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THE INFORMATION SOCIETY AND DEVELOPMENT: THE ROLE OF THE EUROPEAN UNION

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The Information Society and Development: the Role of the European Union

Communication from the Commission to the Council to the European Parliament to the Economic and Social Committee and to the Committee of the Regions

Communication from Mr. Bangemann in agreement with Mr. Marin and Mr. Pinheiro

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INTRODUCTION

Recent trends towards the information society potentially concern most human activities, including learning, communication, work and leisure. This applies equally to the developing countries, notwithstanding the diversity of their market situations, policies or technological capacities. This Communication presents a number of guidelines and mechanisms to encourage the participation of developing countries in the information society, not only as consumers but also in an active role.

The G7 Conference on the information society held in Brussels in February 1995 expressed concern about the need to avoid further widening the gap separating the industrial countries from the developing countries and called for "a shared vision of human enrichment:" [1] "Our action must contribute to the integration of all countries into a global effort. Countries in transition and developing countries must be provided with the chance to fully participate in this process as it will open opportunities for them to leapfrog stages of technology development and to stimulate social and economic development". The Conference on the information society and development organized in Midrand from 13 to 15 May 1996 at President Mandela's invitation, bringing together more than 50 countries and international organizations, focused on the specific needs of the developing countries and highlighted the potential of the new technologies (see supplementary Annex 6). It provided a forum for joint reflection on the common rules required, the areas of cooperation towards building the global information society, and the priorities for development. Egypt has undertaken to organize the follow-up to this Conference.

The EU has embarked upon redefining and modernizing its relationship with each of the main developing regions, providing an opportunity to take account of the information society concept in relations with them. For Community action a reference framework has to be established to secure the necessary coherence, promote possible synergies between the various policies, and strive for coordination with the activities of the Member States and of the international organizations concerned. A regional approach is recommended for this purpose to ensure that the action takes place in the context of existing relations and at the same time in that of the available cooperation instruments. For external partners the message should be realistic and it should draw their attention to what is at stake in the current upheavals and to the efforts they have to make.

A THE CHALLENGE OF INTEGRATING THE DEVELOPING COUNTRIES IN THE GLOBAL INFORMATION SOCIETY

1 THE CONTRIBUTION OF INFORMATION AND COMMUNICATIONS TECHNOLOGIES (ICT) TO DEVELOPMENT

1.1 As emphasized at the Conferences of Midrand and Rome on the Mediterranean, **the information society (IS)** mobilizes revolutionary and pervasive technologies that profoundly alter the organization of work, education and society at large. It entails a reduction of time and space constraints and presents a panoply of new tools with unparalleled capacities enabling the developing countries to make some great leaps forward in technology by economizing on the intermediary stages which the industrialized countries have gone through. The increasing complexity of economic relations and the unprecedented accumulation of knowledge and experience are

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[1] Meeting of the Ministers of the G7 countries and the Member States of the European Union, Brussels, 26 February 1996.

conducive to increasing global integration. However, countries that shut themselves off from these changes, isolating themselves from international trade networks and investment flows and from networks of scientific and cultural creativity and their spread, would risk being marginalized. In some countries there is the further risk of a two-speed society emerging, with only part of the population having access to new networks, services and equipment and capable of using them with ease and enjoying the advantages they offer.

1.2 In technological terms, the moves towards the information society mobilize a **panoply of new tools** which are spreading throughout the developing countries. There has been an explosive growth in ***cellular mobile telephony***, in particular where they offset the deficiencies of fixed networks. In the field of ***satellite*** communication, geostationary technology is in full development (multispot access or access on demand), and low- and medium-altitude orbit systems will soon be offering global services. These technologies are less capital-intensive and better adapted to remote regions and sparsely populated areas (solar-powered switches, VSAT). The capacity of ***optical cables*** is on the increase and connections are multiplying, e.g. those being established between Chile and the other countries of the Pacific coast of South America, and the FLAG project linking Europe and Asia via the Mediterranean. ***Internet*** and WWW technology provide a platform for integrating other technologies, including ISDN lines and ATM servers. A very wide range of projects is already based on these techniques and virtually all NGOs in the field use them. ***Teleports*** serve as "reception centres" for tele-working, in particular for highly labour-intensive types of services such as statistics, accounting, software production and airline reservation systems (Mauritius, Jamaica, India, the Philippines).

