparatory process from its beginning and has made a significant contribution to the work on the Declaration of Principles and the Plan of Action that the Summit is expected to adopt. UNESCO's proposals for the Declaration of Principles and the Plan of Action are based on its mandate. This leads it to promote the concept of knowledge societies rather than that of the global information society, since enhancing information flows alone is insufficient to grasp the opportunities for development that are offered by knowledge. Therefore, a more holistic and comprehensive vision, and a clearly developmental perspective, are needed.

The proposals respond to the main challenges posed by the building of knowledge societies: first, to narrow the digital divide that accentuates disparities in development, excluding entire groups and countries from the benefits of information and knowledge; second, to guarantee the free flow of, and equitable access to, data, information, best practices and knowledge in the information society; and third, to build international consensus on newly required norms and principles.

Knowledge societies should be firmly based on a commitment to human rights and fundamental freedoms, including freedom of expression. They should also ensure the full realization of the right to education and of all cultural rights. In knowledge societies, access to the public domain of information and knowledge for educational and cultural purposes should be as broad as possible providing high quality, diversified and reliable information. Particular consideration should be given to the importance of diversity of culture and language.

In knowledge societies, the production and dissemination of educational, scientific and cultural materials, the preservation of digital

heritage and enhancing the quality of teaching and learning, should be regarded as crucial elements. Networks of specialists and of virtual interest groups should be developed, as they are the key to efficient and effective interaction and cooperation in knowledge societies. Information and communications technology (ICT) should be seen both as a pedagogical tool and as a discipline in its own right for the development of effective educational services.

These technologies are not merely tools; they inform and shape our modes of communication and our thinking and creativity processes. How should we act so that the benefit of this ICT revolution accrues to all mankind and does not become just the privilege of a small number of economically highly developed countries? How can we ensure access for all to these information and intellectual resources, and overcome the social, cultural and linguistic barriers to participation in knowledge societies? How should we promote the online publication of content that is increasingly more diversified and potentially a source of enrichment for the whole of humanity? What teaching and learning opportunities are offered by these new means of communication?

These are crucial questions to which answers must be found if knowledge societies are to become a reality and offer the opportunity for interaction and enrichment on a global scale. They are also questions which the stakeholders in the development of knowledge societies – States, private enterprise and civil society – must answer together.

On the occasion of the World Summit on the Information Society, UNESCO intends to make available to all participants a series of documents that will discuss the above issues of concern. They will also refer to the development potential of ICT, problems and solutions, and various projects implemented by UNESCO and its many partners. It is hoped that this information will encourage ongoing debate and assist participants to evaluate the significant impact, and the potential, of the emergence of the new ICTs.

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UNESCO Universal Declaration on Cultural Diversity

Cyberspace not only carries and distributes information but is also a vehicle for communication and the exchange of views. The wealth of information about different cultures and values available on the Internet enables an individual to remain based in his or her own culture while becoming exposed to and influenced by others.

One problem however is that the information and services available on the Internet are usually written in the world's most dominant languages. If this state of affairs is not changed it could quickly lead to the erosion of cultural and linguistic diversity and accelerate the extinction of languages, customs and traditions.

Intellectual piracy of work is also a danger to cultural diversity in that it is an obstacle to the development of the cultural industry. A balance must therefore be struck between the protection of authors' moral and economic rights and maintenance of public access to literary, scientific and artistic works and cultural services.

If cyberspace is to be used to narrow rather than to deepen the development divide, all of these issues need to be addressed.

The parameters for this have been set by UNESCO's Universal Declaration on Cultural Diversity 2001 and its accompanying 20-point Action Plan, and have featured in discussions leading up to the December 2003 World Summit on the Information Society in Geneva.

They can also be found in projects launched by UNESCO in cooperation with other specialized institutions of the United Nations system, governments, non-governmental organizations, and civil society.

UNESCO and cultural diversity

Ever since its creation in 1945 UNESCO has recognized the importance of cultural diversity. One of its missions has been to encourage mutual knowledge and understanding between peoples using every means of mass communication.

This has been achieved through the adoption of international agreements to promote the free flow of ideas and encourage popular education and the spread of culture and knowledge.

The Universal Declaration states that intercultural dialogue and respect for cultural diversity and tolerance are essential to building lasting peace. Its symbolic importance can only be gauged when viewed in the context of the events of 11 September 2001 and their aftermath.

The Declaration recognizes that globalization, together with rapid advances in information and communication technologies, present a threat to cultural diversity, while creating conditions for renewed dialogue among cultures and civilizations.

Cultural diversity is seen as part of humanity's common heritage, which, as a source of exchange, innovation and creativity, is as essential for humankind as biodiversity is for nature. It should therefore be protected for the benefit of both present and future generations and be considered as a basic human right.

While different aspects of cultural diversity had been dealt with in a variety of international declarations, recommendations and even treaties elaborated by UNESCO and international and regional forums, the Universal Declaration on Cultural Diversity 2001 was the first such text to be devoted entirely to cultural diversity.

Earlier instruments include the 1966 Declaration of Principles on International Cultural Cooperation, the 1980 Recommendation concerning the Status of the Artist, the 1989 Recommendation on Safeguarding Traditional and Popular Culture, and legally binding treaties such as the 1950 Agreement on the Importation of Educational, Scientific and Cultural Materials ('Florence

Agreement'), the 1952 Universal Copyright Convention, and the 1972 Convention for the Protection of the World Cultural and Natural Heritage.

They are all incorporated by reference in the Preamble to the Declaration.

The definition and role of culture too have evolved over time. The World Conference on Cultural Policies (MONDIACULT, Mexico City 1982) marked a shift from a narrow to an all-encompassing definition of culture, which was described as “the whole complex of distinctive spiritual, material, intellectual and emotional features that characterise a society or social group”.

This broad definition was taken up by the World Commission on Culture and Development (*Our Creative Diversity*, 1995), and reaffirmed at the Stockholm Intergovernmental Conference on Cultural Policies for Development in 1998.

At that meeting, cultural diversity was perceived both as a basic building block of the “emerging global civic culture” that required global ethics and values, and as a major source of social energy for individual nations.

The Action Plan adopted by the Stockholm Conference emphasized the need to take account of universal values while recognizing cultural diversity, combined with the need to preserve the multitude of grassroots cultural initiatives in order to promote mutual understanding, respect and consideration between individuals and nations in view of the risk of disagreements and conflicts.

It recognized that while globalization and other trends enriched the link between cultures, they could also be detrimental to creative diversity and cultural pluralism. This made mutual respect all the more imperative.

This conceptual groundwork is reflected in the Preamble to the Universal Declaration which links cultural diversity to human development, respect for identity, pluralism, the universality of human rights and the strengthening of international cooperation to redress the global imbalance in the circulation of cultural goods and services.

Events leading up to the adoption of the UNESCO Declaration

Experts meeting in June 1999 to discuss the topic “Culture: a form of merchandise like no other?” linked to a Round Table of Ministers of Culture on the theme “Culture and Creativity in the context of Globalization” held in November that year, established the groundwork for the adoption of the Universal Declaration. The talks emphasized the need to defend and promote cultural diversity in the light of globalization.

Following that, another group of experts mandated by the General Conference to look into the relationship between cultures, the marketplace and globalization, convened in Paris in September 2000. They recommended to the Director-General that a declaration on cultural diversity be prepared.

This proposal received the green light from UNESCO’s Executive Board at its 160th session in October 2000, and the direction it would take was sketched out at a second Round Table of Ministers of Culture three months later on the theme “2000 –2010: Cultural Diversity: Challenges of the Marketplace”.

The following principles emerged as priorities: the need for greater North-South cooperation to help the South develop its cultural industries, organize viable local markets and obtain access to international distribution systems; the protection of intellectual property rights and copyright; the urgency of intensifying efforts to curb illicit traffic in cultural property and regulate cultural tourism.

UNESCO was identified as the most appropriate international organization to launch a common platform.

These principles and priorities were elaborated following extensive consultations with Member States, civil society and other international organizations, including the European Commission, the World Trade Organization, the International Organization of French-speaking Countries, and the International Network of Cultural Policies.

A preliminary draft of the Declaration was presented to UNESCO’s Executive Board as a basis for discussion in April 2001, and fine-tuned in

subsequent working groups in the light of comments received from and further consultation with Member States.

Two main ideas emerged during the consultations. The first was that cultural diversity should be seen in the context of respect for human rights if the peaceful and harmonious coexistence of various cultures within the same state is to be ensured. However, no specific reference was made to the question of cultural goods and services.

The second idea, while not overlooking the importance of the Declaration and its link to human and cultural rights, recognized that creative diversity as expressed through cultural industries can be a strong contributor to sustainable development. However, cultural industries are increasingly concentrated amongst the few players who have advanced technical capacities for producing and distributing creative products. Hence national policies ought to be able to counter these trends, which represent a threat to national identities.

These ideas were brought together in the final draft by emphasizing the causal link between cultural pluralism, in the sense of positive interaction between people from different cultural backgrounds, and the fulfilment of their creative abilities and multiple modes of expression through the production of cultural goods that it was essential to defend and promote.

Principles enshrined in the Universal Declaration

The Declaration is structured around four main themes: diversity and pluralism, cultural diversity and human rights, cultural diversity and creativity, and cultural diversity and international solidarity.

The 20-point Action Plan appended to the Declaration commits Member States to disseminate the Declaration and encourage its effective application.

1. Diversity and pluralism

The Declaration places diversity at the heart of the development process understood not only in terms of economic growth, but also as a means of achieving a more satisfactory intellectual, emotional, moral and spiritual

existence (Article 3). Cultural pluralism is to be ensured through the elaboration of national policies, which include all citizens as a guarantee for social cohesion, the vitality of civil society and peace (Article 2).

2. Cultural diversity and human rights

The Declaration firmly links cultural diversity to a respect for universality, indivisibility and the interdependence of human rights and fundamental freedoms (Article 4). Cultural rights are identified as the right to freedom of expression and the dissemination of one's work in the language of one's choice, the right to good education and training, and the right to participate in the cultural life of one's choice and to conduct one's own cultural practices with respect for the human rights and fundamental freedoms of others (Article 5).

The Declaration recognizes that freedom of expression, media pluralism, multilingualism, equal access to art and to scientific and technological knowledge, including in digital form, and the possibility for all cultures to have access to means of expression and dissemination are the guarantees of cultural diversity (Article 6).

3. Cultural diversity and creativity

The Declaration recognizes that technological advances open up vast opportunities for creation, but that attention must also be paid to the rights of authors and artists. Cultural goods and services are also regarded by the Declaration as vectors of identity, values and meaning and cannot be treated as mere commodities or consumer goods (Article 8).

It also balances a state's right to define its own cultural policy with a general obligation that cultural policies must create conditions conducive to the production and dissemination of diversified cultural goods through cultural industries that have the means to assert themselves at the local and global level (Article 9).

