



United Nations  
Economic Commission for Africa

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Multidisciplinary  
Regional Advisory Group

REPORT OF A MISSION TO THE G7/DEVELOPING COUNTRIES'  
CONFERENCE ON THE INFORMATION SOCIETY AND DEVELOPMENT  
MIDRAND, SOUTH AFRICA  
13 - 17 MAY 1996

By  
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### **Executive Summary**

The United Nations Economic Commission for Africa (ECA) represented all the regional Commissions of the United Nations at the G7/Developing countries' Conference on the Information Society and Development (ISAD) held in Midrand, South Africa from 13-17 May 1996. ECA's delegation was comprised of Mr. K. Y. Amoako, Executive Secretary, Ms. Nancy J. Hafkin, Officer-in-charge of the Pan African Development Information System and Mr. Makane Faye, Regional Adviser on Information Systems Development.

The ISAD Conference focused on the ways in which developing countries could use Information and Communication Technologies to boost development, to stimulate and support environmentally sustainable growth, and to ensure their effective participation in the emerging global wired economy. The major highlights of the Conference were the keynote address made by the Executive Secretary on Africa's Information Society Initiative (AISI) and the consensus document which was produced by the discussion forum between the G7 and the Developing countries and which was introduced by the Executive Deputy President of South Africa, Mr. Thabo Mbeki, during the closing session as the Chairperson's views concerning ideas emerging from the fora discussions.

The AISI document presented Africa's common position and strategies vis à vis the new information trends and was widely welcomed by participants who saw it as a means to enable Africa to leapfrog many development problems. The Chairperson's views were a wrap up of project ideas and a consensus programme that emerged from negotiations between the G7 and the Developing countries. The ISAD Conference shows that there was a clear need for international support for public/private partnership projects in a number of domains aimed at helping to build a truly Global Information Society. The meeting recognized that the developing world had unique needs and challenges and also special skills and experiences in addressing these issues.

### **Background**

The ISAD Conference resulted from a remark made by Deputy President, Mbeki during his address to the G7 Ministerial Conference on the Global Information Society, held on 25-26 February 1995 in Brussels, Belgium, when he

pointed out that there was a need for a subsequent conference that would bring together a cross-section of the developing world, the G7 countries and the European Union. Hence the Conference was restricted to 40 invited countries, balancing the G7 countries with industrialized and developing countries from Europe, Africa, the Middle East, East Asia, South and Central America, the Indian Ocean, and the Caribbean. The following 14 African countries took part in the ISAD Conference: Angola, Botswana, Egypt, Ethiopia, Gabon, Ghana, Kenya, Mauritius, Morocco, Mozambique, Namibia, Senegal, South Africa, Tanzania and Zimbabwe. In addition to ECA's delegation, also participating from Ethiopia were the delegation from the Government of Ethiopia led by the Vice Minister of Transport and Communication Ato Ayenew Bitewilign, and the delegation from the Organisation of African Unity led by Assistant Secretary General Ahmed Haggag.

The G7 countries consist of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States of America.

### **Objectives of the Conference**

The objective of the Conference was to launch a dialogue between a cross-section of countries with different social, economic and cultural patterns to pursue policies which aim at facilitating the integration of developing countries in the information society, associating them, as partners, in its creation and avoiding a widening of the development gap in the context of the information age. The ISAD Conference was to define a "shared vision" on the Global Information Society and support it by the adoption of core principles and means for co-operatively achieving the defined goals. The aim of the Conference was therefore to discuss what should be done to enable the developing world to take part in the global information society.

### **Themes and key issues of the Conference**

Following are the key issues discussed during the ISAD Conference:

#### ***The Information Society Perspective***

This focused on the implications for social groups as well as individuals. The Information Revolution should benefit society as a whole.

***The role of the Information Society in Promoting Development***

The development needs of each country should be the focus for the Information Society.

***Ensuring equity in the Information Society***

Information must be an instrument of emancipation and empowerment, appropriate to the environment and needs of each country.

***The role of the Administration in the Information Society***

The State has a role to play in ensuring universal access and supporting establishing the economic environment for the IS.

**Policy pillars**

Following are the "policy pillars" discussed at the ISAD Conference

- The importance of Information Community planning.
- Information technology as an engine of development and empowerment of the people.
- Education and training for the Information Community.
- Encouraging innovation.
- Information Technology for economic growth and industrial development.
- Contributions of the Information Society to world knowledge & culture.
- An equitable international approach to Information Technology.
- Sectoral co-operation.
- Creating an enabling environment.

**The Executive Secretary's keynote speech**

The Executive Secretary of ECA was the keynote speaker during a luncheon hosted for the ISAD Conference by ECA, World Bank, the Global Information Infrastructure Commission and the Council for Scientific and Industrial Research (CSIR) of South Africa. The Executive Secretary's speech dealt in length with Africa's contribution to the Global Information Society by adopting and implementing an Action plan.