Space technology offers unprecedented possibilities for development aid, in particular in navigation and positioning and also in earth observation. Specifically, earth observation satellites enable the collection of data essential for resource management, land management and monitoring of the environment. CD-ROMs contribute to education and facilitate the storage and dissemination of data. CIM production technologies and material-as-needed methods (Just in Time) lead to significant gains in productivity.

1.3 Through information society applications **new opportunities** present themselves for the developing countries with advantages comparable to those accruing in the industrialized countries, e.g. more efficient management for SMEs and access to economic information, training, interactive user/server networks and international markets, and also enhanced efficiency for governments and administrations.

Technologies for **education and training,** in particular distant education and multimedia, and new modes of learning offered by the information society may be instrumental in meeting these quantitative and structural needs of countries that have to accommodate, train and economically integrate large numbers of workers (in most cases half the population is under the age of 20) in widely dispersed and under-equipped areas of habitation. Through continuing education and training, moreover, there has to be a constant renewal of skills throughout people's lives.

Some countries have to cope with large-scale endemics and epidemics. **Telemedicine** may help to meet these challenges by improving the organization and management of health care. Data bases may be linked through telematic networks to monitor the development of diseases (epidemiology), provide access to medical expertise through teleconsultation and pave the way for remote medical assistance. ICT also play an important role in preparing and implementing health policies.

In **industry and international trade**, ICT play a decisive role in improving competitiveness by raising production quality (more stringent standards, quality control) and its fashion-related aspects (textiles) or by integrating production in a complex process such as in the case of spare car

components, or by offering facilities for the transmission of orders and specifications as the first steps towards electronic commerce. In some countries software applications and computerized data input have created a large number of jobs (100 000 software engineers in India) and new markets are emerging for word processing in the press, newsmedia and audiovisual sectors.

In the domain of **research** in agriculture, chemistry, water management, fisheries, the environment, urban planning, etc. the development of networks enables researchers in the developing countries to have the necessary information at their disposal and to set up teams of critical size and thus to integrate in the global scientific community and thus stem the brain drain.

The emergence in many developing countries of a new **independent press** and the explosive growth of the Internet, the freeing of the airwaves and the shift from state to public service broadcasting are creating an increasing demand for up-to-date information, both written and audiovisual. Such pluralist information contributes to strengthening civilian society and consolidating the democratization process in numerous developing countries.

Linguistic diversity, including certain Community languages as well as native languages of the developing countries, constitutes a cultural richness that forms part of man's heritage. Thanks to ICT, it can be conducive to the development of an industry with multicultural and multimedia contents based in particular on electronic publications.

1.4 ICT are not the sole instrument to give an impetus to structural development. They can only be used with optimum efficiency if the societies where they are applied manage to master them properly. Experience in development aid shows that the use of new technologies must be largely adapted according to national and local contexts, geographic conditions, the economic structure of the country concerned or to its fundamental needs. However, ICT have a great potential which may serve the goals of the development strategies and competitiveness of the developing countries. This potential has certainly not yet been fully exploited. The aim of this communication is to propose an overall strategy in this domain.

2 THE CHALLENGES FACING THE DEVELOPING COUNTRIES

The benefits of the information society for the developing countries depend however on the level of their communication and information infrastructure and the development capacity offered by their economic and regulatory systems.

2.1 The level of **telecommunication infrastructures** in the developing countries is highly diverse but mostly far removed from that in the industrialized countries. Using teledensity[2] as an indicator, the figure for the industrialized countries is over 48, that for middle-income countries around 10 while the least advanced countries are about 1.5 and the world average is 11.5. This quantitative difference is further aggravated by qualitative weaknesses of networks affecting the quality and reliability of communication and by structural disparities between urban and rural areas. Teledensity in rural areas, for instance, does not exceed 0.8 in low-income countries. The infrastructures fail to meet local demand and cannot guarantee access to global communication networks. Moreover, default on payment by public administrations in certain cases, failure to allocate charges for international communications (deductions from the general state budget) and the existence of cost structures that surcharge international communication and subsidize local

[2] Number of main lines per 100 inhabitants.

communication deprive telecommunication operators of the resources for their activities. Thus public management hampers the optimum use of existing facilities. [3]

However, there are enough factors for growth. First of all, there is a significant sustainable demand, witness the long waiting lists and connection periods of up to ten years, the existence of veritable "black markets" in telephone lines in some areas, and high levels of average revenue per line. This explains why in many countries there has been a sustained growth in telecommunications, e.g. more than 17% a year for all countries with an income level below US $700 from 1984 to 1994. The drop in the cost of technologies and competition from new global operators using call-back procedures and the like have led to a decrease in traditional revenue from international communication that is causing concern to the developing countries, raising their awareness of current changes.