4. Cultural diversity and international solidarity

The Declaration endows UNESCO with the responsibility for transposing the principles of the Declaration and its Action Plan into development strategies and to serve as a forum where all stakeholders, in other words states, international governmental and non-governmental organizations, civil society

and the private sector, can elaborate concepts and policies in favour of cultural diversity (Article 12).

The Action Plan

Member States also commit themselves to achieving 20 objectives aimed at encouraging the implementation of the principles in the Declaration. Cyberspace is a double-edged sword, which can be used to speed up or hamper the fulfilment of several of these objectives.

Objectives 9, 10, 11, 12, 16 and 17, for example, are specifically targeted at reducing the digital divide and increasing the digital access of developing countries to markets and resources.

Member States commit themselves to encouraging digital literacy and to ensuring a greater mastery of the new information and communication technologies, both as an educational discipline and learning tool (Objective 9). They should promote linguistic diversity in cyberspace and encourage universal access to all information in the public domain (Objective 10).

As part of the implementation process, UNESCO has launched the Programme for Creative Content to support creativity and innovation in local content production for television, radio and the new media. It is also developing software packages to facilitate multilingual and open coursework for higher education, which is to be extended to basic education and vocational education.

Member States are also committed to redressing the digital divide in favour of developing countries, both by increasing the latter's access to and mastery of new information technologies and by facilitating the digital dissemination of local cultural products and access to available digital resources in the fields of education, culture and science (Objective 11).

UNESCO has launched several initiatives to fulfil this commitment to digital literacy and knowledge and the dissemination of cultural products, including a New Information and Communication Technologies (NICT) training kit containing freely accessible tools on the Internet and a CD-ROM.

UNESCO also supports the creation of ICT distance learning tools and infrastructures. The “Digi Arts” project aims to develop digital and electronic arts through exchanges between North-South artists, students and researchers.

UNESCO also supports grassroots multimedia centres, which combine community radios run by local people in their own languages with community telecentre facilities. This enables remote villages to communicate and exchange information with the rest of the world, which in turn helps reduce poverty and encourages greater accountability in public affairs.

In order to preserve cultural diversity in the media and global information networks, states also undertake to encourage the production and dissemination of diversified contents in the media and mechanisms for their distribution (Objective 12).

Cyberspace provides an instantaneous marketplace and public recognition for artists that were unimaginable in traditional markets. Nevertheless, it also makes the fight against piracy more difficult.

The Action Plan is committed to ensuring the protection of copyright and related rights in the interest of the development of creativity and fair remuneration for creative work, while upholding a public right of access to culture (Objective 16). Among the projects supported by UNESCO is an anti-piracy project in Africa initiated by the International Federation of Musicians.

The Plan also recognizes the need to assist the cultural industries in developing countries to create viable local markets that have access to the global market and international distribution networks (Objective 17).

UNESCO’s Global Alliance for Cultural Diversity was launched for this dual purpose. The Alliance’s strategic targets are knowledge-sharing, capacity-building, copyright enforcement and the creation of a policy framework conducive to the development of viable small and medium-sized cultural enterprises in the areas of book publishing, music recording, film and audiovisual, multimedia, crafts and design.

Through innovative partnerships, which span the public, private and non-profit sectors, the Alliance is building a network including governments,

organizations, foundations and companies that can respond to the needs of the various actors in the cultural industries of developing countries worldwide.

The way ahead

Since the adoption of the Universal Declaration, there has been an ongoing debate as to whether it is necessary to reinforce action to promote cultural diversity through the creation of an international convention, which, unlike a declaration, would be legally binding. UNESCO's Thirty-Second General Conference in October 2003 decided that the matter of the protection of the diversity of cultural contents and artistic expression should be the subject of an international convention, and invited the Director-General to submit a preliminary draft of such a document to its next session in 2005.

UNESCO's Recommendation on multilingualism and access to cyberspace and the Charter of digital heritage

In October 2003 UNESCO's General Conference adopted two standard-setting measures that emphasize the potential of Information and Communication Technology (ICT) to contribute to the promotion of freedom of expression, linguistic and cultural diversity, education, and access to information, particularly information in the public domain. They are the Recommendation on the Promotion and Use of Multilingualism and Universal Access to Cyberspace, and the Charter on the Preservation of the Digital Heritage.

The Recommendation on the Promotion and Use of Multilingualism and Universal Access to Cyberspace deals with four aspects that must be taken into consideration so that the greatest number of people profit from the potential of ICT.

These are the development and promotion of multilingual content and systems, access to networks and service, the development of public domain content, and the reaffirmation and promotion of a fair balance between the interests of copyright holders and the public interest. These measures aim to provide more equitable access to information and to favour the development of multicultural knowledge societies.

The Charter on the Preservation of the Digital Heritage is a declaration of principle designed to assist Member States in preparing national policies to preserve and provide access to digital heritage. Digital heritage consists of unique resources of human knowledge and expression which can be cultural, educational, scientific or administrative, as well as technical, legal, medical or any other kind of information created digitally or converted into digital form from existing analogue resources.

This fast-growing heritage is particularly at risk because of the rapid obsolescence of the hardware and software with which it is generated and preserved. The Charter recognizes that this material constitutes a common heritage and that its preservation requires urgent measures.

UNESCO took the lead on these issues because of its ongoing commitment to the promotion of multilingualism and universal access to sources of information and knowledge in order to reinforce the educational, cultural and scientific aspects of social development. The Organization also exists in part to encourage and enable the preservation and enjoyment of the cultural, scientific and information heritage of the world's peoples.

Multilingualism and access

Globalization has encouraged a new era of interactivity between nations, economies and individuals, but it also has disturbing and possibly marginalizing effects. It is up to international institutions and national authorities to counter this, particularly in the areas of access to knowledge, the spread of new information and communication technologies, and the development of multilingualism on the Web.

The solution, however, is not a simple one, because even if new technology can vastly improve the free circulation of knowledge, it may also create a gap between the so-called info-rich and info-poor. Similarly, the dominance of a group of languages could restrict means of expression and result in a standardization of culture.

This was the context that motivated UNESCO's decision to encourage its Member States to adopt a recommendation to promote the use of multilingualism and universal access to cyberspace.

The process began in 1997 when the General Conference requested the Director-General to prepare a draft recommendation on this matter. The draft was later modified substantially to take into account the opinions of all Member States, and intergovernmental and international nongovernmental organizations that wanted to contribute.

It was believed that the adopted recommendation would represent a significant contribution by UNESCO to the work of the World Summit on the Information Society in 2003 and 2005.

Facilitating access to Internet services

The availability of publicly accessible Internet networks and services are the first prerequisite to ensure that all citizens and nations can benefit from information on the Web. The obstacles to universal access include economic constraints, high costs for Internet service connection and a lack of telecommunication facilities. The provision of telecommunications facilities as a public service is subject to regulatory frameworks on an international level, as well as standards developed by the International Telecommunication Union (ITU), which has adopted universal access of citizens to telecommunications as one of its goals. Internet service connection, however, is considered by the ITU as a user application rather than as a telecommunications service within its mandate.

While most industrialized countries do not regulate Internet connectivity, many developing countries restrict the establishment of Internet service providers (ISP) or their access to international gateways. This contributes to the higher costs of Internet access in these countries. In addition, the historical development of the Internet has led to a strong market dominance by a few major international providers. As a result, ISPs in most developing countries are generally obliged to assume the full cost of an international leased telecommunications channel to a backbone provider.

Promoting multilingualism

Language is the foundation of communication between people and is also part of their cultural heritage. For many, language has far-reaching emotive and cultural associations and values rooted in their literary, historical, philosophical and educational heritage.

For this reason the users' language should not be an obstacle to accessing the multicultural heritage available in cyberspace. The harmonious development of the information society is therefore only possible if the availability of multilingual and multicultural information is encouraged.

Facilitating access through development of public domain content

A significant amount of world human heritage lies in content known as public domain information. This enormous legacy of knowledge, partly generated by governments, public institutions and international organizations, exists in every country, culture and language. Making it easier to post this information on the Web will substantially contribute to the goal of universal access.

Facilitating access through application of exemptions to copyrights

Maintaining a balance between copyright protection and access to information is a major challenge for the information society. This involves both national and international regulations. Certain principles of copyright such as limitations on the duration and scope of protection, embody the quest for that balance.

More fundamentally, the notion that a work can be protected on the basis of its originality is a vital instrument for drawing the border between protected works and those in the public domain. Users are also allowed exemptions reflecting the need to strike a balance between the private interests of the creators of intellectual content and the larger public interest.

The recommendations

Numerous concrete measures are proposed by UNESCO in the Recommendation. Examples include: that Member States should define and support national policies that promote the teaching of languages, including mother tongues, in cyberspace. They should also support efforts to set up freely accessible automatic translation services, as well as intelligent linguistic systems such as those that perform multilingual searches for information. It also recommends that the public and private sectors and civil society at local, national, regional and international levels should work to reduce language barriers and promote human interaction on the Internet.

Member States and international organizations should promote access to the Internet as a service of public interest. Citizens should be able to access

public and government records including all the information that they require in a modern democratic society.

Both individual states and international organizations should help people to learn how to use a computer and access information and services on the Internet. They should also encourage the production of local content. National legislation on copyright should be updated to comply with the new technological situation in a way that ensures a balance between the interests of authors and copyright holders and that of the public.

UNESCO's role in this matter is to assist in the emergence of the notion of balance and equity in the information society, to show that the free access to information and the preservation of linguistic and cultural diversity is above all a political choice, and to ensure that this is the most informed choice possible.

Preservation of digital heritage

Our cultural, scientific and information heritage exists increasingly in digital forms, and increasingly in digital forms only. The technologies we use to create and access this digital heritage have many advantages, which explains why they have spread worldwide so rapidly.

But there are very serious challenges in keeping our emerging and fast-growing digital heritage usable and available. The media we use to carry and store it are unstable, and the technology needed for access is constantly superseded by newer technologies.

As old technologies lose support, access to the digital heritage that they fostered is also lost. These challenges are not only technical in nature. They also have organizational and societal dimensions as we struggle to keep access lines open over extended periods of time, often with insufficient resources and unclear strategies.

UNESCO's interest in this situation comes as no surprise. The Organization exists in part to encourage and enable the preservation and enjoyment of the world's cultural, scientific and information heritage. The growth of digital heritage and its vulnerability could hardly go unnoticed.

A large part of the vast amounts of information produced in the world today is born digital, and comes in a wide variety of formats such as text, database, audio, film and image. For institutions traditionally entrusted with collecting and preserving cultural heritage, the question that has become extremely pressing is which of these materials should be kept for future generations, and how to go about selecting and preserving them. This enormous trove of digital information produced today in practically all areas of human activity, and designed to be accessed on computers, may well be lost unless specific techniques and policies are developed to conserve it.