The action plan was contained in a document entitled: "Africa's Information Society Initiative (AIS): An Action Framework to build Africa's Information and Communication Infrastructure", adopted by resolution 812 (XXXI) of the ECA Conference of Ministers. Resolution 795, "*Building Africa's Information Highway*", of the thirtieth session of the Conference of African Ministers responsible for economic and social development and planning, held in Addis Ababa in May 1995, had requested the Executive Secretary of the Economic Commission for Africa to set up a high-level working group on information and communication technologies in Africa, made up of African technical experts, to prepare a plan of action in this field for presentation to the thirty-first session of the Conference of Ministers. The Action Framework is the product of the Working Group. It attempts to address the issues related to information and communications for development. It targets decision makers and leaders in all sectors, including, in particular those responsible for planning, information, telecommunications, economic development, laws and regulations, health, education, trade, tourism, environment and transport.

It also aims to support the development of Africa's role and policies in a future where information is a crucial economic and social resource, and where electronic networks and information technology present a new venue for socio-economic and cultural activity, at both local and global levels.

The Executive Secretary requested the audience to use the Action framework in working towards the development of information infrastructures in member States. The G7 countries and the international partners, including partners of the African Networking Initiative (ANI) were also urged to assist in the implementation of the African Information Society Initiative in partnership with ECA for benefit of member States.

The text of the Executive Secretary's keynote speech is in Annex I.

The Executive Secretary also chaired the first of the fora sessions on "Applications to serve the diverse needs of the development world." In his opening remarks, Mr. Amoako emphasized that the tests of both value and enetration of the information society in developing countries would be the development and utilization of sector applications. These applications would assist Africa to compete in global economy in a time of rapid economic and social change.

Some of the important areas where the development of sector applications could be envisaged included:

- in debt management, development of loan databases to enable countries, through information management, to reduce their payments;
- in trade, providing value-added network information services to the private sector to leverage competitiveness in trade and investments of developing countries ;
- in employment, creating databases of job seekers and job opportunities to permit job matching;
- in education, developing databases of skills produced by the education system and working to match these with national needs;
- in environment, development of databases of environmental indicators and distribution of these on a regular basis to indicate trends in this area
- publication of economic and social indicators on a monthly basis, extracted from databases in these areas;
- establishment of national World Wide Web sites on the Internet with up to date information on facilities, to attract tourists
- scanning of documents and manuscripts, to preserve national written heritage
- setting up electronic links between village and regional health centres with national and international medical centres to bring expert diagnoses to local level;
- development of electronic early warning systems to alert planners to spread of infectious diseases, crop failures, etc.
- in public administration, where the possible applications were myriad.

Some developing countries had already made substantial progress in the development and utilization of these applications. The panel described some of these pioneering efforts.

### **The Chairperson's views**

"The Chairperson's views concerning ideas emerging from the fora discussions on global information society and development: themes and projects" was introduced by Mr. Mbeki.

The chair's views on a number of ideas which emerged from the fora discussions were as follows (Mr. Jay Naidoo, South African Minister for Post and Telecommunications chaired the Conference): A first exchange of views had taken place on these ideas between high level representatives of the countries, international organisations and non-governmental organisations attending the conference.

The challenges facing the developing world in establishing the Information Society were grouped into nine themes and it was agreed that the information society should be targeted to meet the needs of people and promote development. The themes suggested were aimed at directly serving these needs. They were based on the needs of people in developing countries, and not simply on the momentum of technological change.

#### **Achieving cooperation in these themes would usefully serve to:**

- Create communities of interest to exchange experience and best practices;
- Enhance national resources and share global resources;
- Help establish the needs of the developing world on the international agenda in building the Information Society;
- Harmonise global standards to ensure interconnectivity and open interfaces;
- Work for the mobilisation of funding for developing world projects.

### **Linking with other initiatives**

There are presently eleven existing G-7 pilot projects which constitute themes of cooperation on the Information Society. The ISAD-identified themes were considered to be both demand- and needs-driven and are cross-sectoral in scope. It was agreed that these themes, and their pilot projects, typically complemented and reinforced a number of existing G-7 pilot projects and direct



their results at the satisfaction of the needs of users worldwide. The ISAD Conference welcomed the fact that the existing G-7 pilot projects had been expanded to include developing countries.

According to the Chairperson, the themes proposed by the ISAD Conference *"must link with the many existing national, regional and global initiatives, such as the African Information Society Initiative (AISII) of the ECA Council [sic] of ministers, and various private sector projects"*.