2.2 For the **other information infrastructures**, the PC ratio per 100 inhabitants gives an indication of the informatics gap, ranging from 18 for high-income countries, to 2.3 for medium-income and 0.01 for low-income countries. In terms of the market share in information technology, the United States account for 34.7%, Europe for 29.3%, Japan for 14.6% and the rest of the world only 21,4%. These differences are also reflected in the figures for data transmission, the spread of Internet servers and the number of users. Here, again, there are enough factors for potential growth, including the drop in prices, the development of multimedia applications and access to the Internet. The PC market is dynamic and could follow in the footsteps of television which is now wide-spread in low-income countries, with 46% of homes having a TV set.

2.3 According to the World Bank, the annual investment necessary for the growth of telecommunications in the developing countries over the next five years amounts to US $60 billion. Financing in the form of international public aid would not exceed 2.3 billion and most countries cannot make up the difference. The necessary investment can only come from the private sector. However, to mobilize private investors a legislative and regulatory framework will have to be established that is stable, predictable and transparent, making it possible to take rational economic decisions.

The commitments on market access and national treatment and on the **regulatory principles** adopted by 69 countries, including many developing countries, in the framework of the WTO/GATS negotiations on the opening-up of telecommunication services which were completed on 15 February 1997 provide a general framework that can meet the needs of the developing countries. Provision is made for independence of the regulator, basic competition rules, interconnection of networks, universal service obligations, transparency in the grant of licences, and allocation of frequencies. In order to make more rapid progress on the road to the Information Society, the developing countries ought to examine what would be the best approach to develop their national telecommunication systems in accordance with the GATS principles.

The developing countries will thus be able to meet the commitments made to the WTO on telecommunication services and, in the case of countries that have not made such commitments, to meet these, including those relating to regulatory principles.

2.4 **Human resources** are decisive by coping with change. This includes technical staff in telecommunication and computing and, in particular, those in the software sector, offering prospects for new jobs. This also concerns training for people working in information such as teachers and journalists, those responsible for regulation, management (marketing, financial and commercial

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[3] African Green Paper - Telecommunication Policies for Africa, Document 2-F, 2 April 1996, Telecommunications Development Office, ITU.

services, and quality control) and new professional intermediaries specialized in ICT access and use. Measures should also be taken to ensure life-long learning.

2.5 A dialogue on the aspects of the information society connected with development is carried on within certain international organizations, e.g. the ITU, UNESCO, UNCTAD, UNDP, with the SDNP programme, the World Bank, with its InfoDev initiative, and the OECD.

B COMMUNITY ACTION

3 THE EUROPEAN UNION'S CONTRIBUTION TO PROMOTING THE INFORMATION SOCIETY IN THE DEVELOPING COUNTRIES

European Union action on cooperation in telecommunications and information technologies has progressively increased over the years. Experience shows that it meets a growing need more explicitly expressed by our partners and that it produces concrete and significant results.[4] The new cooperation agreements signed with developing non-member countries include formal provisions on the information society and associated technologies.

3.1 **Economic, financial and technical cooperation** has led to significant activities in the various partner regions of the Union.[5]

In the Mediterranean region several projects have been implemented, including assistance in consulting Community data bases. On Malta the European Commission has co-financed the upgrading of the telecommunications network. An ECU 10 million programme was recently approved for the modernization of the Syrian telecommunications operator.

In Africa the accent has been on rural telecommunications and communication by satellite. Two projects for rural telecommunications services have been implemented in Mozambique (MECU 13) under EDF VI and in Tanzania (MECU 25) under EDF VII. A major satellite communication project for the safety of civil aviation has been launched in West and Central Africa (MECU 38) under EDF VI and VII. In the Pacific, a number of projects have improved communication between the islands.

In Central America assistance for the modernization of telecommunications is being set up with the COMTELCA regional organization involving financial support totalling ECU 18 million. Other projects have been implemented, including a study of human resources in Venezuela and telematic applications in Mexico, and AHCIET is running a programme of seminars.