Preserving valuable scientific information, research data, media output and digital art, to name but a few areas, poses new problems. If such material is to be accessed in its original form, technical equipment (original or compatible hardware and software) must be maintained alongside the digital files that make up the data concerned. In many cases, the multimedia components of websites, including Internet links, represents additional difficulty in terms of copyright and geography, sometimes making it difficult to determine which country a website belongs to.

In the late 1990s, UNESCO set about examining these issues with a view to defining a standard to guide governments' preservation endeavours in the digital age. The 31st General Conference adopted a resolution drawing attention to the world's fast-growing digital heritage and the need for an international campaign to safeguard endangered digital memory. It also invited the Director-General to prepare a discussion paper for the 2002 Spring session of the Executive Board containing elements of a draft charter on the preservation of digital documents.

During the meeting, Member States agreed on the need for rapid action to safeguard digital heritage. The debate was largely inspired by a discussion paper compiled for UNESCO by the European Commission on Preservation and Access (ECPA), an Amsterdam-based non-profit foundation, which outlined the issues involved in digital preservation.

Traditional preservation methods, such as the "legal deposit" used by national libraries to ensure that copies of all printed materials are kept, could not be applied as such to digital material for a variety of reasons, notably because Web "publications" often draw on data stored on servers in different parts of the world.

The sheer volume of data concerned also poses a problem. It is estimated that the Internet features one billion pages whose average lifespan is extremely short, estimated at forty-four days to two years.

Considered the most democratic publishing medium ever, some argue that the ever-growing Internet deserves to be preserved as a whole, as its pages and discussion forums can be seen as a priceless mirror of society. The sheer volume of data to be sifted in order to select what is worthy of preservation is staggering.

According to a recent study by the School of Information Management and Systems at the University of California at Berkeley, “the world’s total yearly production of print, film, optical, and magnetic content would require roughly 1.5 billion gigabytes of storage. This is the equivalent of 250 megabytes per person for each man, woman, and child on earth”.

Another complex issue concerns copyright, including copyright of the software required to access digital files. A dazzling array of rights may be associated with websites combining mixed materials from various sources and agreement on the principle of “the right to copy for preservation” still has to be developed worldwide.

The complexity of the problems means that the task of preservation must involve both the creators of information and software producers, who should take conservation into consideration when they design their products. Obviously the days are gone when preservation was the sole responsibility of archival institutions.

Cooperation, guidance, leadership and sharing of tasks are all key elements in the preservation of digital heritage. Adequate resources and support at policy level are indispensable to ensure that future generations continue to have access to the wealth of digital resources in whose creation we have invested so much over the past decades.

The Charter on the Preservation of the Digital Heritage recommends, amongst other things, the development of strategies and policies to preserve the digital heritage, taking into account the level of urgency, local circumstances, available means and future projections. It suggests that the

main criteria for deciding what digital materials to keep should be their significance and lasting cultural, scientific, evidential or other value. And it recommends the creation of appropriate legal and institutional frameworks to secure the protection of Member States' digital heritage.

UNESCO's role will include taking the principles adopted in the Charter into account in the programmes it runs, fostering cooperation and raising awareness of the issue and proposing standard ethical, legal and technical guidelines to support the preservation of the world's digital heritage.

The full texts of UNESCO's Recommendation on the promotion and use of multilingualism and universal access to cyberspace and the Charter on the preservation of the digital heritage are available in Annexes 2 and 3.

Multilingualism on the Web

“There are approximately 172 million English speakers and 163 million non-English speakers on-line” (*Global Reach*)

“50.4 per cent of Web users speak a native language other than English” (*Global Reach*)

“Web users are up to four times more likely to purchase from a site that communicates in the customer’s language” (*www.idc.com*)

“Site stickiness is doubled when a website is translated - visitors stay for twice as long” (*Forrester Research*)

“Almost one-third of websites are presented in a language other than English” (*Messaging Online*)

“Thirty-seven million Americans do not speak English at home” (*US Department of Health*)

“Over 100 million people access the Internet in a language other than English” (*Global Reach*)

“By 2004, 50 per cent of all on-line sales are expected to occur outside the US” (*Forrester Research*)

“For the first time, there are now more e-mail accounts outside the US than within it. The total number of electronic mailboxes in the world at the end of 2000 was a staggering 891.1 million, up 67 per cent from 1999. Over 451 million of the total for 2000 was outside the US” (*Messaging Online*)

“43 per cent of Web users do not speak English at all” (*Global Reach*)

Since the late 1990s there has been growing concern about the need for greater multilingualism on the World Wide Web. Today the priority is the creation of bridges between linguistic communities to facilitate the circulation of texts in more than one language. Although digital translation technology has greatly improved the situation, there is a need to strengthen the political and cultural will to offer Internet users a wider choice of languages.

The history of language coding

In 1963, at a time when computers were first being developed, the American National Standards Institute created a coding system known as the American Standard Code for Information Interchange (ASCII). It was a standard coding scheme that assigned numeric values to 26 unaccented letters, plus numbers, punctuation marks and symbols, to give a total of 128 characters translated into a binary language. The ASCII could only be used to read English. It was impossible to include the accented letters that occur in many European languages or non-alphabetic languages such as Chinese or Japanese.

This was not a problem in the early years of computers as the exchange of electronic files was limited mainly to the mainly English-speaking North America. But it soon became necessary to include other languages. As a temporary solution, extended editions of the ASCII, which could process a total of 256 characters, including letters with accents, were used to translate European alphabets.

But it soon became clear that this was not adequate. Problems encountered included the multiplication of encoding systems, the corruption of data during transient phases and incompatibility between systems when pages could only be displayed in one language at a time. As the exchange of data spread worldwide it could no longer be limited to texts in English and a few European languages.

In January 1991, the Unicode Consortium was created by a group of IT companies, businesses marketing databases, software writers, research organizations and user groups. It developed Unicode, an encoding system specifying a single number for each character. Unicode is readable regardless of the platform, software and language used. It can process 65,000 single characters, and thus include all the writing systems in the world. It is progressively replacing the ASCII. For example, Microsoft's Windows NT, Windows 2000 and Windows XP all use Unicode for text files, while previous versions of the operating system used the ASCII.

But Luc Dall'Armellina, co-author and Webmaster of oVosite, a multimedia writing space, believes that even if operating systems include character fonts that can represent all the languages in the world, Unicode cannot

solve all language problems. “Our keyboard, with its approximately 250 keys, proves insufficient when Katakana or Japanese Hiragana has to be captured, and even more so as far as Chinese is concerned. The great variety of writing systems worldwide and the number of their signs stands in the way,” he said.

Olivier Gainon, a pioneer of on-line literary editing, believes the solution to the problem lies on a technical level. “Today, it’s abnormal that the transmission of accents can be problematic in e-mails. In my opinion, the first step is a technical one. If we manage to do this, the rest will follow. Language representation will reflect the number of individuals connected and there should eventually be multilingual search engines.”

In 2000, more than 50 per cent of Internet users were not English-speaking. And this percentage has not stopped growing. In March 2003, over 60 per cent of users had a home language other than English.

Linguistic communities

“Because the Internet has no national boundaries, cyber surfers are categorized according to other criteria specific to the medium,” says Randy Hobler, a product and translation service Internet marketing consultant. He describes what he calls “language nations” of cyber surfers who are categorized according to their mother tongue, regardless of their geographic location. Therefore the “Spanish nation” includes Internet users in Spain and Latin America, but also Spanish speakers living in the United States or Morocco.

English remains dominant

The dominance of English, the main language of international exchange, is however unlikely to change. Marcel Grangier, manager of the French section of the central language department of the Swiss Federal Government, believes the solution is not to “fight English” but to increase the number of sites in other languages and multilingual sites.

Henri Slettenhaar, a communication technology professor at Webster University in Geneva, has also emphasized the need for bilingual sites. “Local communities on the Web should first use their language to circulate information. If they wish to make it available to the global community, this

information must also be available in English. I much prefer reading the original with difficulty than reading a poor translation.” Slettenhaar says that global research in the areas of business and information should be in English, with local versions if need be. However he believes that if information is aimed at a specific ethnic or linguistic group, it should first be in their language with perhaps a summary in English.

But not everyone is so generous about English domination on the Internet. Philippe Loubière, a literary translator, believes that linguistic diversity is essential to freedom of thought and the survival of modern Man.

“I’m very pessimistic,” Loubière says, “The Anglo-Saxons write to you in English without being embarrassed. The vast majority of French acknowledge with total indifference that their language is gradually being replaced by the bad English of sales and advertising people, and the rest of the world has completely accepted the linguistic hegemony of the Anglo-Saxons because their only aim is to serve these rich and powerful masters.”

The digital divide between the rich and poor, rural and urban areas, privileged and unprivileged regions, developed and developing countries, reduces the possibility that one day the Internet will truly reflect the distribution of languages worldwide.

Zina Tucsnak, a research engineer at the *Analyse et Traitements Informatiques du Lexique Français*, believes the best way to guarantee greater multilingualism would be by assigning a quota for each language on the Web.

Emmanuel Barthe, a legal researcher, does not agree: “Recent signs lead one to believe that languages should be left as they are on the Web. Indeed, languages other than English are developing with the growth of the number of national websites aimed specifically at national publics, in order to draw them to the Internet.”

French on the Internet

Since the mid-1990s, pioneers like Jean-Pierre Cloutier and Olivier Bogros have been striving to develop French on the Internet.

In 1994, Cloutier, a journalist in Quebec, created a weekly column called *Les Chroniques de Cybérie*.

“In the beginning, the *Chroniques* dealt mainly with new sites and software in French,” he says, “But gradually we began looking at more with basic Internet issues and then extended to certain national and international social, political and economic news items.”

Two years later, Bogros, a librarian in France, created *La bibliothèque électronique de Lisieux*, one of the first digital libraries in French. He believes a library could extend its public to the entire French-speaking world by making not only the catalogue available on-line but also by creating a real virtual library.

Bakayoko Bourahima, a librarian at the *École Nationale Supérieure de Statistique et d'Économie Appliquée* (ENSEA) in Abidjan, describes the domination of English on the Web as a double handicap for French-speaking Africans. “There’s the problem of proficiency in a second foreign language. A lack of multiculturalism on the Internet will impose a second linguistic colonization on us, along with all the restrictions it brings. The different language blocks should invest more in promoting their access to the Web, without forgetting their different internal specificities.”

Richard Chotin, a teacher at the *École Supérieure des Affaires* (ESA) in Lille, points out that the supremacy of the English language succeeded that of French in the eighteenth and nineteenth centuries. “The problem is political and ideological. It’s an ‘imperialism’ of the English language arising out of American imperialism. When one does not have to make an effort to be understood, one does not. It is the others who make the effort.”