## **Proposed Themes**

The following themes and ideas were proposed by the Conference for follow up by the G7 in partnership with the Developing countries.

### **Theme 1: Integrated systems to Meet People's Basic Needs**

IT is a tool and not an end in itself. IT has a crucial role to play in meeting a range of needs, and in supporting sustainable social and economic development. This would include projects providing a range of health services in developing countries, particularly in remote areas; systems to manage natural resources and support the environment; and systems to support housing, transport and welfare provision for people. A special emphasis must be put on meeting the special needs of rural areas.

### **Theme 2: Universal Access**

Without universal access, the Information Society could deepen rather than reduce inequalities. One approach for cost effective support of universal access in a developing world context could be through community based schemes that cover a multitude of services, applications and content through multi-purpose community centres. These centres could offer development related information, training, government information and services, small medium and micro enterprise (SMME) support, community media centre (including multimedia) and a community resource centre. They should, whenever possible, be run on commercial lines to ensure sustainability. In this way the Information Society can be extended to various underprivileged communities. Universal access also applies

to supporting marginalised sectors to be able to participate full in the Global Information Society, such as youth, women and disabled people.

### **Theme 3: Innovation to develop appropriate applications and content**

All countries should develop the ability to produce applications and content that are driven by local needs in an appropriate fashion. Only in this way can developing countries become active participants in their own right in the Global Information Society. This includes supporting the technological innovation infrastructure of a country and developing centres of excellence in producing applications and content. This theme also covers producing content reflecting differing needs, languages and cultures in developing countries. Small, Medium and Micro Enterprises (SMMEs) are a key mechanism for allowing all countries to implement their vision of the information society in all its detailed aspects.

### **Theme 4: Human Resource development**

Human resource development, such as education and training, is a dimension of the development of the Information Society as important as the development of physical infrastructure. As well as its role in the empowerment of people to be active players in the GIS, the returns on investment in learning in developing countries often exceed those of investments in hardware. New public/private sector partnerships need to be found to channel resources to developing skills and empowering people in the economy. Education and training are appropriate and strategic vehicles to guarantee equity for all people to participate in the Global Information Society. This theme includes producing teaching materials relevant to the language and culture of the users, using IT to support teaching and training and developing a recognised qualifications framework.

### **Theme 5: Support for business, especially SMMEs**

IT is both an industry, and key component in the development of all other economic sectors. So this theme would include support for any SMMEs through the tools of the Information Society, such as global economic networks, new

production techniques, sound management and financial controls, databases of contacts and support agencies, and projects aimed at developing specific sectors.

**Theme 6: Support of good governance**

Open and efficient government underpinned by relevant, sound information is accepted as being a crucial step towards development. This will allow greater participation of stakeholders in decisions concerning them at the grassroots level, improve the efficiency of government and enhance the services it offers to citizens.

**Theme 7: Cultural heritage**

Cultural development covers dissemination, archiving, gathering, education, and curriculum development. Endangered cultures should be nurtured as living contributions to the Global Information Society. This theme seeks to assist developing countries harness their rich and diverse cultural heritage and to utilise the Information Infrastructure to become significant content-providers world-wide. By exploiting content they can generate income and strengthen indigenous cultures.

**Theme 8: Building the infrastructure**

Infrastructure development is the foundation of building the Global Information Society. Without this, none of the other projects will be possible. There are a range of different technologies appropriate to the conditions found in developing countries. There is broad agreement that information infrastructure provided by private investment in a competitive environment can be very effective. Providing infrastructure has a direct connection with universal access to the Information Society.

**Theme 9: Countries with special circumstances**

There should be a focus on countries that are facing special circumstances such as civil strife or natural disaster. Special assistance should be provided to allow these countries to rebuild themselves to counteract the problems compounding the underdeveloped status of their information and telecommunications networks and services.

## **Follow up process**

During the fora which brought together representatives of all interested sectors (public authorities, business, international and regional organisations as well as civil society and NGOs) the themes as well as some example projects have been highlighted as particularly relevant to meet the diverse needs of developing countries. The sample projects are in annex II. The following principles were retained to build the Global Information Society:

- There was a need to develop an inventory of Information Society initiatives in the developing world, to link with existing inventory projects, such as the G-7 pilot project;
- There was a need for national level fora for national coordination of the Information Society, encompassing different societal sectors such as government, business, labour, academia and community;
- There was a need to ensure regional coordination mechanisms, through existing structures;
- It was suggested that a working committee meeting made up of the national Information Society coordinators or nominees should take place later this year to progress this work with support from existing international organisations. Egypt offered to host this meeting.
- All available means of dissemination should be used to ensure exchange of information, coordination, lessons learnt and best practices regarding the implementation of projects in support of these themes, including Web sites, journals, electronic mailing lists and inputs to relevant conferences.