For Asia, actions connected with the information society have been included in other operations. The ECIP mechanisms for promoting partnerships, supplementing the ALINVEST, ASIA-INVEST and MEDINVEST regional programmes, have made it possible to support more than 20 joint venture projects in the information sector and introducing ICT in industry.

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[4] See SEC(94)428 on Telecommunications and Development, the Role of the European Union" (Working document of the Commission's departments).

[5] See the annex listing the total sums allocated by the Community (Commission + EIB) to telecommunication projects in the developing countries, with a breakdown by geographic areas (Mediterranean, Africa, Latin America and Asia; the countries of Central and Eastern Europe are not included in these data, although they benefit from extensive cooperation with the Union).

3.2 From 1990 there has been **international scientific cooperation** with the developing countries under the accompanying actions (APAS) of the Framework Programme and projects totalling MECU 27 were launched between 1990 and 1994, including activities in China and India. Since 1995 this cooperation has formed part of the fourth R&D framework programme, Action 2, International Cooperation, with 25 projects totalling MECU 9, covering subjects ranging from microelectronics, telematic applications (telemedicine in Latin America, distant teaching in Africa and Latin America, management of natural resources and linguistic engineering in the Arab countries), management of natural resources (in particular for tropical forests) and industrial applications (textile industries in the Maghreb and machine tools in Latin America). However, the rapidly developing countries have expressed regret that the financial resources dedicated to ICT areas remain limited, although to them these are priority areas. Consideration is being given to whether European research networks should be linked up with the corresponding networks in the developing countries.

3.3 The **European Investment Bank** has made part of the resources earmarked for non-member countries available for initiatives under the Lomé Convention and agreements with the Mediterranean countries. Since 1980 over ECU 350 million have been lent in the countries of the Mediterranean and the ACP and since 1993 in the countries of Latin America and Asia that have signed cooperation agreements with the Community. The Bank has lent its support to these projects, set up at the request of the beneficiary countries and designed to extend or modernize telecommunications networks. Several loans and support in the form of risk capital have been provided to African countries to finance networks, in particular in rural areas, including in Erythrea, Burkina Faso and Namibia. In Morocco the EIB granted an MECU 80 loan for the extension of international cable links to connect Tetouan to Spain and Casablanca to Portugal and France. In Erythrea MECU 8 has been lent to strengthen the local network and international links, supplementing a regional project which also involves Djibouti. An MECU 75 investment was made in Chile in 1994 to connect 400 000 new subscribers to the digital network over the next two years, involving a 23% growth of initial teledensity (12 lines per 100 inhabitants).

3.4 **The Member States** also have bilateral ICT programmes. For instance, the Commonwealth Secretariat in London promotes the organization of seminars on the regulation of telecommunications and also technical training courses. The Governet project is designed to illustrate the challenges involved in the implementation of Internet in Africa, presenting proposals to meet these challenges by linking up management experts in Africa through networks with the collaboration of the Association of Management Training Institutes in Eastern and Southern Africa (AMTIESA). The Spanish scientific and technical cooperation programme with the countries of Latin America (CYTED) has implemented several ICT projects. Initiatives taken in France include the RIO project (Réseau Intertropical d'Ordinateurs or intertropical computer network) of the French office of overseas scientific and technical research (ORSTOM) which at the end of the 1980s linked the research centres and laboratories of the countries of Southern Africa to global research networks. There are plans for extending the French REFER network to the developing countries with the assistance of AUPELF/UREF which are developing a scientific information system (SYFED) in the French-speaking countries. The INRIA (national institute for informatics and automatics research) continues its cooperation with numerous partners in the developing countries. The Italian Government, in conjunction with UNESCO and the Republic of Korea, has financed the RINAF project (Regional Informatics Network for Africa) for the creation of several access points to information networks in Africa in collaboration with other similar initiatives in the region, e.g. the RIO of ORSTOM.

