

Panel on

**"UNIVERSAL ACCESS TO INFORMATION AND INFORMATICS  
FOR HUMAN DEVELOPMENT"**

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**Summary of Presentations**

An open and universal Information Society can only develop and subsist if it is based on basic policy principles understood by all. Universal access to the new information services and media is in many minds the most important of these principles, and is implicitly embodied in the Universal Declaration of Human Rights, particularly Article 19 bearing on freedom of expression and Article 27 relating to freedom of access to information and protection of users' security and privacy.

Governments, industry and the civil society are seeking to apply these long accepted principles to the electronic information environment, but these efforts are hampered by major difficulties and challenges, including the critical issue of how to ensure fair conditions for the developing countries which are entering the digital age at a major disadvantage.

At the same time, however, most of the national and international debates seem to be concentrating on the technological and economic aspects of information and communication technologies (ICTs), because of their more immediate perceived impact, perhaps to the detriment of the others which will ultimately have a deeper, more fundamental significance in achieving an Information Society for All. We therefore feel that this panel is a particularly timely forum to explore the "right of access to information" and national and international strategies by which information and knowledge resources can be developed as a global public good, stressing important "infoethical" issues.

**Access to networks and services:**

At the most basic level, universal access means ensuring all citizens access to telecommunication services and other ICT facilities. Disparities and inequalities in Internet access - now commonly referred to as the "digital divide" - are considerable, particularly in developing countries where the Internet is most often far too expensive to be accessible to ordinary citizens and most public service institutions and is often available only in major population centres.

One must clearly distinguish in this context, even if they are "bundled" for the end user, the case of Internet service connections, for which there is no regulation at the international level, and that of access to the underlying telecommunication channels which falls within the regulatory framework developed by the International Telecommunication Union (ITU).

In the telecom area, with the mounting pressure to abolish bilaterally negotiated cost sharing arrangements (the so-called "accounting rate" system of the ITU), developing countries will face an unprecedented burden to maintain their telecommunication systems. The net result of this "rate re-balancing" is that the telecommunication operators in developing countries will be

forced to offset the costs by increasing their national call charges which are often already very high relative to local means, particularly in rural areas, thus placing further constraints on access to knowledge resources for disadvantaged populations. Solutions require balanced consideration by national and international regulators since the telecom privatisation and deregulation movement which is at the root of these tendencies is also enabling many consumers in developing countries to access the Internet by leased line and dial-up access at reasonable prices, especially where monopoly public telecommunication operators had been inefficient or did not reinvest their high profits in infrastructure to improve access.

In another, but related, development, advanced technology, high speed Internet backbones and powerful network nodes, built up over a period of time, have led to an overwhelming concentration of Internet backbone business in one country, the USA. Currently, even for intra-European networks, local Internet service providers (ISPs) often use Virginia as their international Internet hub, and the majority of ISPs in developing countries are linked to the US-based operators for intra-regional and sometimes even national, traffic. ISPs outside the USA must in most cases pay the entire costs of these two-way links, and ironically, under these circumstances, even the poorest countries are obliged to subsidize the Internet providers and users in the United States.

What redeeming measures are available to developing countries? In this connection, the issue of strengthening intra-regional networks, combining commercial and public service traffic, has to be brought forward high on the agendas of regional forums. Serious thought should be given to the possibility of establishing high capacity regional backbones to connect each country within a multi-hub global network in which nobody dominates connectivity - as is already under consideration, for example, within the Asia Pacific Economic Cooperation (APEC) forum.