So-called minority languages

Some believe that this linguistic, political and ideological imperialism may in fact be a universal tendency. France, for example, has tried to impose the French language on former colonies like Haiti.

Guy Antoine, creator of the website, *Window on Haiti*, has made the promotion of krayòl (Haitian Creole) a personal cause. He describes a

book fair held in the capital. “Out of the 500 books written by Haitian authors on display, only about 20 were in krayòl, within the framework of an insistent campaign by France to celebrate ‘francophonie’ in its former colonies. In Haiti, this is going relatively well but to the detriment of ‘créolophonie’.”

Antoine’s website includes general discussions on all sorts of subjects and also debates on krayòl writing norms. In 2000, Antoine joined the managing group of Mason Integrated Technologies whose aim is to create tools making documents written in a minority language accessible. “Given the experience of the team on the subject, we’re first working on Haitian Creole, which is the only national language in Haiti, and one of the two official languages, the other being French. This language can hardly be considered as a minority language in the Caribbean since it is spoken by between eight and ten million people.”

Another experience is that of Caoimhín Ó Donnáile, an IT professor at the Sabhal Mór Ostaig Institute on the Isle of Skye in Scotland. He gives his classes in Scottish Gaelic. He’s also the Webmaster of the Institute’s English-Gaelic website, the world’s main source of information on Scottish Gaelic, and on which he regularly updates a list of European Minority Languages. “Our students use a Gaelic spell checker and a Gaelic on-line terminology database. It’s now possible to listen to the radio in both Scottish and Irish Gaelic on the Internet anywhere in the world.”

Ó Donnáile believes the Internet can be used to protect languages. “If people do not care about preserving languages, the Internet and the globalization that goes with it will considerably accelerate the disappearance of these languages. If people really care about preserving them, the Internet can be an irreplaceable tool.”

In 1999, Robert Beard co-founded yourDictionary.com, a reference portal in all languages with a large section dedicated to endangered languages. “Endangered languages are mainly unwritten languages,” he says, “Only one third of some 6,000 languages existing in the world are both written and spoken. I do not think that the Web will contribute to the loss of the identity of languages and I even have the feeling that, long-term, it will strengthen this identity. For instance, an increasing number of American Indians contact

linguists to ask them to write the grammar of their language and to assist them in compiling dictionaries. For them, the Web is an instrument that is both accessible and very precious for cultural expression.”

Language facts and figures

Chinese

The eAsia report found that China’s active Internet user base would increase by 750 per cent from 2.5 million in 1999 to 21 million by 2003. China and India are expected to outpace Japan in Internet growth in the near future.

French

France is expected to become the third largest Internet economy in Europe. More than nine million new Internet users went on-line in Britain, Germany, and France, according to a survey published by the *NOP Research Group*. The French market is showing the fastest growth rates, with a 47 per cent market growth in the last year.

German

There are approximately 15.9 million people on-line in Germany. In the six months prior to February 2000, the number of Internet users increased by more than 50 per cent.

Italian

According to Between ICT Brokers, there were 10 million people on-line in Italy by April 2000.

Japanese

There are now 19.4 million Japanese using the Internet, according to a new report from *Access Media International*. This figure represents a 128.8 per cent increase on last year’s figure. Over 20 per cent of Japanese homes are now on-line.

E-commerce was set to explode in Japan, from about \$4 billion in 1999 to \$693 billion in 2003, according to a recent report by Andersen Consulting and Japan's Ministry of International Trade and Industry (MITI).

Portuguese and Spanish

Consumer electronic commerce will see explosive growth in Latin America, Gartner predicts. Competitors need to prepare now for this e-commerce tidal wave, and one aspect of market readiness is developing offerings in the local languages. Gartner research states that "content in native languages will increase in importance as Internet use penetrates deeper into lower tier socio-economic groups in Latin America".

Russian

Monitoring.ru Agency reports that there are 5.4 million adults over the age of 18 using the Internet in Russia. For more information on Russian Internet use go to <http://www.monitoring.ru/Internet/digest.html>.

Translation in cyberspace

With the Internet becoming an increasingly important source of information globally, it has become essential to make documents accessible to more people in their own language.

Jean-Pierre Cloutier, who writes a weekly news column on the net called *Chroniques de Cybérie*, said in 1999: “There are very few translations of important texts and essays published on the web, from English into other languages as well as the other way round.”

He was far from being alone in calling for more availability on the Web of information in languages other than English. “When can we hope to see the translation of Spanish-speaking thinkers and others of communication ?” asked Maria Victoria Marinetti, a professor of business Spanish and a translator. “It is very important to be able to communicate in different languages. I would even say it’s mandatory, because the information on the Internet is aimed at the whole world. So why wouldn’t we have it in our own language or in the language we want to read? Wouldn’t having global information but not a wide variety of languages be contradictory?”

One should not forget that many people who surf on the Internet speak only one language. Miriam Mellman, for example, works at the *San Francisco Chronicle*, a widely-read daily newspaper in the United States. She only speaks English. “It would be great if lazy people like me could use instant translation programmes,” she says, “Even if I decide to learn a language other than English, there are many others, and this would make communication easier.”

But even people who speak several languages share this wish. Gérard Fourestier is the creator of *Rubriques à Bac*, a site providing a series of data

bases for high school pupils and students. “I’m French,” he explains, “I learned German, English and Arabic, but I am still way off the mark when I surf to all the corners of the globe. It would be a pity if the largest or most powerful groups are the only ones that are ‘displayed’ and, as far as translation software is concerned, there’s still a lot to do.”

Pierre-Noël Favennec, an expert at France Telecom R&D, says research should look at a way of making automatic translation into any desired language possible, not only the dominant ones.

Automatic translation

It goes without saying that an automatic translation does not produce the same quality of work as one done by a professional. But translators take time to do the work and often cost a lot of money.

Existing translation software is a practical alternative, providing a more immediate and cheaper, if not free, result. It makes it possible to translate a web page or short text in a few seconds, with several combinations of possible languages. This software takes the text to be translated, and automatically generates a corresponding text in the language desired by using specific rules for the transfer of grammatical structure.

The European Association for Machine Translation (EAMT) says: “There are a certain number of systems today that produce a result which is not perfect but good enough to be useful in certain specific applications, generally in the area of technical documentation. Moreover, translation software, which is mainly aimed at assisting the human translator, is becoming more popular with professional translation organizations.”

In 1998, a company called Globalink, which specialized in translation products and services, published the history of automatic translation on its site. (The site has since disappeared. Globalink was bought out by Lernout & Hauspie which in turn was acquired by Scansoft.) It explained that the concept of automatic translation and the processing of natural language first appeared in the late 1930s along with the development of quantitative computing. During the Second World War, the first programmable computers gained from the progress in cryptology and efforts made to try and crack German and other war codes.

After the war, in the emerging sector of information technology, there was continued interest in translation and in the analysis of texts in natural language. In the 1950s research was done on literary translation, a word-for-word translation that did not take linguistic rules into account. The Russian project, begun in 1950 at Georgetown University, was the first systematic attempt to create a usable automatic translating system. In 1965, rapid progress in theoretical linguistics culminated in the publication by Noam Chomsky entitled *Aspects of the Theory of Syntax*.

He proposed new definitions of the phonology, morphology, syntax and semantics of the human language. However, in 1966 an official American report gave a prematurely negative assessment of automatic translation systems, which ended all financing and experimentation in this area for the next 10 years.

It was only at the end of the 1970s that serious experimentation began again. At the same time, progress was being made in IT and language technology. This period also saw the development of transfer systems from one language to another and the launch of the first attempts to market automatic translation systems. Companies such as Systran and Metal began to see the viability and usefulness of this kind of market. They set up automatic translation products and services linked to a central server.

But there were still many problems such as high development costs, the difficulty of offering new language combinations, the inaccessibility of this kind of system for the average user and the difficulty in shifting to new development stages.

In 1999 and 2000, the generalization of the Internet and the beginning of electronic commerce created a true market. Three companies, Softissimo, Systran, and Lernout & Hauspie, launched products aimed at the general public, professionals and manufacturers. Softissimo launched the Reverso translation software series, together with multilingual writing products, electronic dictionaries and language methods. Reverso, for example, is used by France Télécom's search engine, Voilà.

Systran produced translation software used mainly by the search engine AltaVista. And Lernout & Hauspie (since bought by ScanSoft) offers

dictation, translation, voice compression, voice synthesis and industrial documentation products and services.

In March 2001, IBM entered this expanding market. It launched a top-of-the-range professional product, the WebSphere Translation Server. This software package instantly translates web pages, e-mails and chat rooms into Chinese, English, French, German, Italian, Japanese, Korean and Spanish. It interprets 500 words per second and makes the addition of specific vocabulary possible.

In June 2001, the newly formed translation engineering, localization and multilingual content management services company, Champollion Wordfast, launched Wordfast. It is an automatic translation software package with terminology available in real time, typographical control and is compatible with the IBM Translation Server, and TMX and Trados software packages. A simplified version of Wordfast can be downloaded free of charge and the user manual, which can also be downloaded free-of-charge, is available in 16 different languages.

Many public organizations are also involved in the research and development of automatic translation software. Here are three examples, one in the English-speaking community, the second in the French-speaking community and the third in the international community.

The Natural Language Group, associated with the University of Southern California's Information Sciences Institute (USC/ISI), deals with several aspects of the processing of natural language such as automatic translation, automatic text summary, multilingual verb management, development of concept taxonomy (ontology), text generation, compilation of huge multilingual glossaries and multimedia communication.

In France, a multidiscipline group of IT specialists and linguists known as GETA, at Grenoble's Institute of Computer Science and Applied Mathematics, is researching all the theoretical, methodological and practical aspects of computer-assisted translation, and more generally of multilingual IT. The GETA also contributes towards the compiling of the Universal Networking Language (UNL), a digital metalanguage used for the encoding, storage, research and communication of multilingual information, independently of a given language source.

This metalanguage is developed by the international UNL Programme which includes many partners in all linguistic communities. Created within the framework of the United Nations University Institute of Advanced Studies, this programme is run under the aegis of the Universal Networking Digital Language (UNDL) Foundation.

Looking to the future

When automatic translation software is effective, instant translation will follow along with the immediate processing of linguistic, cultural and national codes.

As Randy Hobler, an Internet marketing specialist of translation products and services explains: “We will quickly arrive at a point when a very reliable translation of the text and the word will be so commonplace that it will be able to become part of platforms or even chips.”

At this point, when the development of the Internet has reached its cruising speed, when translation is more than 98 per cent reliable and when the different combinations of possible languages has covered most of the market, the vision of language transparency, any communication from one language to another, will be too limiting for those selling this technology.

The next development will be ‘transcultural and transnational transparency’ in which other aspects of human communication, commerce and transactions beyond only language will come on the scene.

For example, gestures and facial movements have meaning which varies from one society to another. The letter O made with the thumb and index finger means “OK” in the United States, while in Argentina it is an obscene gesture.