## **Conclusions:**

The Conference achieved a commitment among over 40 developing and developed nations to work together to assure that the benefits of the Information Age reach all corners of the world. A key message of the Conference was that each developing country should develop an information society adapted to its own

needs and specific realities. This is very much in line with ECA's AISI action framework.

A follow-up meeting to the ISAD Conference will be held in Cairo before the end of 1996 to further identify themes and projects for collaborative action.

### **Other conference and meetings**

Organizations in South Africa organized two additional important meetings on the information society theme during the same week as the ISAD Conference. The ECA delegation also participated in those meetings.

At the conference of International Council of Scientific and Technical Information (ICSTI) entitled "Towards a southern African Information network: North-South Cooperation in scientific and technical information" held at Helderfontein Estates, Fourways, South Africa, from 13-14 May, Mr. Faye made a presentation on "usage/user patterns in developing countries: the case of Africa" at the session on "information users and usage patterns." The conference brought together nearly 100 professionals in scientific and technical information from the entire world.

At the Conference on "Empowering Communities in the Information Society" (also held at Helderfontein Estates, from 15-17 May), co-organized the CSIR, the Development Bank of Southern Africa, the International Development Research Centre and the International Telecommunication Union, Mr. Amoako was invited to give the keynote address on the African perspective. (Ms. Hafkin delivered it on his behalf; the text appears in Annex III). Ms. Hafkin also chaired the session on "national information policy requirements."

During the mission members of the ECA delegation also met with the State Library of South Africa, the library of the University of South Africa, the sub-Directorate of Meta Information of the Department of Arts, Culture, Science and Technology and the Africa Institute of South Africa, which indicated its desire to become a PADIS institutional participating centre.

*Conference on the Information Society and Development*  
*Information Society Luncheon Forum:*  
*Information and Communications for Development*  
*Midrand, South Africa*  
*14 May 1996*

***Africa's Information Society Initiative:***  
***an action framework to build Africa's information and***  
***communication infrastructure***

**Keynote address by Dr. K.Y. Amoako,**  
**Executive Secretary of the Economic Commission for Africa**  
**and Under-Secretary General of the United Nations**

**Honourable Ministers  
Excellencies  
Distinguished experts from around the world  
Ladies and Gentlemen:**

*It is a particular pleasure to be with you today. The forward looking theme of this conference, the participation of so many critically important actors in the field, and the conjunction of private and public interests represented here today all foretell a meeting of significance. Eons from now archaeologists will look back at meetings like this one as they search for the foundations of their fully live information societies. What we build here and how we build it will help shape the future for generations.*

*The honour you have given to me and to the Economic Commission for Africa in asking me to give the keynote address at this special luncheon forum is not lost on us. We are serious participants in information developments on this continent, and we plan to remain active as this continent considers its future in informatics.*

*To move into the Information Society, Africa must be clear on what it wants and make its desires clear to others. If we are clear, if we have a compelling vision for ourselves, then it is likely that our choices will turn into our own reality. If we are not clear, then we will either be perpetual observers of the information highway or find ourselves on a road not fit for our needs.*

*Africa obviously starts late in planning the architecture of its information highway. A small indication of this is found in the agenda of the Internet Society, meeting next month in Montreal. Of some 300 presentations, connectivity in Africa figures as only one small item.*

*But being late in planning our information society offers some advantages. We can profit from the experience of others, and we have the potential to leapfrog some kinds of problems. For example, informatics offers solutions to distance education, extension of health and agricultural services, early warning systems to disasters, trade and tourism promotion and other benefits which in the past would have required far more expensive solutions.*

*To be able to take solid benefit from the information age we see growing around us, Africa requires an architecture for our informatics planning -a framework.*

*Building Africa's Information Society is central to the strategic vision I have elaborated for the Economic Commission for Africa, which I joined as Executive Secretary less than a year ago. I am very pleased to inform you that the ECA Conference of Ministers responsible for economic and social planning and development shares that vision. Just last week the Ministers adopted an action framework to build Africa's information and*

*communications infrastructure. This framework is called the African Information Society Initiative.*

*By the year 2010 the Initiative sees an information society in Africa where:*

- *Every man and woman, school child, village, government office and business can access information through computers and telecommunications;*
- *Information and decision support systems are used to support decision making in all the major sectors of each nation's economy;*
- *Access is available throughout the region to international, regional and national "information highways";*
- *A vibrant private sector exhibits strong leadership in growing information-based economies;*
- *African information resources are accessible globally reflecting content on tourism, trade, education, culture, energy, health, transport and natural resource management;*
- *Information and knowledge empower all sectors of society.*