4 GIVING A NEW IMPETUS TO COMMUNITY ACTION FOR THE DEVELOPING COUNTRIES

4.1 The outline sketched above shows that there has been increasing awareness in the Community and in the recipient countries of the strategic character of the **integration of the developing countries in the information society**. However, this calls for a strategy in which account is taken of this dimension when evaluating cooperation projects and programmes so as to ensure the coherence of all the instruments of cooperation for optimum effectiveness. To implement these guidelines there is no need to provide additional loans. Rather, the information society dimension should, with the agreement of the partner countries, be systematically incorporated in the existing programmes, rechannelling the funds made available, where appropriate, in particular where this dimension may be advantageous. Promoting the establishment of an economic and regulatory framework remains a first priority target, mobilizing local and international capital to ensure access for the developing countries to ICT for their benefit. The second target is to put technology at the service of development.

Creating the conditions favourable to such integration requires the following:

– establishing the **prerequisites to the development** of the information society: regulatory framework conducive to investment, commitments under the WTO on the basic regulatory principles for telecommunication, standards;

– **facilitating the access of the developing countries** to the information society through measures relating to human resources, technology transfer in particular in production and trade activities, demonstration of applications; this also includes their participation in Community R&D activities;

– supporting measures **to foster partnerships** between private operators of the Union and the developing countries;

– contributing to **better integration between the information and communication systems of the developing countries** of the same region so as to encourage interconnection of their systems and the development of new services, following the Community model;

– fostering **dialogue and coordination with international initiatives** of the Member States and those of the international organizations concerned.

In these activities account will be taken of the priorities of the Partners. Often, they will not modify the objectives of cooperation but, rather, strive to serve them more efficiently in the light of each country's specific economic situation. Nor is it the intention that the Union should substitute itself for the developing countries. Rather the Union intends to provide them with the means to participate in working out the global frameworks for the information society and developing internal models for its use.

4.2 It is proposed that cooperation should follow eight **courses of action** comprising the following:

• Raising **awareness** and fostering **dialogue**, including social and societal aspects. This can be achieved by including the information society dimension in the institutional dialogue between the European Union and most of the developing countries. Where possible this activity should be pursued in coordination with the awareness-raising initiatives of international organizations such as the World Bank (InfoDev), UNESCO and the ITU (in particular the World Conference on Development and Telecommunications to be held in Malta in 1998, and regional conferences) and, where appropriate, by supporting the initiatives that could be taken in the follow-up to the Conference of Midrand. In this

context, it is important to encourage the establishment of concertation bodies between suppliers, operators and users (governments of developing countries, local decision makers, companies) to examine how the new technologies could improve national and local development strategies.

- Supporting the **establishment of a regulatory framework** suited to the development of infrastructures for which the EU has wide-ranging experience in gradual liberalization, which may serve as a model, obviously with national nuances. This includes technical assistance in implementing the commitments made to the WTO by developing countries, and support for countries contemplating such commitments.
- **The use of the financial instruments** administered by the Commission and the EIB, taking account of the other funding organisations (World Bank but also the BID, ADB, etc.) and by making financial cooperation subject to a number of conditions conducive to structural adjustment and progressive adaptation of the operators. Financial assistance should be clearly targeted and linked to consecutive stages of change. Thus, support will be given by priority to credible and qualified operators offering prospects of efficiency and sustainability. A particular focus could be aimed at projects for rural areas or projects of regional significance.
- Action oriented towards the regional adoption of identical **standards** ensuring interconnectability of networks and interoperability of services and enabling users to benefit from falling prices resulting from economies of scale. At the same time, an impetus should be given to the adoption of strict quality requirements for systems and components. The EU has evolved a dynamic standardization policy which has led to such standards as GSM, ISDN, DECT and ERMES. The developing countries could be more closely interested in standardization and thus benefit from Community experience. Such cooperation should take place in the framework of European bodies such as the ETSI and CEN/CENELEC.
- **Pilot projects which** make it possible to demonstrate the specific benefits of applications, test their technical feasibility and evaluate their economic implications and cultural acceptance. They enable users to move forward in successive stages in adapting the specific applications and learning how to use them. It is therefore recommended that projects be incorporated in the existing programmes that are targeted at areas regarded as requiring priority under regional action plans. This should be achieved in close coordination with the projects launched at global level in the G7 framework following the conference of Brussels. The Global Inventory Project could serve as a basis for data exchange in this field.
- **Taking account of ICT in industry**, in particular in sectors where there is cooperation with the EU.[6]
- Support for defining a strategy for the development of the information society, requiring provision of the **necessary human resources**, in particular through the transfer of experience in matters of training, multilingual access to knowledge and the utilization of new technologies in this domain. Particular emphasis should be placed on targeted training, especially at a regional level, for regulators, decision makers, distributors and managers, high-level technicians and media staff, both audiovisual and printed. Priority ought to be given to local training facilities, in particular for technical staff, and to improving these where they are insufficient.