When multimedia multilingual videoconferencing is inevitably developed, it will be necessary to correct gestures visually. The Media Lab at the Massachusetts Institute of Technology, Microsoft, and many others are working on the computerized recognition of things such as facial expressions and the identification of biometric characteristics through the face.

It would be a pity if an American businessman made an excellent presentation to an Argentinean during a multilingual videoconference on the web, with his speech translated into perfect Argentinean Spanish, if at the same time he makes the gesture O with his thumb and index finger. Computers will be able to intercept these messages and correct them visually.

(All quotations in the above chapter are taken from the Entretiens series published by Toronto University's *Net des études françaises* - <http://www.etudes.francaises.net>)

Useful links

Translation in cyberspace

American National Standards Institute (ANSI): <http://www.ansi.org/>

ASCII (American standard code for information interchange):

[http:// www.asciitable.com/](http://www.asciitable.com/)

Endangered Language Repository: <http://www.yourdictionary.com/elr/>

European Association for Machine Translation (EAMT):

<http://www.lim.nl/eamt/>

European Minority Languages:

<http://www.smo.uhi.ac.uk/saoghal/mion-chanain/en/>

Groupe d'étude pour la traduction automatique (GETA):

<http://www-clips.imag.fr/geta/>

IBM Research: <http://www.research.ibm.com/>

Media Lab: <http://www.media.mit.edu/>

Natural Language Group at ISI:

<http://www.isi.edu/natural-language/nlp-at-isi.html>

Opera: <http://www.opera.com/>

ScanSoft: <http://www.scansoft.com/>

Softissimo: <http://www.softissimo.com/>

Systran: <http://www.systransoft.com/>

TMX: <http://www.tmx.de/>

Trados: <http://www.trados.com/>

UNDL Foundation: <http://www.undl.org/>

Unicode: <http://www.unicode.org/>

Windows (Microsoft): <http://www.microsoft.com/windows/>

Wordfast: <http://www.wordfast.org/>

yourDictionary.com: <http://www.yourdictionary.com/>

Global Internet Statistics per Language

<http://www.glreach.com/globstats/>

Multilingualism and digital documents

<http://www.info.unicaen.fr/bnum/jelec/Solaris/d06/6loup.html>

<http://www.alfa-redi.org/gic/monterrey.asp>

<http://www.iecat.net/inici.htm> and

<http://www.iec.es/recerca/jornades/ciberespai/inici.htm>

<http://www.star-ag.ch/eng/aktuelles/links.html>

Statistics on international translation flow

http://www.unesco.org/culture/xtrans/html_eng/index1.shtml

Cultural policies and multilingualism

<http://www.tlfq.ulaval.ca/axl/index.shtml>

<http://www.unesco.org/most/ln2lin.htm>

Language teaching

<http://www.frenchteachers.org/technology/cyberspace.htm>

<http://www.becta.org.uk/>

Learning IT terms in your local language

Say IT information sheets: <http://www.becta.org.uk/technology/sayit/index.html>

Albanian, Arabic, Bengali, Cantonese, Farsi, German, Greek, Gujarati, Hindi, Italian, Japanese, Korean, Kurdish (Sorani), Pashto, Portuguese, Punjabi, Russian, Serbian, Somali, Spanish, Swahili, Tamil, Turkish, Ukrainian, Urdu, Vietnamese, Welsh, Yoruba.

Helping people to work with local languages on the Internet

The case of India: <http://www.indianlanguages.com/>

Internationalizing HTML in order to build pages in local languages

<http://www.webreference.com/dlab/books/html/39-0.html>

Fonts in Cyberspace

<http://www.sil.org/computing/fonts/>

Lists of the ISPs available by country

<http://thelist.internet.com/countrycode.html>

Copyright in the digital environment

Who owns content travelling in cyberspace? What rights does it give rise to? To what extent can copyright owners control the use of their works in cyberspace? What access do users have concerning content in cyberspace? What is the role of copyright in the digital environment: traditional copyright or copyright adapted to the challenges posed by technological advancement? Is the need for the development of a large public domain in contradiction with a high level of copyright protection? Is there a relationship between copyright and cultural diversity?

Origin of copyright

The first law granting authors the exclusive right to authorize the reproduction of their works was adopted in England in 1709. The objective of copyright protection has been to stimulate creativity and bring knowledge to the public.

The need to make the benefits of knowledge available to humanity and consequently stimulate the dissemination of this knowledge by remunerating those dispensing it forms the basis of copyright.

Since the introduction of the system of copyright protection, the lawmaker, seeking the best way to reach this objective, has tried to find a balance between the rights of the individual who creates the work and society's need to know and to learn. More than 200 years ago, the British judge, Lord Mansfield, said: *"We must take care to guard against two extremes equally prejudicial; the one, that men of ability, who have employed their time for the service of the community, may not be deprived of their just merits, and the reward of their ingenuity and labour; the other, that the world may not be deprived of improvements, nor the progress of the arts be*

*retarded*¹". Today, in the digital environment, Mansfield's considerations are still valid.

The nineteenth century gave rise to statutory activities on both national and international levels. After a long series of negotiations, the main international instrument in the domain of copyright, the Berne Convention for the protection of literary and artistic works, came into being in 1886.

Copyright as a basic human right is corollary to the right of participation in cultural life, as recognized by the Universal Declaration on Human Rights adopted in 1948 by the United Nations General Assembly.

Article 27 states:

1. Every individual has the right to participate freely in the cultural life of the community, to enjoy arts and to contribute towards scientific advancement and the fruits resulting from it.
2. Every individual has the right to the protection of the moral and material interests arising out of any scientific, literary or artistic work he has created.

The role and position of UNESCO

One of UNESCO's aims, as stated in its Constitution, is to promote the free flow of ideas by word and image and to facilitate the access of all people to the printed and published materials produced by all.

It sets out to do this by encouraging cooperation between nations in all spheres of intellectual activity and by recommending to the nations concerned the necessary international conventions. It encourages governments to adopt measures towards promoting creativity and increasing the production of national literary, scientific, musical and artistic works.

UNESCO has contributed to standard-setting in the field of copyright by adopting the Universal Copyright Convention in 1952, which was later revised in Paris in 1971. The Convention made it possible to extend copyright protection worldwide by creating a common legal denominator, promoting

1. Sayre V. Moore (1785), 1 East. 361n, 102 E.R. 139n.

both respect for the rights of creators and the international circulation of works, especially for educative and teaching purposes. In this regard, UNESCO has always aimed to ensure that the basic principles governing copyright are in harmony with the development of education, science, culture and communication in the modern society.

Copyright and technological challenges

From the “Gutenberg galaxy” to cyberspace, from the invention of printing to the digital environment, from the development of reproduction techniques to technological convergence, the evolution of copyright has always been closely linked to technological development. All the more so since the rights granted to an author correspond to the different uses made of a work.

With each technological advance it is important to find the most effective way to protect the works, but also to seek a fair balance between its protection, the stimulation of intellectual creativity and the public’s lawful access to protected works.

Today, information and communication technologies have radically changed the way works and services are circulated, and have also changed the way protected works are accessed and used.

Problem issues raised include the possibility of simultaneous access by an unlimited number of individuals, transmission of intangible copies of the same quality as the original work, and the blurring of boundaries. The relationship between creators, society and the users of works has also changed considerably. This explains the need for copyright laws to be adapted constantly to fit in with contemporary reality.

It should be pointed out that as far as the promotion of multilingualism on the Web is concerned, copyright plays a relatively neutral role. It provides protection for translators and the creators of translation tools.

According to national legislation and treaty regulations, copyright laws can, in some cases and under certain conditions, permit access to works. In the case of printed publications, for example, the Universal Copyright Convention introduced a system of compulsory translation licences subject to strict

conditions. These included fair compensation for the owner of the right of translation, as well as reproduction licences and a preferential system for the licensing of translations in favour of developing countries when the information was going to be used for teaching, scholarship or research purposes.

These compulsory licences, although rarely used, were intended to facilitate the public's access to a diverse range of literary and scientific works in their respective national languages.

Key elements of international protection

On the international level, it was decided to adapt copyright laws to the latest developments in technology, not by revising the Berne Convention for the protection of literary and artistic works but by adopting two new instruments, the 1996 World Intellectual Property Organization Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT).

They ensure that copyright and related rights owners continue to benefit from appropriate and effective protection when their works are circulated on the Internet. According to the treaties, the act of making available protected works in a way that allows members of the public to access them where and when they choose, is a restricted act, that is subject to the authorization of the copyright owner.

As early as 1982, national experts convened by WIPO and UNESCO concluded that the downloading of work into the memory of a computer should be considered an act of reproduction. This notion was confirmed in 1996 in the agreed statement concerning the WCT and the WPPT, according to which the “reproduction right and the exceptions permitted thereunder, fully apply in the digital environment, in particular to the use of works in digital form. It is understood that the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of [pertinent articles of the treaty]”.

Along with classic copyright protection, the treaties also provide for the possibility of copyright holders to use technical measures to effectively protect their rights and to grant licences for the on-line use of their works.

And they oblige contracting parties to provide for effective legal sanctions against the circumvention of these technical protection measures. They also prohibit the removal of electronic marking or other rights management information, and of control systems for access to works.

Access to works is made possible by service providers whose responsibilities should be outlined in laws that exist on a national level.

For instance, in the United States, the 1998 Digital Millennium Copyright Act states that a service provider will be liable if he fails to take into consideration the notice that copyright has been infringed upon through his system. This applies when the service provider does not act as a simple passive intermediary.

In Europe, the Directive on electronic commerce defines the responsibility of service providers using a horizontal approach. Sanctions could be imposed, in certain cases, through an assessment of the respect of rights recognized by the directive on copyright and related rights in the information society.

Balance between copyright and general public interest in the digital environment

Maintaining a balance between the legitimate interests of copyright owners and that of the public to have access to creative activity, particularly for use in education and research, has been one of the main concerns of lawmakers. In today's digital age, this balance should be maintained even more strongly, as stated in the preamble of the WIPO World Copyright Treaty and suggested in UNESCO's Recommendation on the Promotion and Use of Multilingualism and Universal Access to Cyberspace, adopted by its 32nd General Conference in 2003.

The WIPO treaties paved the way for national lawmakers to reach this balance between the interests of copyright holders and the general public by means of the three-step test.

According to this test, exceptions and restrictions in certain special cases should not conflict with a normal exploitation of the work, nor should

they unreasonably damage the legitimate interests of the authors and other copyright holders.

States should also ensure that technical protection measures do not create obstacles to the effective application of exceptions and restrictions provided for by law. In addition, they must ensure that users can access protected works, where the laws allow a work to be used, without the authorization of the rightful owners.