Public service institutions in many developing countries - universities, research centres, libraries, museums, NGOs and government agencies - are facing special difficulties in participating in the information revolution because of economic and associated obstacles to access, particularly where the Internet has been developed mainly on a commercial basis as opposed to the situation in the industrialized countries where its origin was as a service to the academic and research communities. The general idea of a "public service sector ICT consortium" can be useful in ensuring the access of public service institutions to networks and services. Such a consortium relies on the principle of self-help, drawing on the strengths of the different institutions to consolidate demand for services, to promote appropriate public policies, and to provide cost-effective support for training, infrastructure and content development. This approach is not about duplicating facilities of the private sector, but rather about complementarity and co-operation between the public and private sectors to ensure improvements in public services through ICTs. Public service sector consortia can take many forms. One model which has been promoted by UNESCO and other UN agencies is the multipurpose community telecentre (MCT) - a shared, sustainable facility empowering local communities to service their information and ICT requirements to improve literacy campaigns, basic and non-formal education, government programmes and participatory development action, all within the framework of a viable business plan. The basic justification and strategies for public service sector consortia were developed some years ago in a joint study of the ITU and UNESCO<sup>1</sup>, but need to be reviewed and updated in view of new developments in technologies and networks.

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<sup>1</sup> ITU and UNESCO. *The Right to Communicate - At What Price? Economic Constraints to the Effective Use of Telecommunications in Education, Science, Culture and in the Circulation of Information*. UNESCO, Paris: May 1995 (CII-95/WS/2).

National authorities, telecommunication operators and ISPs could promote development and future markets by establishing concessionary rates for Internet access in public service institutions such as schools, academic organizations and public libraries. Such schemes, sometimes known as "e-rates" have been successfully promoted by governments and regulatory agencies in several countries, most notably the USA. The idea of an "Internet tax" has been proposed in various forms and forums to the cross-subsidization necessary to ensure universal access to the Internet.

### **Access to and production of content**

Perhaps even more important than physical access to telematics facilities is universal access to knowledge content, which is at the root of building a "Knowledge Society" based upon lifelong learning and basic human values and rights. Education and knowledge must be considered in this context as not simply advantages for personal and professional fulfilment, but also as social capital - "global public goods" which are the natural concern of public authorities as developed in a very interesting recent publication of UNDP.<sup>2</sup>

The knowledge base for the future knowledge economy is being developed largely through publicly funded instruments such as universities and research grants, while the exploitation of knowledge to produce products has become mainly a concern of private industry. While it is true that industries increasingly do their own product research, it is also true that the publicly funded institutions produce the researchers, and publicly funded academic institutes continue to be the fountain of knowledge. Then who should own the knowledge? Shouldn't there be a fair access to knowledge produced by both private and public enterprises, with due regard to the intellectual property rights? For instance, genome information sequences have been developed naturally through millions of years of evolution. Should a private owner become the sole proprietor of such information? Shouldn't there be an obligation to share that information with public bodies who could be entrusted to manage and to share it as a part of human knowledge base? The challenge is to define new concepts and frameworks to promote the common public welfare while encouraging private initiative and protecting rightful economic interests.

A key concept in this strategy is that of the electronic public domain - information free of copyright including classical literature, fundamental and indigenous knowledge, and the information and data of governments or produced with public funds at the national and international levels - which represents a vast world documentary heritage accessible to all, a window on national cultures and an invaluable support for education and cultural industries in developing countries. Paradoxically, public domain information, which is free of copyright and belongs to everybody, is often not well enough known to potential contributors and users because of lack of interest in promoting it, no direct profit being expected due its very "public" nature. In order to ensure effective management of and access to this knowledge, the principles of free access to information in the public domain will have to be defined and promoted through appropriate public policies and international agreements, and the necessary public service infrastructures such as virtual libraries and archives appropriately developed.

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<sup>2</sup> Kaul, Inge, Isabelle Grunberg and Marc A. Stern (Eds.). *Global Public Goods: International Cooperation in the 21st Century*. Oxford University Press, 1999 (excerpt available at <http://www.undp.org/globalpublicgoods/>).