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[6] Document of the Commission's departments on industrial cooperation in the Mediterranean region and in Asia.

- Inclusion by the EU of the information society among the principal areas for action in the 5th Framework Programme in research and development.[7] In some cases developing countries will be able to take part in Community programmes in this field on a project-by-project basis. This has to be implemented under the provisions on international cooperation in the framework of the Fifth Framework Programme. Specifically, the **interconnection of** European research **networks** and those of the developing countries should be systematically promoted, in particular to break the isolation of researchers in developing countries and give them access to specific documentation.

4.3 In order to take account of the specific economic, political and cultural characteristics of the developing countries and their requirements, the action contemplated should be modulated according to the particular features peculiar to each major region and the nature of the dialogue the Community carries on with each one of these. Specifically, a **regional action plan** should be drawn up and implemented in each case.

- For the **Mediterranean region,** Community cooperation takes place within the framework of the Barcelona Declaration for a Euro-Mediterranean partnership (November 1995). The Barcelona action plan takes the information society into account. The Rome Conference on the construction of the Euro-Mediterranean information society (30-31 May 1996) emphasized the importance of a communication capacity that is commensurate with trade flows. An action plan drawn up in the MEDA framework covers actions of regional interest and proposes synergy between the various instruments for structural adjustment, in particular by providing support for adaptation to the regulations, a dialogue through a **Forum on the Information Society**, accompanying support for the **restructuring of telecommunications, training,** and six domains for pilot projects: **health care, electronic commerce, tourism/heritage, IT in industry and innovation, space technology applications, research and education networks**. Additional projects are being submitted by recipient states on a bilateral basis.
- The **Lomé Convention** makes provision for a framework to foster cooperation on communications and information with the 70 partner states in Africa, the Caribbean and the Pacific. **Priority applications in social and economic services** have to be evolved in accordance with the needs specified. A reference in the Green Paper on EU/ACP relations[8] opens the way for a new approach in this direction. At political level the governments of the ACP countries should be encouraged to take due account of the problems of networks and ICT while supporting their own users and, if necessary, setting up new bodies to underpin these developments. A special approach is called for the least advanced countries.
- The countries of **Latin America** are linked to the European Community by bilateral agreements, sub-regional agreements concerning the countries of the Cartagena Agreement (Andean Pact), the countries of the central-american isthmus and a new agreement with MERCOSUR. There is also a regional dialogue with Central America (San Jose) and all the countries covered by the Rio Group. Provision is made for references to IS or ICT cooperation. Most of the countries concerned have already restructured their telecommunications and developed infrastructures with the active participation of European

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[7] COM(97)47 final, Communication of the European Commission: Towards the 5th Framework Programme, the scientific and technological objectives.

[8] Green Paper on relations between the European Union and the ACP countries on the eve of the 21st century, COM(96)570.

industry and operators or have set out to do so. Cooperation, based on the principle of mutual benefit, should encompass standards, industrial aspects, research and priority applications. As a first step it has been proposed that a conference be organized on cooperation between the European Union and Latin America on matters concerning the information society.

- The **countries of Asia** have emerged as consumers and dynamic producers of computer and communications equipment. With approximately half of the world's population, they appear very attractive in the eyes of European operators who are eager for closer cooperation, as was illustrated by a recent study on prospects for cooperation between the EU and Southern and South East Asia.[9] On the basis of the findings of this study, an initial cooperation framework with these countries is currently being studied. It mainly covers priority areas of ICT application and the creation in Asia of a "technology window" to facilitate cooperation between companies in Europe and Asia and enable assistance on aspects like deregulation and standards. For the ASEAN countries, a programme was launched at the ASEM Summit held in Bangkok in April 1996. The ICT occupy an important position in the Partnership with ASEAN meeting planned for November 1997 in Singapore. The projects using satellite observation have contributed to the development of local know-how. Today the strong demand emanating from this region calls for a specific programme which would as its first objective foster partnerships between companies. In relations with India and China, targeted industrial cooperation should be pursued while for the poorest countries, such as Vietnam and Mongolia, action should by priority focus on basic information and communication services and preparations for their access to the IS.