*We take seriously the action framework outlined by the Initiative. The framework will be the basis for ECA's own programme of work in its focus area of Harnessing Information for Development. This is one of but five focus areas for our entire programme of work. Most importantly, the African Information Society Initiative will serve as the framework for the priority area of informatics under the United Nations System wide Special Initiative on Africa. ECA is a lead agency for the informatics part of the UN Special Initiative, the implementation of which will involve several key United Nations agencies, including the World Bank, UNESCO, the International Telecommunications Union and UNCTAD.*

*The implementation of the African Information Society initiative will take place at country level, starting with national Information and communication Infrastructure plans, and it will be elaborated through programmes and pilot projects reflecting national needs and priorities. ECA, with its partners, will work directly with countries to assist in drawing up national action plans, to develop programmes and to draft projects to help support systems for government, business and society. AISI also foresees cooperation, linkage and partnership between African countries to share the success of accumulated implementation experiences and to stimulate regional development in various information and communications fields. Thirdly, the initiative calls for bi-lateral and regional mechanisms to stimulate cooperation between African countries. And finally, it calls for support and partnership with the international public and private sectors.*



*As I indicated, the starting point of the action framework is the formulation and development of National information and Communication infrastructure plans in every African country, always based on national needs and priorities, initially probably on a five-year basis.*

*The implementation of the plans inevitably must begin with infrastructure development, without which little of the initiative can be realized. It will be necessary to upgrade and develop telecommunication infrastructure and networks at the national level as well as to improve regional inter-connectivity and to provide gateways to international telecommunications networks. It is here that technological advances offer Africa more cost-effective and appropriate technologies to leapfrog over several generations of intermediate technologies still in use in the industrial world. On infrastructure, we will follow the able lead of the international Telecommunications Union.*

*Human resource development is the sine qua non of the initiative and the element that will make it sustainable. The initiative calls for the building of new capacities through education and training not only for engineers and information systems specialists, but for planners and managers as well, to be trained in information technology - not only in its use, but most importantly, in its possibilities: it is they who need the ability to adapt, adopt and exploit new technologies, and to manage change.*

*AISI is African's own initiative. It was prepared by a High Level Working Group of African Experts in information and communication technologies (several of whom are in the room with us today), at the request of African ministers responsible for economic development and planning who have now endorsed it. I urge not only your close study of the AISI initiative, but your support of it. (You have a copy of the Initiative in your luncheon package, next to your menu!).*

*The Initiative, we feel, is a very important framework for action. ECA plans to play a full role in helping its Member States to implement it. Achieving the objectives of the Initiative will require support from many sources. In addition to our partners already working with us on the informatics area of the United Nations Special Initiative for Africa, to implement the AISI we are calling for an international partnership: from the G-7 and other donor countries and from the private sector.*

*Let me underline the fact that the vision of the African Information Society Initiative rests upon national actions to create much needed enabling environments for an information society. Creating the enabling environment is a critical challenge.*

*The Initiative boldly speaks about "the liberalization of national telecommunications and public broadcasting services", about the importance of "intellectual property, privacy and the free flow of information". It sees important roles for the private sector, NGOs and the media. All of this may seem new to some governments which not long ago struggled to find ways of monopolizing news for their peoples and which even now may have mixed feelings about whether the information highway should run through their countries.*

*The choice seems simple, but it is not. Controlling information flows need to be weighed against the benefits of attracting our diaspora back to Africa, because this great pool of talent will want to remain connected to the worlds it has known, of connecting within Africa and the rest of the world, and of reaping enormous educational advantages by a range of services from simple connectivity to participation in virtual universities. Since these choices deal so fundamentally with the quality of society we desire, they can rightly be called political choices. Governments need to find a level of comfort with an enabling environment for information. There needs to be careful discussion as well as a clear understanding of choices and consequences. I would submit that the task is for dialogue both at the technical and political levels.*

*Beyond questions of user access to information systems will be questions of access by providers. Here, too, Africa has had a history of attempting to control access, hence state telecommunications have been seen as having a right of total market control. It seems likely that state telecommunications systems (or prevail continue to have major roles to play in Africa's information future. But we also need to make room for a whole host of private parties offering services around the core infrastructures. For example, two weeks ago a Nairobi newspaper interviewed two Kenyans who are offering a range of Internet access services in Kenya. He is a veteran of NYNEX, and she left a career in the World Bank. These two are typical of numerous young Africans - both returning to their countries from the diaspora and those who never left- who are anxious to start value-added information services- information-based businesses that promise jobs and economic growth. Software services from Africa could attract business to this continent, such as is now the case in Asia and Latin America.*

*The action framework will help foster basic policy and physical infrastructure, the backbone of the information society. But there is need to address very critical issues of access and application.*