Another important consideration is that of "fair use" of protected information and knowledge. Current law and practice generally allow free use of published information for research, study, reviewing and reporting, and fair access to electronic knowledge resources can be seen as a corollary to this fair use principle. The most forceful counter-arguments to extending the concept of fair use to the electronic domain come from publishers who note that electronic texts available on the Internet are not only storable but also can be duplicated and re-distributed at will, while the analogous printed materials are browsed either in a library or a bookshop and hence are less vulnerable to copyright infringements. Therefore, pressure is mounting from publishers to tighten copyright laws and to make browsing protected works on screen, and sharing them through networks without permission, illegal. An example is the "sui generis" right which can be accorded under European law to databases irrespective of their original content or literary value, but which has not been questioned by many developing countries and not generally extended into international practice. Policing of such tightened laws will be problematic with the difficulties of proving how and where the material is obtained and with ample opportunities to make changes to electronic text. In extreme cases some preventive technological solutions such as disabling of printing can be applied. However, it would seem more fruitful to expand the definitions of "fair use" and to work to inculcate in the world's citizens "infoethics" principles of respect for intellectual property.

Clearly, provisions for fair access to and IPR protection of electronic knowledge should be harmonized world wide, particularly in the context of global information networks and taking account of the interests of all stakeholders, including authors, property holders, citizens, public services and developing countries. In this context public domain and fair use are two sides of the same coin, and in fact there is a continuum between them including the definition of "copy-left" information such as open source software made available without cost by its authors who wish to retain moral rights over their works, and possibilities for a vast range of fair use categories which would make different types of copyrighted information available to specific user groups for use in education, science, culture and development.

### **Protecting human dignity in the digital age**

The Internet is indeed a new mass medium, but also differs qualitatively from the "traditional" media in the degree to which it permits individual as well as mass interaction, providing new possibilities for creativity, expression and provision of personal services while raising new dangers of exploitation of citizens. Two essential and interrelated concerns in this context are those of privacy and freedom of expression.

A basic question is whether the Internet should be regulated in a manner analogous to the "traditional" mass media. In that case, how should one distinguish between content truly intended for mass dissemination, content shared within a small group of voluntary participants such as an electronic discussion group (in principle ensured by the right to freedom of assembly) and personal communications which might be given a wider circulation with or without the authors' consent. How can one ascertain the paternity and responsibility for content originated by one party, and disseminated, re-disseminated or modified by others? The creation of an international rating and filtering system for Internet content has been proposed as an alternative to national legislation regulating online speech. But contrary to their original intent, such systems may actually facilitate governmental restrictions on Internet expression. Additionally, rating and filtering schemes may prevent individuals from discussing controversial or unpopular topics, impose burdensome compliance costs on speakers, distort the fundamental cultural diversity of the Internet, enable invisible "upstream" filtering which can infringe on the rights to information of citizens worldwide, and eventually create a homogenized Internet

dominated by large commercial interests. In order to avoid the undesirable effects of legal and technical solutions that seek to block the free flow of information, alternative educational approaches could be emphasized as less restrictive means of ensuring beneficial uses of the Internet.

Closely linked to both freedom of expression and universal access is the question of how to encourage and empower citizens in the production electronic knowledge resources, and also opinions, representing the diversity of the world's cultures and languages. A particularly difficult challenge obtains in empowering developing country populations steeped in traditional cultures and values and often with large numbers of illiterate or neo-literate citizens. In this context, national education systems and publicly funded projects will have major responsibilities in producing skilled and knowledgeable people who will become both producers and users of ICT based content.

The increase in the use of technologies in business, government organizations, and communities of all kinds are also posing serious threats to our fundamental right privacy. In addition to the risks associated with new economic activities (e.g. on-line banking or data mining for the personal information market), the anonymous nature of the Internet may facilitate personnel harassment or "cyberstalking" which is becoming an increasing concern in some countries, as well as impersonation by unauthorized use of someone else's email address.

UNESCO is working at the heart of all of these questions, with Governments in both industrialized and developing countries, civil society organizations and the international community, to reach consensus on guidelines, principles and necessary action to guarantee citizens' access to information, information and communication technologies and associated guarantees for security, privacy and freedom of expression in the Information Society.