UNESCO is currently conducting a comparative study of national legislations on the use of protected works for the purposes of education, science and libraries with a view to reaffirming and promoting the balance between the interests of copyright holders and those of the public in the digital environment.

UNESCO's far-reaching contribution to cultural diversity, access to cyberspace and the promotion and use of multilingualism have been discussed in previous chapters. However, on the issue of the promotion and use of multilingualism and universal access to cyberspace, it is worth noting that UNESCO encourages Member States to develop public domain information, to reaffirm a balance between the interests of copyright holders and public interests by updating national copyright and related rights legislations in compliance with international conventions, to apply limitations and exceptions in the digital environment with respect to the three-step-test, and to acknowledge technological innovations and their potential impact on access to information.

Public domain and free access

The development of public domain content is an important way of contributing towards a fair and affordable access to information, and its aim is to encourage increased participation in the information society.

UNESCO defines public domain information as publicly accessible information whose use does not infringe on any legal right or obligation of confidentiality. This refers to all works or objects of related rights which can be exploited by any person without authorization, either because protection is not granted under national or international law, or because of the expiration of

the term of protection. It also includes public data and official information produced and voluntarily made available by governments and international organizations. In other words, public domain information includes, but is not limited to, works that are or can be protected by copyright, where the term of protection has expired.

It should be noted that in copyright, the expression “works in the public domain” has a particular meaning because it concerns only economic rights. Moral rights, particularly rights to integrity and paternity, which the majority of laws provide for the creators of works, are inalienable and must be complied with.

In order to preserve their cultural heritage, the use of public domain works in some states is subject to obtaining a licence. In others, however, the payment of a fee is required. This is known as “paying public domain”.

UNESCO’s Recommendation on the promotion and use of multilingualism and universal access to cyberspace encourages states to identify public domain information and promote repositories of information and knowledge that are in the public domain.

It is also conceptually possible to extend the principle of public domain to “open access” content made available free of charge by the copyright owners. In this case, even if the works concerned do not strictly belong to the public domain, their free use contributes towards reaching the same results. UNESCO recommends that Member States encourage open access solutions.

In conclusion, both the availability in cyberspace of diversified and multilingual works and access to these works is equally essential for the information society. Copyright contributes towards their creation and production by also governing the rules controlling access and use.

By protecting the interests of the creators and the public, copyright plays an important role in the promotion of creativity and the dissemination of knowledge. It therefore represents a legal framework for the use of works of the mind that is in everybody’s interest.

Annex 1

UNESCO Universal Declaration on Cultural Diversity

Adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization during its 31st session, November 2001.

The General Conference,

Committed to the full implementation of the human rights and fundamental freedoms proclaimed in the Universal Declaration of Human Rights and other universally recognized legal instruments, such as the two International Covenants of 1966 relating respectively to civil and political rights and to economic, social and cultural rights,

Recalling that the Preamble to the Constitution of UNESCO affirms “that the wide diffusion of culture, and the education of humanity for justice and liberty and peace are indispensable to the dignity of man and constitute a sacred duty which all the nations must fulfil in a spirit of mutual assistance and concern”,

Further recalling Article I of the Constitution, which assigns to UNESCO among other purposes that of recommending “such international agreements as may be necessary to promote the free flow of ideas by word and image”,

Referring to the provisions relating to cultural diversity and the exercise of cultural rights in the international instruments enacted by UNESCO¹,

1. Among which, in particular, the Florence Agreement of 1950 and its Nairobi Protocol of 1976, the Universal Copyright Convention of 1952, the Declaration of Principles on International Cultural Cooperation of 1966, the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property (1970), the Convention for the Protection of World Cultural and Natural Heritage of 1972, the UNESCO Declaration on Race and Racial Prejudice of 1978, the Recommendation concerning the Status of the Artist of 1980, and the Recommendation on Safeguarding Traditional and Popular Culture of 1989.

Reaffirming that culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs,²

Noting that culture is at the heart of contemporary debates about identity, social cohesion, and the development of a knowledge-based economy,

Affirming that respect for the diversity of cultures, tolerance, dialogue and cooperation, in a climate of mutual trust and understanding are among the best guarantees of international peace and security,

Aspiring to greater solidarity on the basis of recognition of cultural diversity, of awareness of the unity of humankind, and of the development of intercultural exchanges,

Considering that the process of globalization, facilitated by the rapid development of new information and communication technologies, though representing a challenge for cultural diversity, creates the conditions for renewed dialogue among cultures and civilizations,

Aware of the specific mandate which has been entrusted to UNESCO, within the United Nations system, to ensure the preservation and promotion of the fruitful diversity of cultures,

Proclaims the following principles and adopts the present Declaration:

Identity, Diversity and Pluralism

Article 1 – Cultural diversity: the common heritage of humanity

Culture takes diverse forms across time and space. This diversity is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind. As a source of exchange, innovation and creativity, cultural diversity is as necessary for humankind as biodiversity is for nature. In this sense, it is the common heritage of humanity and should be recognized and affirmed for the benefit of present and future generations.

2. This definition is in line with the conclusions of the World Conference on Cultural Policies (MONDIACULT, Mexico City, 1982), of the World Commission on Culture and Development (Our Creative Diversity, 1995), and of the Intergovernmental Conference on Cultural Policies for Development (Stockholm, 1998).

Article 2 – From cultural diversity to cultural pluralism

In our increasingly diverse societies, it is essential to ensure harmonious interaction among people and groups with plural, varied and dynamic cultural identities as well as their willingness to live together. Policies for the inclusion and participation of all citizens are guarantees of social cohesion, the vitality of civil society and peace. Thus defined, cultural pluralism gives policy expression to the reality of cultural diversity. Indissociable from a democratic framework, cultural pluralism is conducive to cultural exchange and to the flourishing of creative capacities that sustain public life.

Article 3 – Cultural diversity as a factor in development

Cultural diversity widens the range of options open to everyone; it is one of the roots of development, understood not simply in terms of economic growth, but also as a means to achieve a more satisfactory intellectual, emotional, moral and spiritual existence.

Cultural Diversity and Human Rights

Article 4 – Human rights as guarantees of cultural diversity

The defence of cultural diversity is an ethical imperative, inseparable from respect for human dignity. It implies a commitment to human rights and fundamental freedoms, in particular the rights of persons belonging to minorities and those of indigenous peoples. No one may invoke cultural diversity to infringe upon human rights guaranteed by international law, nor to limit their scope.

Article 5 – Cultural rights as an enabling environment for cultural diversity

Cultural rights are an integral part of human rights, which are universal, indivisible and interdependent. The flourishing of creative diversity requires the full implementation of cultural rights as defined in Article 27 of the Universal Declaration of Human Rights and in Articles 13 and 15 of the International Covenant on Economic, Social and Cultural Rights. All persons have therefore the right to express themselves and to create and disseminate their work in the language of their choice, and particularly in their mother

tongue; all persons are entitled to quality education and training that fully respect their cultural identity; and all persons have the right to participate in the cultural life of their choice and conduct their own cultural practices, subject to respect for human rights and fundamental freedoms.

Article 6 – Towards access for all to cultural diversity

While ensuring the free flow of ideas by word and image care should be exercised that all cultures can express themselves and make themselves known. Freedom of expression, media pluralism, multilingualism, equal access to art and to scientific and technological knowledge, including in digital form, and the possibility for all cultures to have access to the means of expression and dissemination are the guarantees of cultural diversity.

Cultural Diversity and Creativity

Article 7 – Cultural heritage as the wellspring of creativity

Creation draws on the roots of cultural tradition, but flourishes in contact with other cultures. For this reason, heritage in all its forms must be preserved, enhanced and handed on to future generations as a record of human experience and aspirations, so as to foster creativity in all its diversity and to inspire genuine dialogue among cultures.

Article 8 – Cultural goods and services: commodities of a unique kind

In the face of present-day economic and technological change, opening up vast prospects for creation and innovation, particular attention must be paid to the diversity of the supply of creative work, to due recognition of the rights of authors and artists and to the specificity of cultural goods and services which, as vectors of identity, values and meaning, must not be treated as mere commodities or consumer goods.

Article 9 – Cultural policies as catalysts of creativity

While ensuring the free circulation of ideas and works, cultural policies must create conditions conducive to the production and dissemination of diversified cultural goods through cultural industries that have the means to assert

themselves at the local and global level. It is for each State, with due regard to its international obligations, to define its cultural policy and to implement it through the means it considers fit, whether by operational support or appropriate regulations.

Cultural Diversity and International Solidarity

Article 10 – Strengthening capacities for creation and dissemination worldwide

In the face of current imbalances in flows and exchanges of cultural goods and services at the global level, it is necessary to reinforce international cooperation and solidarity aimed at enabling all countries, especially developing countries and countries in transition, to establish cultural industries that are viable and competitive at national and international level.

Article 11 – Building partnerships between the public sector, the private sector and civil society

Market forces alone cannot guarantee the preservation and promotion of cultural diversity, which is the key to sustainable human development. From this perspective, the pre-eminence of public policy, in partnership with the private sector and civil society, must be reaffirmed.

Article 12 – The role of UNESCO

UNESCO, by virtue of its mandate and functions, has the responsibility to:

- (a) Promote the incorporation of the principles set out in the present Declaration into the development strategies drawn up within the various intergovernmental bodies;
- (b) Serve as a reference point and a forum where States, international governmental and non-governmental organizations, civil society and the private sector may join together in elaborating concepts, objectives and policies in favour of cultural diversity;
- (c) Pursue its activities in standard-setting, awareness-raising and capacity-building in the areas related to the present Declaration within its fields of competence;
- (d) Facilitate the implementation of the Action Plan, the main lines of which are appended to the present Declaration.

Main Lines of an Action Plan for the Implementation of the UNESCO Universal Declaration on Cultural Diversity

The Member States commit themselves to taking appropriate steps to disseminate widely the “UNESCO Universal Declaration on Cultural Diversity” and to encourage its effective application, in particular by cooperating with a view to achieving the following objectives:

1. Deepening the international debate on questions relating to cultural diversity, particularly in respect of its links with development and its impact on policy-making, at both national and international level; taking forward notably consideration of the advisability of an international legal instrument on cultural diversity.
2. Advancing in the definition of principles, standards and practices, on both the national and the international levels, as well as of awareness-raising modalities and patterns of cooperation, that are most conducive to the safeguarding and promotion of cultural diversity.
3. Fostering the exchange of knowledge and best practices in regard to cultural pluralism with a view to facilitating, in diversified societies, the inclusion and participation of persons and groups from varied cultural backgrounds.
4. Making further headway in understanding and clarifying the content of cultural rights as an integral part of human rights.
5. Safeguarding the linguistic heritage of humanity and giving support to expression, creation and dissemination in the greatest possible number of languages.
6. Encouraging linguistic diversity – while respecting the mother tongue – at all levels of education, wherever possible, and fostering the learning of several languages from the earliest age.
7. Promoting through education an awareness of the positive value of cultural diversity and improving to this end both curriculum design and teacher education.
8. Incorporating, where appropriate, traditional pedagogies into the education process with a view to preserving and making full use of culturally appropriate methods of communication and transmission of knowledge.