*The burden of ensuring equitable access to the benefits of the Information Society in Africa lies both with Governments and the private sector. They must ensure that access to the information society and its benefits are equitable- across regions and gender, between cities and rural areas, - and that its arrival does not mean the creation of new elites, of new inequities built around information as a resource. All of Africa's people are stakeholders in the Information Society. The information revolution is not about pipes and computers, but about people and how they live. Information empowers and information frees people at all levels of society, regardless of their gender, their level of education or their status, to make rational decisions and to improve the quality of their lives. The technology is there: voice-recognition software, machine translation, solar-powered units, wireless communication- to be accessible to the rural areas and to the poor, through community telecentres, for example. Governments will be strengthened by the access they will have to all their citizenry and that their citizenry will have to them. The private sector will find that extending access can be profitable, as formerly unserved areas use access to build economic activities. However, it is up to Governments to ensure that equitable access is an essential part of national information and communication plans.*

*The question of who owns the information on the information highway must also be addressed. As a cultural issue, it is sensitive. The information highway may be a lot less attractive to Africa if all one can get on it is non-African information. And it has zero political attraction if there is little prospect that Africa will be a contributor to the global databanks. Africa must participate in the global information society both as a producer and a consumer. Africa has tremendous amounts of useful and unique information, but in most places that information is neither organized nor accessible. Much of this information could be useful in planning and decision making both by the public and private sectors. Crafting Africa's entrance to the global information highway is an opportunity to demonstrate that Africa has experience, literature, trading opportunity, knowledge, and relevance in a wide number of areas. There is a lot at stake: we Africans must not be dependent upon external analysis of core issues of importance to our development. We must not self-marginalize, and we must demonstrate that we are worthy producers of information. In building Africa's information society, the information content area is as important as the physical infrastructure.*

*ECA has long been sensitive to this issue. We are an active producer of information about Africa's economic and social situation; we have long established a network of information to link with governmental and research establishments in Africa; we have assisted governments and sub-regional and regional development institutions in organizing their development information. Presently we are constructing an ECA World Wide Web site to disseminate Africa's development information. Using others' Web sites, more users now download ECA's documents weekly than what our hard copy distribution used to achieve on a yearly basis. The challenge here is to build the information highway in Africa, so that our target clientele can access our information electronically. We have also begun to produce CD-ROMS on African development, and will continue to work within Africa to build capacities to disseminate African information electronically.*

*ECA is but a part of the answer to the issue of how will Africa hold up its end as an information supplier. I use us as an example only to demonstrate that market demand is there and that we must encourage both consumption and production of information if we are to be full players in this new age.*

*The combination of policy and programme frameworks, such as will be afforded in the African Information Society Initiative, emphasizing equity and connecting to produce as well as to consume information, should serve Africa extremely well in the years ahead. This is a time of choosing at the national and regional levels, and of plotting our future so that Africa can be a full partner in the global economy, in the global information infrastructure. May the archaeologists of the future find that we did our job well.*

**Sample projects**

***This annex gives examples of projects within these themes. Wider collaboration and investigation than is possible at one conference is required before proposing a final list of projects for these initiatives.***

***Theme 1: Integrated systems to meet people's basic needs***

- 1. Telematics in epidemiological surveillance, interconnection of hospitals to improve access to interactional literature and distance diagnosis.***
- 2. Natural resource management and Regional Environmental Information System, for example Infoterra, Africover and the results of the Tunis colloquium on IT for Environmental Concerns.***
- 3. Telemedicine and Interactive Health Network. Equity of access to the full spectrum of clinical services through collaboration among clinicians regardless of location, including the projects of the ITU/BDT in telemedicine.***
- 4. The ITU/BDT SPACECOM and Worldspace initiatives which seeks to apply satellite communication technology to improve access to telecommunication services in rural and remote areas.***

***Theme 2: Universal access***

- 1. Multi-Purpose Community Telecentres, including the Community Tele-Service Centers;***
- 2. Use of IT in training and empowering of disabled people;***
- 3. Youth development projects, such as those from the GII Junior Summit, Tokyo 1995;***

***Theme 3: Innovation to develop appropriate applications and content***

- 1. Centers of Excellence, Expertise and Resources***
- 2. National Science and Technology Network***

**Theme 4: Human Resource Development**

1. *National qualification framework for information technology*
2. *Distance learning*
3. *Development of courseware and educational software, with regard to language issues*
4. *Training of trainers and teachers*
5. *The African Regional Advanced Level Telecommunication Training Institute, AFRALTI, Nairobi*
6. *Ecole Supérieure Multinationale des Télécommunications, ESMT*
7. *Schools network to link schools globally*