## **Elizabeth LONGWORTH**

The focus of the global information society, with its intelligent networks, micro processors and ability to access massive reservoirs of knowledge has for the most part been on commerce and trade related issues. It is essential to consider the significance of information technology for human development and the "social capital" of knowledge. Therefore, my comments will focus on two issues relevant to this theme: the importance of the "public domain" to information access; and the "fair use" exception in public copyright law.

Although the social, educational, ethical and cultural needs of our communities are intimately linked with economic welfare, it is essential to see the digital technology and the advent of global networks as offering much more than the means of doing ebusiness. This same technology can address many other vital human needs and support initiatives to improve education, research and knowledge levels and to deliver community services and an enormous range of public benefits.

A practical measure to achieve these goals is to expand the amount of, and improve access to, what is known as "public domain" information or "public content". Another way of thinking about public domain is to think in terms of rights to access information. Funding is a separate matter. The link between access to information and economic welfare will in the near future become so significant that if the gap between the information rich and the information poor widens too far (whether as between communities or countries), there could be increased risk of global instability and negative impacts which reach well beyond local or national boundaries.

All countries have a vital interest in the development of a global information society and in the benefits that flow from a better informed and more knowledgeable population. What then are some of the strategies for enhancing the provision of public content? The first step is a willingness to consider the benefits of providing more public content and an appreciation of the implication of access to information on good governance and economic welfare. The decision on what categories of information should be accessible may depend on the particular objectives - political, social, educative, ethical, cultural or economic.

Access to information is consistent with support for democratic processes. A government which promotes public content is an open government and therefore more likely to encourage greater participation by its citizens and to believe in greater transparency and accountability for decision-making. This is one way of encouraging citizens to participate in an information society. An informed population can contribute to debate, make their views known on issues and influence outcomes. These forces are a very powerful incentive for citizens; the various FOI (freedom of information) models can both encourage and empower citizens to participate in accessing and generating information.

There are a wide range of social objectives underlying the expansion of public content. At one end of the spectrum are "public good" or "public interest" policy objectives. The people's welfare will be better served through access to or disclosure of information, rather than a paternalistic approach where decisions are made on behalf of the people without informing or consulting them. One of the critical challenges is the tension between social objectives and the other economic interests in controlling or restricting the availability of certain types of information. This economic interest manifests as the intellectual property ("IP") rights of the content provider, author, inventor or other "owner" of the information.

It is vital that the scope of IP protection be kept under review as we move into a more networked environment with greater dependency on being able to access knowledge resources. We should not continue to assume that the content providers' rights are always paramount; the right to IP protection (and the economic incentives of IP regimes) must be balanced against other emerging needs of the new information society. The preservation of records of social and cultural discourse, scholarship, scientific research and cultural heritage, is of fundamental importance to society. It is the basis on which we develop new artistic, creative and scholarly work. It is a key factor in addressing the "digital divide".

I am not advocating one set of rights to prevail, nor that we dispense with IP rights. Certainly there are statistics which evidence the link between IP enforcement in developing countries and the growth of a viable export business in that information product, whether it is music, publishing or software (especially when piracy is actively discouraged). However, the expansion of IP rights needs to be kept in check while the economics and impacts of other stakeholder interests are considered. There are specific ways to improve the balance of interests; for example, ensuring a limited duration of IP monopoly rights. In some jurisdictions, it is not possible to have copyright in a fact, only in an expression of an idea or in the particular compilation of the facts or a format.

There have always been a number of categories of exemptions from IP protections. For example: for human rights (eg freedom of the press); for public interest reasons; for library or archive deposits; for education and under special rules for non-profit institutions; under competition law; to adapt the law to new circumstances, as technology develops; and, for perceived market failure.