9. Encouraging “digital literacy” and ensuring greater mastery of the new information and communication technologies, which should be seen both as educational discipline and as pedagogical tools capable of enhancing the effectiveness of educational services.
10. Promoting linguistic diversity in cyberspace and encouraging universal access through the global network to all information in the public domain.
11. Countering the digital divide, in close cooperation in relevant United Nations system organizations, by fostering access by the developing countries to the new technologies, by helping them to master information technologies and by facilitating the digital dissemination of endogenous cultural products and access by those countries to the educational, cultural and scientific digital resources available worldwide.
12. Encouraging the production, safeguarding and dissemination of diversified contents in the media and global information networks and, to that end, promoting the role of public radio and television services in the development of audiovisual productions of good quality, in particular by fostering the establishment of cooperative mechanisms to facilitate their distribution.
13. Formulating policies and strategies for the preservation and enhancement of the cultural and natural heritage, notably the oral and intangible cultural heritage, and combating illicit traffic in cultural goods and services.
14. Respecting and protecting traditional knowledge, in particular that of indigenous peoples; recognizing the contribution of traditional knowledge, particularly with regard to environmental protection and the management of natural resources, and fostering synergies between modern science and local knowledge.
15. Fostering the mobility of creators, artists, researchers, scientists and intellectuals and the development of international research programmes and partnerships, while striving to preserve and enhance the creative capacity of developing countries and countries in transition.
16. Ensuring protection of copyright and related rights in the interest of the development of contemporary creativity and fair remuneration for creative work, while at the same time upholding

a public right of access to culture, in accordance with Article 27 of the Universal Declaration of Human Rights.

17. Assisting in the emergence or consolidation of cultural industries in the developing countries and countries in transition and, to this end, cooperating in the development of the necessary infrastructures and skills, fostering the emergence of viable local markets, and facilitating access for the cultural products of those countries to the global market and international distribution networks.
18. Developing cultural policies, including operational support arrangements and/or appropriate regulatory frameworks, designed to promote the principles enshrined in this Declaration, in accordance with the international obligations incumbent upon each State.
19. Involving all sectors of civil society closely in framing of public policies aimed at safeguarding and promoting cultural diversity.
20. Recognizing and encouraging the contribution that the private sector can make to enhancing cultural diversity and facilitating to that end the establishment of forums for dialogue between the public sector and the private sector.

The Member States recommend that the Director-General take the objectives set forth in this Action Plan into account in the implementation of UNESCO's programmes and communicate it to institutions of the United Nations system and to other intergovernmental and non-governmental organizations concerned with a view to enhancing the synergy of actions in favour of cultural diversity.

Annex 2

Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace

Adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization during its 32nd session, October 2003.

Preamble

The General Conference,

Committed to the full implementation of the human rights and fundamental freedoms proclaimed in the Universal Declaration of Human Rights and other universally recognized legal instruments, and *mindful* of the two International Covenants of 1966 relating respectively to civil and political rights and to economic, social and cultural rights¹,

Recognizing the “central and important role of the United Nations Educational, Scientific and Cultural Organization in the field of information and communication and in the implementation of the relevant decisions in this area adopted by the General Conference of that Organization and of the relevant parts of the Assembly resolutions on the subject²”,

Recalling that the Preamble to the Constitution of UNESCO affirms, “that the wide diffusion of culture, and the education of humanity for justice and liberty

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1. Articles 19 and 27 of the Universal Declaration of Human Rights, 1948; International Covenant on Civil and Political Rights, Article 27, and International Covenant on Economic, Social and Cultural Rights, 1966; United Nations Declaration on the Rights of Persons belonging to National, Ethnic, Religious and Linguistic Minorities (resolution 47/135 of 18 December 1992); the ACC Statement on Universal Access to Basic Communication and Information Services, issued in 1997; paragraph 25 of the United Nations Millennium Declaration, 2000.
 2. United Nations General Assembly resolution 35/201 (97th plenary meeting, 16 December 1980).

and peace are indispensable to the dignity of man and constitute a sacred duty which all the nations must fulfil in a spirit of mutual assistance and concern”,

Further recalling Article I of the Constitution, which assigns to UNESCO among other purposes that of recommending “such international agreements as may be necessary to promote the free flow of ideas by word and image³”,

Affirming the principles embodied in the Universal Declaration on Cultural Diversity, adopted by the General Conference of UNESCO at its 31st session and particularly its articles 5, 6 and 8,

Referring to the resolutions of the General Conference of UNESCO⁴ with regard to the promotion of multilingualism and universal access to information in cyberspace,

Convinced that the development of new information and communication technologies (ICTs) provides opportunities to improve the free flow of ideas by word and image but also presents challenges for ensuring the participation of all in the global information society,

Noting that linguistic diversity in the global information networks and universal access to information in cyberspace are at the core of contemporary debates and can be a determining factor in the development of a knowledge-based society,

Taking into account international treaties and agreements on intellectual property, in order to facilitate the promotion of universal access to information,

Acknowledging the need for capacity-building, particularly for developing countries, in acquisition and application of the new technologies for the information-poor,

Recognizing that basic education and literacy are prerequisites for universal access to cyberspace,

Considering that different levels of economic development affect prospects for access to cyberspace and that specific policies and increased solidarity are required to redress current asymmetries and create a climate of mutual trust and understanding,

3. Article I, paragraph 2(a).

4. 29 C/Resolution 28, paragraph 2.A(h), 29 C/Resolution 36, 30 C/Resolution 37, 30 C/Resolution 41, and 31 C/Resolution 33.

Adopts the present Recommendation:

Development of Multilingual Content and Systems

1. The public and private sectors and the civil society at local, national, regional and international levels should work to provide the necessary resources and take the necessary measures to alleviate language barriers and promote human interaction on the Internet by encouraging the creation and processing of, and access to, educational, cultural and scientific content in digital form, so as to ensure that all cultures can express themselves and have access to cyberspace in all languages, including indigenous ones.
2. Member States and international organizations should encourage and support capacity-building for the production of local and indigenous content on the Internet.
3. Member States should formulate appropriate national policies on the crucial issue of language survival in cyberspace, designed to promote the teaching of languages, including mother tongues, in cyberspace. International support and assistance to developing countries should be strengthened and extended to facilitate the development of freely accessible materials on language education in electronic form and to the enhancement of human capital skills in this area.
4. Member States, international organizations and information and communication technology industries should encourage collaborative participatory research and development on, and local adaptation of, operating systems, search engines and web browsers with extensive multilingual capabilities, online dictionaries and terminologies. They should support international cooperative efforts with regard to automated translation services accessible to all, as well as intelligent linguistic systems such as those performing multilingual information retrieval, summarizing/abstracting and speech understanding, while fully respecting the right of translation of authors.
5. UNESCO, in cooperation with other international organizations, should establish a collaborative online observatory on existing policies, regulations, technical recommendations, and best practices relating to multilingualism and multilingual resources and applications, including innovations in language computerization.

Facilitating Access to Networks and Services

6. Member States and international organizations should recognize and support universal access to the Internet as an instrument for promoting the realization of the human rights as defined in Articles 19 and 27 of the Universal Declaration of Human Rights.
7. Member States and international organizations should promote access to the Internet as a service of public interest through the adoption of appropriate policies in order to enhance the process of empowering citizenship and civil society, and by encouraging proper implementation of, and support to, such policies in developing countries, with due consideration of the needs of rural communities.
8. In particular, Member States and international organizations should establish mechanisms at the local, national, regional and international levels to facilitate universal access to the Internet through affordable telecommunications and Internet costs with special consideration given to the needs of public service and educational institutions, and of disadvantaged and disabled population groups. New incentives in this area should be designed towards this end including public-private partnerships to encourage investment and the lowering of financial barriers to the use of ICT, such as taxes and customs duties on informatics equipment, software and services.
9. Member States should encourage Internet service providers (ISPs) to consider provision of concessionary rates for Internet access in public service institutions, such as schools, academic institutions, museums, archives and public libraries, as a transitional measure towards universal access to cyberspace.
10. Member States should encourage the development of information strategies and models that facilitate community access and reach out to all levels of society, including the setting up of community projects and fostering the emergence of local information and communication technology leaders and mentors. Strategies should also support cooperation on ICT among public service institutions, as a means of reducing the cost of access to Internet services.
11. Interconnection on a negotiated cost-sharing basis in the spirit of international cooperation should be encouraged between national

Internet peering points combining the traffic of private and non-profit ISPs in developing countries and peering points in other countries whether developing or industrialized.

12. Regional organizations and forums should encourage the establishment of inter- and intra-regional networks powered by high capacity regional backbones to connect each country within a global network in an open competitive environment.
13. Concerted efforts within the United Nations system should promote the sharing of information about and experience on the use of ICT-based networks and services in socio-economic development, including open source technologies, as well as policy formulation and capacity-building in developing countries.
14. Member States and international organizations should promote appropriate partnerships in the management of domain names, including multilingual domain names.

Development of Public Domain Content

15. Member States should recognize and enact the right of universal online access to public and government-held records including information relevant for citizens in a modern democratic society, giving due account to confidentiality, privacy and national security concerns, as well as to intellectual property rights to the extent that they apply to the use of such information. International organizations should recognize and promulgate the right for each State to have access to essential data relating to its social or economic situation.
16. Member States and international organizations should identify and promote repositories of information and knowledge in the public domain and make them accessible by all, thus shaping learning environments conducive to creativity and audience development. To this end, adequate funding should be provided for the preservation and digitization of public domain information.
17. Member States and international organizations should encourage cooperative arrangements which respect both public and private interests in order to ensure universal access to information in the public domain without geographical, economic, social or cultural discrimination.

18. Member States and international organizations should encourage open access solutions including the formulation of technical and methodological standards for information exchange, portability and interoperability, as well as online accessibility of public domain information on global information networks.
19. Member States and international organizations should promote and facilitate ICT literacy, including popularizing and building trust in ICT implementation and use. The development of “human capital” for the information society, including an open, integrated and intercultural education combined with skills training in ICT, is of crucial importance. ICT training should not be limited to technical competence but should also include awareness of ethical principles and values.
20. Inter-agency cooperation within the United Nations system should be reinforced with a view to building up a universally accessible body of knowledge, particularly for the benefit of developing countries and disadvantaged communities, from the massive amount of information produced through development projects and programmes.
21. UNESCO, in close cooperation with other intergovernmental organizations concerned, should undertake the compilation of an international inventory of legislation, regulations and policies on the generation and online dissemination of public domain information.
22. Definition and adoption of best practices and voluntary, self-regulatory, professional and ethical guidelines should be encouraged among information producers, users and service providers with due respect to freedom of expression.