**Theme 5: Support for business, especially SMMEs**

1. *Information project to support the fisheries industry*
2. *Trade points gathering and disseminating trade-related information or SMMEs, for example the Tradepoint project*

**Theme 6: Support for good governance**

1. *Open and Efficient government, including increasing the efficiency of government internally and increasing its transparency to the people*
2. *Debt Management Information System and other financial/business systems*
3. *One-Stop Information Services providing access to a range of governmental information, for example the North-West Province in South Africa*

**Theme 7: Cultural heritage**

1. *Gathering, preservation and dissemination of cultural heritage*
2. *Culture and tourism information network*

**Theme 8:     *Building the infrastructure***

- 1.     *Satellite communications for remote areas providing a range of services, including satellite direct-to-radio broadcasting***
- 2.     *Providing national higher bandwidth transport facilities***
- 3.     *Providing communication linking initiatives, for example the Regional Informatics Network for Africa***
- 4.     *Providing Internet connectivity to unconnected and little-connected countries in Africa, in line with ECA's activities in connection with the US Leland initiative, IDRC, World Bank and other related programmes***
- 5.     *Afritel, which is the modernisation of the Pan African Telecommunication network.***

**Theme 9:     *Countries with special circumstances***

- 1.     *Projects will focus on rebuilding countries which have faced civil strife or are prone to natural disasters. The countries include Somalia, Liberia, Rwanda, Palestine, Bosnia Herzegovina and others.***

**Empowering Communities in the Information Society  
Heldenfontein Estates  
Fourways, South Africa  
15 May**

**Keynote address by Dr. K. Y. Amoako, Executive  
Secretary of the Economic Commission for Africa and  
UnderSecretary General of the United Nations**

**Ladies and Gentlemen,**

**I am very happy to have the opportunity to address the conference on Empowering Communities in the Information Society. The questions you are addressing over the next three days are exactly those we at the Economic Commission for Africa have been grappling with as we elaborate our programme in Harnessing Information for Development and launch the African Information Society Initiative. These are our concerns: How can the Information Society be relevant to rural areas? How can it take into account needs of the poor, the illiterate? Women? Youth?**

**We at ECA are firmly convinced the Africa has no choice but to enter the Information Age if we want our countries to be competitive in the global economy. At the same time we are deeply concerned that the Information Society be an equitable one. Its arrival should not mean the creation of new elites, of new inequities built around information as a resource. The information revolution is not about pipes and computers, but about people and how they live. All of Africa's people are stakeholders in the Information Society. Information empowers and information frees people at all levels of society, regardless of their gender, their level of education or their status, to make rational decisions and to improve the quality of their lives.**

**Thus, our concern is that the information society and its benefits are equitable- across regions and gender, between cities and rural areas; that communities that in the past have been disenfranchised, both economically and politically, can use the information society for their own empowerment.**

**What is information empowerment? How can information empower formerly powerless communities?**

**Looking only at its economic aspects, some of the things that information, utilizing information technology, can do are:**

**\* Bring jobs to keep rural residents from migrating to cities and exacerbating urban pressures.**

- \* Give local producers access to market information and potential customers;**
- \* Give local businesses access to government information and services, without a trip to a provincial or national capital, which they need to develop and be competitive in rural areas;**
- \* Train workers, through distance education, in new industries established where costs are lower;**
- \* Reverse the brain-drain: city-dwellers might consider returning to work in the rural areas where they grew up if they could consult health specialists, find information, and learn new skills.**

**Thus, information technology can be a tool to help enhance the individuals' participation in society as consumers, workers, managers and owners.**

**Let me draw an analogy from a South-South perspective that we can then apply to the African situation to illustrate the importance of policy choices now, when African countries have the possibility of entering the information age. And please pardon me if I fall back on the rather tired highway metaphor that so many of us have been using.**

**This is a tale of two highways: one in Asia and one in Latin America. The highway in Asia is intended to link a capital city with another city often used as a weekend resort. It is hard to deny that the road was built by the elite for the elite. It is a beautiful, very smooth and very limited access highway. It has fences and walls on both sides. Neighbour has been artificially separated from neighbour. Families must make long detours to the infrequent crossover points when they want to visit relatives who used to be only a short stroll away. When built there was a high toll for using the highway which effectively shut out not only horse carts, of course, but all those who could not afford the toll. Rural incomes went down along the highway. The people could only sigh as luxury cars whipped past them on the way to a restful weekend.**

**Now let us look at a transport network in Latin America. Great care had been made to take the roads to where the people lived, in this case in the Andes. Feeder roads lead from village down to the main roads. With access assured by careful public investment, there is a flow of social and economic services which adds tremendous value to the lives of the people. Schooling and health services have become commonplace. Farmers have doubled their incomes because of better access to markets. The people in the rural areas routinely help to maintain the roads which have become so vital to their lives.**