A key mechanism to balance the "public good" argument against individual economic interests is the codification of the "fair use" doctrine. This usually allows re-use of copyrighted work without copyright infringement, for the purposes of critique, commentary, scholarship or research. Many legal systems then apply various tests or factors as a guide to whether or not a proposed use will fall within these statutory categories of fair use. The scope of the fair use exception is unclear and so it has been left to the courts in many jurisdictions to define the boundaries of what amounts to fair use and is therefore non-infringing. Some court decisions have seriously undermined the scope of this exception.

The origin of the fair use exception is directly relevant to the concepts underlying the public domain. Copyright is intended to advance learning and knowledge by creating an incentive system to induce authors to create and disseminate their works. However, the fair use exception is a more direct intervention or redistribution of rights to ensure access and equity for some socially beneficial purposes. Access for research, education and critique purposes, via fair use, is seen as a public benefit and is the price of limited statutory privilege available through copyright protection. It should be clarified that fair use should not be confused with free use. However, in terms of the need to preserve the "public domain", and to build a knowledge society through equitable access, it is essential to preserve the fair use exception in copyright law.

One of the most significant IP developments in the digital era is the automated rights management technology (ARM) or digital copyright management systems (CMS). These include technologies to monitor and track the exchange of digital information, such as payment per use for encrypted documents and software applications embedded in the information being accessed over the Net to ensure that the user pays for accessing protected information. ARM

technology will have a radical impact on the enforcement of IP rights in digital media and on the scope of fair use doctrine. Instead of seeking protection through very cumbersome and expensive copyright actions, the author (or content provider) can resort to the technology to ensure protection and rely on standardised one-to-one or bilateral licence contracts to ensure payment for use. This enables the content provider to by-pass the public law of copyright and to impose restrictions on the re-use of the information, irrespective of the application of the fair use doctrine. Some commentators fear that these developments may shrink the effect of the fair use exemption because the licensing controls between the content provider and the user will not be obliged to consider fair use issues. The concern is that where content providers choose to exit copyright law and rely instead on private contract law, the public bargain implicit in fair use will be severely undermined. The reliance on contract could allow a form of private censorship where the content provider can prohibit certain uses of the information which would have been allowable under the fair use doctrine.

If the public benefit is analysed from a more macro-economic view of the systemic effects of incentives and disincentives of ARM technology, it can be argued that there may be other net benefits to the public. To illustrate, the use of ARM technology could reduce transaction costs for copyrighted material. The result may be net economic benefits in the efficiencies of ARM because of the long term effect of pushing access prices down. It can be argued that the effects of ARM increase the value of copyrighted works and encourages greater production and improved distribution. While this trend may benefit consumers by improving both the quality of and access to this information, there is still an issue for those that are concerned with the need for direct and immediate access to certain categories of information through the public domain; it is unknown how much of this licensed information will fall into the public domain. It is therefore very important to resist any further erosion of the fair use exception.

There are very strong voices in the debate over the boundaries of copyright protection for digital information. The new IP rights management technology is making it relatively inexpensive to control the boundaries of digital IP rights. Current policing methods, through registration and court action, are so costly and cumbersome that asserting private ownership (through the use of licensing contracts) may become a more efficient method of managing our society's creative and cultural resources. The economic effects of these efficiencies need to be analysed in terms of their social and long term impacts on the availability of information in the public domain. There is also a trend by the courts to narrow the fair use doctrine as it applies to online information where it can be argued that a new ARM licensing regime establishes a market for that information. This judicial trend undermines the original social benefit bargain implicit in the fair use exception and in the other constraints on copyright protection.

We need to be reminded that IP does not necessarily stand for intellectual "property", but for "proprietary" rights. The emphasis should be on rights not property. Under a rights analysis, it is possible to have more than one stakeholder in the same piece of information. There are numerous instances where information rights are not exclusive; for example, where personal information is held about an individual. This may give rise to a privacy right to access that information or constrain its subsequent re-use, even though another may regard that same information as intellectual property. There are many precedents where the law recognises shared interests and allows modified or limited entitlements. It is essential to retain the mechanisms of fair use and to address the public benefit of having relatively unrestrained access to certain categories of information.