**Reaffirming the Equitable Balance between
the Interests of rights-holders and the Public Interest**

23. Member States should undertake, in close cooperation with all interested parties, the updating of national copyright legislation and its adaptation to cyberspace, taking full account of the fair balance between the interests of authors, copyright and related rights-holders, and of the public embodied in international copyright and related rights conventions.
24. Member States and international organizations, when appropriate, should encourage rights-holders and the lawful beneficiaries of

limitations and exceptions to copyright and related rights protection to ensure that such limitations and exceptions are applied in certain special cases that do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the rights-holders as required for in the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT).

25. Member States and international organizations should pay careful attention to the development of technological innovations and to their potential impact on access to information in the framework of copyright and related rights protection under international treaties and agreements.

The General Conference recommends that Member States apply the above provisions by taking whatever legislative or other steps are required to give effect within their respective territories and jurisdictions to the norms and principles set forth in this recommendation.

The General Conference recommends that Member States bring this recommendation to the attention of the authorities and services responsible for public and private works on ICT policies, strategies and infrastructures, including use of multilingualism on the Internet, the development of networks and services, expansion of public domain information on the Internet and intellectual property rights issues.

The General Conference recommends that Member States should report to it, on the dates and in a manner to be determined by it, on the action they have taken to give effect to this recommendation.

Appendix

Definitions

For the purpose of this Recommendation:

- (a) **Backbone** is a high-capacity network that links together other networks of lower capacity;
- (b) **Copyright limitations and exceptions** are provisions in copyright and related rights laws restricting the right of the author or other rights-holders with regard to the exploitation of their work or object of related rights. The main forms of such limitations and exceptions are compulsory licenses, statutory licenses and fair use;
- (c) **Cyberspace** is the virtual world for digital or electronic communication associated with the global information infrastructure;
- (d) **Domain name** is the name given to an Internet address, which facilitates access to Internet resources by users (e.g. “unesco.org” in <http://www.unesco.org>);
- (e) **Intelligent linguistic systems** combine the rapid computational, data retrieval and manipulation power of today’s computers with the more abstract and subtle reasoning skills and understanding of nuances that are implied but not necessarily explicitly stated in inter-human communication within and across languages, thus allowing the simulation of human communication to a high degree;
- (f) **Internet service provider (ISP)** is a supplier of Internet access services;
- (g) **Interoperability** is the ability of software and hardware on different machines from different vendors to share data;
- (h) **Open source technologies** are based on the premise of open source, a certification standard issued by the Open Source Initiative (OSI) that indicates that the source code (program instructions in their original form or programming language) of a computer program is made available free of charge to the general public;
- (i) **Peering** is a relationship between two or more ISPs in which the ISPs create a direct link between them and agree to forward each

other's packets directly across this link instead of using the Internet backbone. When peering involves more than two ISPs, all traffic destined for any of the ISPs is first routed to a central exchange, called a peering point, and then forwarded to the final destination;

- (j) **Portability** refers to the ability of software to be used on a variety of computers without necessitating a particular machine or hardware;
- (k) **Public domain information** is publicly accessible information, the use of which does not infringe any legal right, or any obligation of confidentiality. It thus refers on the one hand to the realm of all works or objects of related rights, which can be exploited by everybody without any authorization, for instance because protection is not granted under national or international law, or because of the expiration of the term of protection. It refers on the other hand to public data and official information produced and voluntarily made available by governments or international organizations;
- (l) **Search engine** is a software application that searches documents for specified keywords and localizes or retrieves the documents where the keywords were found;
- (m) **Universal access to cyberspace** is equitable and affordable access by all citizens to information infrastructure (notably to the Internet) and to information and knowledge essential to collective and individual human development;
- (n) **Web browser** is a software application used to locate and display World Wide Web pages.

Annex 3

Charter on the Preservation of the Digital Heritage

Adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization during its 32nd session, October 2003.

Preamble

The General Conference,

Considering that the disappearance of heritage in whatever form constitutes an impoverishment of the heritage of all nations,

Recalling that the Constitution of UNESCO provides that the Organization will maintain, increase and diffuse knowledge, by assuring the conservation and protection of the world's inheritance of books, works of art and monuments of history and science, that its "Information for All" Programme provides a platform for discussions and action on information policies and the safeguarding of recorded knowledge, and that its "Memory of the World" Programme aims to ensure the preservation and universal accessibility of the world's documentary heritage,

Recognizing that such resources of information and creative expression are increasingly produced, distributed, accessed and maintained in digital form, creating a new legacy – the digital heritage,

Aware that access to this heritage will offer broadened opportunities for creation, communication and sharing of knowledge among all peoples,

Understanding that this digital heritage is at risk of being lost and that its preservation for the benefit of present and future generations is an urgent issue of worldwide concern,

Proclaims the following principles and adopts the present Charter.

The Digital Heritage as a Common Heritage

Article 1 – Scope

The digital heritage consists of unique resources of human knowledge and expression. It embraces cultural, educational, scientific and administrative resources, as well as technical, legal, medical and other kinds of information created digitally, or converted into digital form from existing analogue resources. Where resources are “born digital”, there is no other format but the digital object.

Digital materials include texts, databases, still and moving images, audio, graphics, software, and web pages, among a wide and growing range of formats. They are frequently ephemeral, and require purposeful production, maintenance and management to be retained.

Many of these resources have lasting value and significance, and therefore constitute a heritage that should be protected and preserved for current and future generations. This ever-growing heritage may exist in any language, in any part of the world, and in any area of human knowledge or expression.

Article 2 – Access to the digital heritage

The purpose of preserving the digital heritage is to ensure that it remains accessible to the public. Accordingly, access to digital heritage materials, especially those in the public domain, should be free of unreasonable restrictions. At the same time, sensitive and personal information should be protected from any form of intrusion.

Member States may wish to cooperate with relevant organizations and institutions in encouraging a legal and practical environment which will maximise accessibility of the digital heritage. A fair balance between the legitimate rights of creators and other rights holders and the interests of the public to access digital heritage materials should be reaffirmed and promoted, in accordance with international norms and agreements.

Guarding against Loss of Heritage

Article 3 – The threat of loss

The world's digital heritage is at risk of being lost to posterity. Contributing factors include the rapid obsolescence of the hardware and software which brings it to life, uncertainties about resources, responsibility and methods for maintenance and preservation, and the lack of supportive legislation.

Attitudinal change has fallen behind technological change. Digital evolution has been too rapid and costly for governments and institutions to develop timely and informed preservation strategies. The threat to the economic, social, intellectual and cultural potential of the heritage – the building blocks of the future – has not been fully grasped.

Article 4 – Need for action

Unless the prevailing threats are addressed, the loss of the digital heritage will be rapid and inevitable. Member States will benefit by encouraging legal, economic and technical measures to safeguard the heritage. Awareness-raising and advocacy is urgent, alerting policy makers and sensitizing the general public to both the potential of the digital media and the practicalities of preservation.

Article 5 – Digital continuity

Continuity of the digital heritage is fundamental. To preserve digital heritage, measures will need to be taken throughout the digital information life cycle, from creation to access. Long-term preservation of digital heritage begins with the design of reliable systems and procedures which will produce authentic and stable digital objects.

Measures Required

Article 6 – Developing strategies and policies

Strategies and policies to preserve the digital heritage need to be developed, taking into account the level of urgency, local circumstances, available means

and future projections. The cooperation of holders of copyright and related rights, and other stakeholders, in setting common standards and compatibilities, and resource sharing, will facilitate this.

*Article 7 – **Selecting what should be kept***

As with all documentary heritage, selection principles may vary between countries, although the main criteria for deciding what digital materials to keep would be their significance and lasting cultural, scientific, evidential or other value. ‘Born digital’ materials should clearly be given priority. Selection decisions and any subsequent reviews need to be carried out in an accountable manner, and be based on defined principles, policies, procedures and standards.

*Article 8 – **Protecting the digital heritage***

Member States need appropriate legal and institutional frameworks to secure the protection of their digital heritage.

As a key element of national preservation policy, archive legislation and legal or voluntary deposit in libraries, archives, museums and other public repositories should embrace the digital heritage.

Access to legally deposited digital heritage materials, within reasonable restrictions, should be assured without causing prejudice to their normal exploitation.

Legal and technical frameworks for authenticity are crucial to prevent manipulation or intentional alteration of digital heritage. Both require that the content, functionality of files and documentation be maintained to the extent necessary to secure an authentic record.

*Article 9 – **Preserving cultural heritage***

The digital heritage is inherently unlimited by time, geography, culture or format. It is culture-specific, but potentially accessible to every person in the world. Minorities may speak to majorities, the individual to a global audience.

The digital heritage of all regions, countries and communities should be preserved and made accessible, so as to assure over time representation of all peoples, nations, cultures and languages.

Responsibilities

Article 10 – Roles and responsibilities

Member State may wish to designate one or more agencies to take coordinating responsibility for the preservation of digital heritage, and to make available necessary resources. The sharing of tasks and responsibilities may be based on existing roles and expertise.

Measures should be taken to:

- (a) urge hardware and software developers, creators, publishers, producers, and distributors of digital materials as well as other private sector partners to cooperate with national libraries, archives, museums and other public heritage organizations in preserving the digital heritage;
- (b) develop training and research, and share experience and knowledge among the institutions and professional associations concerned;
- (c) encourage universities and other research organizations, both public and private, to ensure preservation of research data.

Article 11 – Partnerships and cooperation

Preservation of the digital heritage requires sustained efforts on the part of governments, creators, publishers, relevant industries and heritage institutions.

In the face of the current digital divide, it is necessary to reinforce international cooperation and solidarity to enable all countries to ensure creation, dissemination, preservation and continued accessibility of their digital heritage.

Industries, publishers and mass communication media are urged to promote and share knowledge and technical expertise.

The stimulation of education and training programmes, resource-sharing arrangements, and dissemination of research results and best practices will democratize access to digital preservation techniques.

Article 12 – The role of UNESCO

UNESCO, by virtue of its mandate and functions, has the responsibility to:

- (a) take the principles set forth in this Charter into account in the functioning of its programmes and promote their implementation within the United Nations system and by intergovernmental and international non-governmental organizations concerned with the preservation of the digital heritage;
- (b) serve as a reference point and a forum where Member States, intergovernmental and international non-governmental organizations, civil society and the private sector may join together in elaborating objectives, policies and projects in favour of the preservation of the digital heritage;
- (c) foster cooperation, awareness-raising and capacity-building, and propose standard ethical, legal and technical guidelines, to support the preservation of the digital heritage;
- (d) determine, on the basis of the experience gained over the next six years in implementing the present Charter and the Guidelines, whether there is a need for further standard-setting instruments for the promotion and preservation of the digital heritage.