CONCLUSION

The actions undertaken to date to raise awareness and provide information have highlighted the importance of integrating the developing countries in the information society. Following the Midrand Conference, three objectives have been attained:

– the start of a dialogue between developed and developing countries;

– the start of a process that should lead to a vision of the global information society shared between the social sectors concerned by development;

– the drawing up of common principles and cooperative action to strengthen our common vision and meet the challenges of the information society.

This dialogue has revealed the extent to which the gap between the industrialized countries and the less advanced countries could widen as a result of the current changes; this situation calls for specific action. Bearing this in mind, the European Commission, which has gained significant experience in co-operation in the technologies in question, proposes to take up a position that is strongly conducive to the development of the information society in the developing countries and to include this dimension in its general cooperation policy with the developing countries.

The actions proposed involve the existing cooperation mechanisms which will, where appropriate, be applied to the dialogue, awareness campaigns, the definition of appropriate policies, the development and interconnection of information infrastructures, the provision of training, the distribution of applications and the development of their contents. These activities will be managed

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[9] EU-Asia IT&C Economic Cooperation, Final Overall Report, August 1996, EC/ECO Mission No 569/96 (ref. EC CC/B/ECO/2/B7-3001/95/155).

under regional action plans which will ensure the coherence of Community action and synergy with action by the Member States, and provide a basis for concertation with international organizations.

This approach provides the framework within which the EU and its Member States can play an active role as a bridge between the industrialized countries and the developing countries, contribute to translating into practice the participation of the developing countries in the emerging information society and shape it in such a way that each one of them can participate in it.

List of abbreviations

ACP:	African, Caribbean and Pacific states, signatories to the Lomé Convention
ADB:	African Development Bank
AHCIET:	Asociacion Hispanoamericana de Centros de Investigacion y empresas de Telecomunicaciones
ALINVEST:	Investment Program for Latin America
AMTIESA:	Association of Management Training Institutions of Eastern and Southern Africa
ASEAN:	Association of South East Asian Nations
ASEM:	Asian-European Meeting
ASINVEST:	Investment Program for Asia
ATM:	Asynchronous Transfer Mode
AUPELF/UREF:	Association des Universités Partiellement ou Entièrement de Langue Française - Université des Réseaux d'Expression Française [association of partly or fully French-speaking universities - university of French-speaking networks]
BIB:	European Investment Bank
BID:	Banco Interamericano de Desarollo
CEN/CENELEC:	European Committee for Standardization - European Committee for Electrotechnical Standardization
CEPT:	European Conference of Postal and Telecommunications Administrations
CIM:	Computer Integrated Manufacturing
COMTELCA:	Technical Commission on Telecommunications for Central America
CYTED:	Ciencia y Tecnologia para El Desarrollo
DECT:	Digital European Cordless Telecommunications (European standard for digital cordless telecommunications)
ECIP:	European Community Investment Partnership
ETSI:	European Telecommunications Standards Institute
EU:	European Union

FLAG:	Fiber-optic Link Around the Globe
GATS:	General Agreement on Trade in Services
GSM:	Global System for Mobile communications (the digital pan-European mobile telephone system)
G7:	Group of 7 (the 7 most industrialized countries)
ICT:	Information and communication technologies
INRIA:	Institut National de Recherche en Informatique et Automatique (France)
InfoDev:	Information for Development (World Bank)
IS:	Information Society
ISDN:	Integrated Services Digital Network
ITU:	International Telecommunication Union
MEDINVEST:	Investment Program for the Mediterranean Area
MERCOSUR:	Mercado Comùn del Cono Sur
NGO:	Non-governmental organization
OECD:	Organisation for Economic Co-operation and Development
ORSTOM:	Organisation de la Recherche Scientifique et Technique d'Outre- Mer
PC:	Personal Computer
REFER:	Réseau Français de la Recherche
RIO:	Réseau Intertropical d'Ordinateurs
SDNP/UNCTAD:	Sustainable Development Network Program (United Nations)
UNCTAD:	United Nations Conference on Trade and Development
UNDP:	United Nations Development Program
UNESCO:	United Nations Education Science Culture Organisation
VSAT:	Very-Small-Aperture Terminal (for satellite communications)
WWW:	World Wide Web