Another mechanism currently available through a mix of private law (licensing) and statutory copyright protection is the concept of "copyleft". This is where the information "owner" uses its

contract or licensing power to ensure that subsequent users of that same information cannot constrain its re-use. This mechanism is behind the development and popularity of open source code, such as for computer operating systems. It is becoming an increasingly powerful tool to counter the exclusiveness of some content providers.

I would suggest that the time is right for international co-operation on what shared conceptions of public benefit or welfare justify reconsidering the framework of entitlements and contract rules that support the existing information market. Content providers and organisations representing major copyright industries have a strong vested interest in approaches to intellectual property which strengthen notions of property (which leads to concepts of absolute ownership, transferability and control), rather than recognising the need to balance competing rights or interests.

Standard form licensing and contract terms, that will result from the widespread use of digital ARM technology, will pre-empt fair use and abrogate the balance which most copyright laws seek to achieve. This is why the fair use doctrine needs to be developed in a way that could equally be applied to private contract or licensing regimes. There are many instances in our law where the sanctity of contract is not necessarily paramount; it is only one consideration in circumstances where the legislature and the courts believe it is necessary to give effect to the public interest or public good, despite the parties having entered into a contract. Privacy and consumer protection are examples. The fair use doctrine, adapted, clarified and modified from public copyright law, could be another such example of public good or benefit or welfare, requiring articulation in our IP treaties and laws at both international and national level.

By commodifying information and promoting a private law (contract) regime for digital content, we narrow our vision to assessing value purely in individual preference and neo-classical market terms. This fails to appreciate the impact of knowledge development and progress, and ignores other means of valuation, such as whether overall value can be realised for society. There is much work being done on developing other economic models for valuing information, which challenge current presumptions, and are worthy of exploration.

There is a precedent for considering these other interests, and the appropriate balance between competing interests, as articulated in the objectives of the Agreement on Trade Related Aspects of Intellectual Property (TRIPs). More specifically, Articles 7 and 8 provide a framework for the interpretation and implementation of intellectual property rights. Under Article 7 ("Objectives"), *"The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to the balance of rights and obligations"*. This means that the recognition and enforcement of intellectual property rights can be subject to higher social values and, in particular, that a balance needs to be found with other users of technological knowledge. To illustrate, Article 8 states the "principles" that govern the TRIPs Agreement: *"1. Members may, in formulating or amending their national laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement."*

## **Simon DAVIES**

Rapid advances in the development of powerful technology, in conjunction with the demand for greater bureaucratic efficiency, are promoting a seamless web of surveillance from cradle to grave, from bankbook to bedroom.

New technologies developed by the defence industry are spreading into law enforcement, civilian agencies, and private companies. At the same time, outdated laws and regulations are failing to check an expanding pattern of abuses.

It is now common wisdom that the power, capacity and speed of information technology are accelerating rapidly. The extent of privacy invasion – or certainly the potential to invade privacy - increases correspondingly. But it is not merely the increased capacity and decreasing cost of information technology that creates threats to privacy. Globalisation of systems such as the internet removes geographical limitations (and legal protections) to the flow of data. Convergence is leading to the elimination of technological barriers between systems. Modern information systems are increasingly interoperable with other systems, and can mutually exchange and process different forms of data. Meanwhile, the phenomenon of multi-media, which fuses many forms of transmission and expression of data and images, creates vast difficulties for legislators wishing to protect personal privacy.

Governments and private sector organisations have moved in recent years to incorporate surveillance into almost every aspect of our finances, communication and lifestyle. While paying lip service to privacy, they argue that surveillance is necessary to maintain law and order and to create economic efficiency. The rationale is often self serving, and somewhat bogus, but a substantial number of people have nevertheless been persuaded that the surrender of privacy is the price we must pay for a better and safer society.