**There are actual cases: one where the common people were harmed by the highway and one where the people were helped. The point here is that there is no such thing as "the" information highway any more than there is only "the"**



*asphalt highway. Tying the foundation for an encompassing global information age. Some of those choices will wall off poor people just as surely as the highway in Asia created physical walls. Other choices will incorporate people and they will flourish.*

*Will Africa's information highway look like a restricted speedway or an integrated feeder road system? In my own country, Ghana, the setting up of Internet by a local firm has been widely lauded. But this firm offers Internet services for \$100 per month payable in US currency, -three months of the average income of a journalist and a fortune for most students. In order that the Information Society is inclusive rather than exclusive lies at the level of policy choice, which is where most African Governments are now.*

*In constructing national information and communication infrastructure plans, such as South Africa is doing now, especially with its recently adopted White Paper on Telecommunications Policy, the concern with equity has to be prominent at the level of policy development.*

*At the Economic Commission for Africa we have just launched the African Information Society Initiative: an action framework to build Africa's information and communications infrastructure. The Initiative was adopted just last week in Addis Ababa by the Conference of African Ministers of Planning and Development. It was drafted, at the request of African countries a year ago, by a working group of African experts in information and communication technologies. Two of the experts, by the way, were South African. This framework will be the basis for ECA's own programme of work in its focus area of Harnessing Information for Development, one of five focus areas for our entire program of work. The African Information Society Initiative will also serve as the framework for the priority area of informatics under the United Nations System wide Special Initiative on Africa. ECA is the lead agency for the informatics part of the United Nations Special Initiative, working closely with UNESCO, ITU, the World Bank and the International Development Research Centre, all of whom are present at this Conference.*

*The implementation of the African Information Society Initiative will take place at country level, starting with a national Information and Communication Infrastructure plan, and it will be elaborated through programmes and pilot projects reflecting national needs and priorities. ECA, with its partners, will work directly with countries to assist in drawing up national actdraft projects to help develop equitable and relevant information services and systems.*

*The concern for information with equity is a central one of the Initiative. These are some of the things our Initiative says on this score:*

*Information and communication technologies offer the possibility of information-based industries being set up in rural areas: jobs, without the need for people to migrate to cities, without all the attendant urban ills with which we are familiar. The information age can break the link between jobs and*

urbanization. The challenge is to create the conditions that enable people to make a living where they are in rural areas.

Information and communication technologies can no longer be seen as a luxury for the elite but as an absolute necessity for the masses.

All disenfranchised groups must have access to information - women and the poor; rural dwellers: to make rational choices in the economy and to exercise democratic and human rights.

The Information society can be very useful in distance education, in extending the reach of education facilities, particularly for informal learning, to community level.

NGO's are very useful voices in making known the needs of the poor and disenfranchised, and in developing their capacity to make use of the services offered.

African countries need to greatly increase accessibility to telecommunication networks and services to the global information infrastructure, in particular for people in rural and isolated areas, using affordable telecommunication systems.

The technologies are already there that can bring empowering information to isolated communities. Satellite Communication Systems, such as VSAT, global mobile low Earth Orbit (LEO) satellite systems which are coming and which will greatly cut communication costs in rural areas, fibre optic cables for telecommunications, solar power supplies. And for those who are unfamiliar with technology: community telecentres or telecottages to assist them and give them access to information and communications technology, using simple interfaces, touch screens, and voice based systems in local languages.

Given the action framework, the policy and the technology, the question remains: who is to introduce the information services that will so benefit the rural areas, poor urban communities? The concept of social entrepreneurship may offer some possibilities.

This falls into the debate about liberalization of telecommunications and related information services: is it only governments, increasingly strapped for funds, which can ensure that needed information services reaches the urban and rural poor, or could the private sector realize profit in markets previously regarded as unattractive? With a little creativity, the private sector could recognize opportunities to serve Grameen Bank in Bangladesh which is trying to create 35,000 commercially viable telephone companies in rural Bangladesh in tandem with a multinational telecommunications company by lending funds to very poor women to buy cellular phones and by helping each these women to set up this system. This kind of entrepreneurship may be part of the formula needed to focus on spreading as widely as possible the impact of the informatics

*revolution to empower communities in such areas as higher education in Africa, in secondary education, in community health programmes, in applied science and technology, in rurality-based cellular phone systems and in ways which help small enterprises.*

*In conclusion, let me say that we started our work at the level of regions to push the frontier- to ensure the Africa appeared on the map of electronic connectivity, to end the gap between information have and have not nations. But the effort can not end at the capital city. Civil society must pressure Governments and the private sector to ensure that all the citizens in African countries can improve the quality of their lives by using the tools of Information Age.*