The scale of privacy invasion is sometimes beyond belief. Earlier this year, a report commissioned by the European Parliament confirmed the existence of a vast network of supercomputers operated by the secretive US National Security Agency (NSA), an agency responsible for intercepting communications across the world for the benefit of American business and government. The report added that Echelon indiscriminately intercepted electronic communications and extracted valuable information using artificial intelligence systems to identify key words.

Whether through cause or effect, privacy now occupies an unenviable place in the catalogue of human rights. Along with censorship and free speech, privacy persists as a complex polemic, defying resolution. Throughout the past quarter century, no other fundamental right in the arena of public policy has generated such turbulence and controversy. And yet, as one writer has observed "privacy is the right from which all other rights derive". It is central to the freedom and autonomy of people, and it is perhaps the key factor that limits the power of the State.

Torture, discrimination, racial hatred: these issues have achieved baseline consensus within the international community. Privacy, however, is viewed by many governments and corporations as the bogeyman of human rights. It is conventional wisdom amongst many organisations that privacy of the individual and the protection of personal information impedes economic performance and law enforcement.

The result is that many countries are becoming surveillance societies. The justification is seductive, and difficult to oppose. And in our quite innocent and natural desire to save a few dollars, or just to be good citizens, we yield information constantly about our finances,

purchases, employment, interests, telephone activity and even our geographical; movements. Inevitably, when we do so, organisations are ready to exploit the data. Surveillance has become a fixed component of the burgeoning information economy.

In 1994, conscious both of the shortcomings of law, and the many differences in the level of protection in each of its States, the European Parliament passed a Europe-wide directive which will provide citizens with a wider range of protections over abuses of their data. The Data Protection Directive sets a benchmark for national law. However, this initiative will be no more than window dressing without a bold and imaginative, forward looking legislative framework.

ECOSOC is ideally placed to take leadership in this crucial phase of global privacy protection.

### **Facilitating Access to Networks and Services** by Dario M. GOUSSAL (\*)

Access to information is a critical input for rural areas, in addition to its long-term implications in human development. This is not just a problem for rural inhabitants, but rather a public concern of the whole society. In any service, Universal Access roots on three multi-layered regulatory principia: 1) Geographical coverage, to bring it to every community. 2) Affordability -reasonable prices respect to the income of the users-, 3) Equitability -same opportunities to all regions and social groups-. The objective of Integrated Development implies maximum values for all such dimensions, and the regulatory framework acts as an intermediate layer between commercial and group interests, and the moral obligation to promote it. The coverage depends on the size and the capillarity of the network, but experience in developing countries has shown that even a huge investment effort to expand the system is not enough *per se*: moreover, a strong growth in the overall teledensity may mask increasing regional inequalities and rural-urban teledensity gaps. Therefore, equitability is also a goal for Universal Access, since public telecommunications systems are supposed to perform balancing roles in the development of the economy. A particular access policy can drive rural-urban gaps either to exacerbation, to statu-quo or to regression phases. The effectiveness of Universal Access regulation depends on how close to the needs put by the Integrated Development layer can it drive the natural action of market forces and interest groups.

Typical complaints from Internet users in South America are low speed, scarcity of local content, low security and high prices. It is important to keep track of income disparities among regions and social groups, even in the same country. For example in Argentina, average income per capita in the city of Buenos Aires is similar to France, and 11 times more than in the province of Santiago del Estero. Usually, expenditures in telecommunications services should be limited to about 1 to 3% of the total income, in order to yield a net increment in the social welfare of individuals, so a typical household in Santiago will find difficult to afford even a PSTN lifeline subscription. In communities without local ISPs, dial-up sessions require expensive long distance calls, almost impossible to afford. Others with just a small provider often do not benefit from discounts or special rates. Conversely, Internet users in large cities obtain better prices and higher quality of service, due to strong competition and more connectivity options (DSL, cablemodem, etc).

We have been working in comparison studies about access and geographical location patterns. A recent one in Argentina revealed that ISPs with dial-up connectivity at local call rates abound only in urban locations of more than 50,000 inhabitants. Dial-up access at discount rates in

villages below such population range had small coverage, about 10 to 13%. Clearly this is a matter of regulation, in order to promote investment, competition and reasonable prices everywhere, not just in large cities.

In 1994, during the First World Telecommunications Development Conference in Argentina, UNESCO and the ITU submitted the joint document: "The right to communicate: at what price?" It's worth reading it again, as a start point in successive policy proposals submitted by international organizations to foster Universal Access. The 1999 Report on the Internet from the ITU has specific recommendations to promote the industry, to build infrastructure, to expand access, to stimulate usage and creation of local content, and to promote competition in the access market. Many countries are actively working in these issues. For example, there are several programs to facilitate public access to information through public libraries, schools and community telecenters. In another policy toolkit, drawn from the Informatics Initiative 2000 Conference for the Americas -promoted two years ago by the Inter-American Development Bank-, again there are recommendations to extend access via community telecenters, as well as special e-rates for schools, libraries and healthcare. The document claims for priority projects geared to affordability, creation of regional Network Access Points & mirror databases to increase local traffic, and the need for useable and useful information. There are also proposals for message systems and combined access by multiple media, such as Web contents broadcasted on request by local FM radios. Also my group was studying on viability models for rural e-mail services, by using handheld computers and narrowband satellite links.

Universal Access to Information is largely more than a matter of regulation. It requires a strong involvement of the private sector and local institutions of the communities. There are a number of large projects with government funding, like in Canada, Australia and the USA, but also good experiences born in communities, like in Hungary, Estonia, Western Australia and the United Kingdom, while Internet access projects in Ghana and Peru are rather based on entrepreneurship and franchising. From a strategic point of view, it is necessary to promote complementarity, instead of rivalry, among the various possibilities of public access to information. The largest potentially suitable access networks in every country include the schools, the post offices, the public libraries, the FM radios, the cable TV providers and lately, the community telecenters. Government support is often necessary, but is not a guarantee for a smart allocation of resources. A comparison study between two location patterns -public libraries and community telecenters of the current CTC project in Argentina- showed the coverage of communities as correspondingly decreasing for small-size population ranges, with the CTC coverage always behind that of the public libraries. There are locations with many facilities, especially in large cities, but on the other hand a lot of locations with no access at all.

The marginal impact of public access to information is inversely depending on the size and the resources already available in the community. Provided that every facility will require a minimum number of users and a sort of balance between affordability and sustainability, the usefulness of public access points tends to increase for small, distant and low-income communities, with little exposure to technology and to alternative information sources. In neighborhoods and towns with high rates of unmet basic needs, for example, poor housing usually drives students to prepare their lessons and school homework in libraries, just because they do not have at home a quiet room with some privacy to study. The existence of micro-entrepreneurs and self-employed people is also a driving factor. In any prospective location, previous successful experiences of community-based initiatives, and other community participation indicators tend to increase the foreseeable marginal impact. In projects involving public access in multiple locations, there is as well a need to balance the theoretically optimal distribution pattern, -from the macroeconomic

outlook- with the specific willingness and the particular possibilities of local institutions and the private sector to take concrete commitments.

Just for further discussion, my group had drafted some additional suggestions. First, the adoption of new feasibility criteria with a broader scope in UA programs, so as to enable inclusion of communities no matter of their size, location or income. Second, new applications geared to meet needs of deprived areas, such as Web training content, friendly also for illiterate learners. Then, strategic plans for optimal utilization of recycled & surplus computers in rural schools-libraries, and for extending the lifecycle of hardware & software used in education. And finally, studies on alternative funding sources, tariff compensation and indirect support to foster the establishment of locally-based Internet Service Providers , wishing to develop useful content in unserved or small towns.\*

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