Ethiopia

The Federal Democratic Republic of Ethiopia
Ethiopian Telecommunication Agency

Ethiopia's Response to Draft WSIS Declaration of Principles and Action Plans

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Executive Summary

The challenges of globalization necessitate that countries develop their information and communication infrastructure and create an enabling environment for information and knowledge sharing. To this effect, the WSIS process provides African countries with opportunities to embark on nation-wide awareness raising programmes on the information society development issues and take concrete measures that would facilitate their digital inclusion. As part of its contribution to the WSIS process, Ethiopia, like most developing countries, is in the process of implementing various ICT projects and initiatives. Progress in this front prerequisites that the country aligns its endeavors with similar regional and global initiatives such as the African Information Society Initiative (AISI), the Bamako 2002 Declaration and the ICT component of the New Partnership for African Development (NEPAD), the Melennium Development Goals (MDGs). In response to the WSIS principles and plan of action, the following are Ethiopia's positions:

- As a country with over 67 million people, teledensity of 0.5 (2002), and PCs penetration of below 80,000 (2001), ***ICTs infrastructure*** is one of the key areas that Ethiopia must build up with a mix of technologies ranging from gigabit fiber backbone network to wireless solutions that speed up the penetration of ICTs to the grass root or rural community level. District centred development is the current approach to accelerate the empowerment of the society's participation in and addressing of community based development requirements. In fact, infrastructure is the basis to the expansion of all the other ICT services and products, and for implementing the actions enumerated below. Hence, the issue of financing and investment, affordability, development and sustainability of ICTs infrastructure is of critical concern to Ethiopia that requires financial and technical support from the international community to ensure Ethiopia's full participation in the information society.

- Ethiopia recognizes that ***capacity building*** is the cornerstone for the development of an information society. In this connection, a national ICT capacity building programme has been developed and efforts are underway to implement various projects in the framework of the programme that addresses development of human resource, building institutional and technological capacity. Given the amount of resources needed to meet these challenges, it is imperative that the country forges strong partnership with the private sector and international donor agencies.

- Ethiopia is a country with diverse ***cultural and linguistic heritage***. There are over eighty local languages. Moreover, Ethiopia has its own script used for written communication for a number of centuries. The multilingualism and the development of the local script present challenges with respect to Ethiopia's full participation in the information society, especially in terms of development and promotion of local content. Although there are endeavors to develop an Ethiopic characters. The work done so far is far from being desired. In this regard, the country needs a great deal of resource and technical assistance in using its languages for developing local content including digitizing indigenous knowledge and enable local languages fully supported by all ICT products and services including internet domain names. Furthermore, local research efforts targeted at the development of local language processing need to be supported.

- Ethiopia fully recognizes the significant role that ICTs play in harnessing socio-economic development and its contribution in poverty reduction and alleviation. The national ICT capacity building programme provides emphasis to selected focus areas to *promote development-oriented applications* in education, health, governance, trade and commerce, and public administration and service delivery. In addition, local ICT companies should be encouraged to engage themselves in the development of applications to maintain sustainability and cost-effectiveness. Export-oriented ICT products and services such as outsourcing software development projects from companies in developed countries to companies in developing countries should be encouraged and supported. Furthermore, ICT manufacturing capabilities should be encouraged through providing support to local IT companies involved in innovative activities, promoting the concept of setting up IT parks in capital cities and regional towns, supporting school IT clubs and research networks, and introducing preferential incentive schemes to encourage IT investment in the underprivileged areas.

- Information is the basis of a well-functioning and transparent decision-making process and a pre-requisite for a well established democracy. Knowledge is the key agent for transforming both our global society and local communities. Sharing and strengthening global knowledge for development can be enhanced by ensuring **equitable access to information** for educational, scientific, economic, social, political and cultural activities, leading to a vibrant public domain of information. Considering the cultural and linguistic diversity, particularly in African countries, emphasis should be given to preserving and making accessible indigenous knowledge. Governments should strive to remove barriers to equitable access to information and knowledge that result from differences in education and literacy levels, gender, age, income and connectivity.

- Ethiopia recognizes that *security in the use of ICTs* is a major factor for the development of the information society. As the cyber world does not respect national frontiers, it is impossible to fight cyber crime without international cooperation. Building a secure ICT environment on which users can have confidence to exchange all kind of information is of paramount importance. In particular, supporting developing countries in creating awareness and fighting cyber crimes is an important component for ensuring security in the cyber world. Otherwise, cyber crime paradises may be created in these countries endangering the information society development. Governments of the third world should be supported in promoting the legal ICT market so that ICT professionals are not attracted by cyber crime activities. In addition, appropriate mechanisms should be put in place that enable developing countries adopt powerful ICT security technologies produced in developed countries.

- Information society development needs the full *participation of all stakeholders* at national, regional and international level. This can only be achieved through encouraging cooperation and partnership and the full and effective involvement of all stakeholders, and by clearly defining their roles, responsibilities and goals. Considering the limited financial and technical resources for information society development, resource mobilization should be the collective responsibilities of all stakeholders at national, regional, and international levels.

- Ethiopia recognises the fact that ***enabling political, legal and regulatory environment*** is one of the prerequisites for information society development. However, very little is done in this respect at national level, and efforts are underway to improve the situation that requires full support from regional and international partners. Furthermore, international organizations as well as the developed countries should support developing countries in putting in place enabling policy, legal and regulatory framework particularly in the development of market environment, protection of the consumer, the fair usage of IP addresses and internet governance.

Possible project areas identified that require financial and technical support

The implementation of concrete ICT programmes and projects is crucial to achieve the goals set by the action plans identified above. Ethiopia has developed a national ICT capacity building programme focusing in different areas to be implemented and executed in a 2 to 5 years time. The major programmes and projects identified in this framework include the following:

- Government administrative and service delivery
- Community access and service delivery
- Sector program development (ICTs in education, health, agriculture)
- Private sector development
- ICTs and knowledge economy development (ICTs physical infrastructure development, human resource development, and content and use of appropriate technology)
- Policy, regulatory and standards issues
- ICT human resources development
  - Capacity building in ICTs education and training infrastructure of the higher education system
  - Establishment of National ICTs excellence centre and network support technical system
  - Teaching ICTs to vocation stream educators
  - Launch distance-learning program in ICTs
  - ICTs curriculum development for use at the middle and higher-level education and training.

The funding will be executed in the form of acquiring the necessary tools and equipment, development of local applications and contents, development of distribution, access and local area connectivity, building up of institutional executing capacity, development of critical mass of skilled human resource, setting up of excellence centres for local languages, courseware, and national ICTs research capacities.

These activities require relatively significant amount of financial and technical resources from regional and international partners. Moreover, Ethiopia supports the Bamako 2002 Bureau proposal that a Digital Solidarity Fund be created as proposed by President Abdoulaye Wade to finance the programmes and pilot projects.

1. INTRODUCTION

Ethiopia should move in equal pace with the rest of the world in the areas of ICTs, as Ethiopia is making serious efforts to invest a huge resource and attracting investors in the ICTs sector, as an accelerator of sustainable development. As the world is joining hands to transform the world society to Information Society and the corresponding economy to be Knowledge intensive economy, there is no reason for Ethiopia to stay behind. We need interactions - in the interest of compatibility of vision and thinking – meaning, with regard to the speed of learning process and implementation, appreciation of diversity of culture, language, etc.

On one hand, Ethiopia has the responsibility to take part in the initiative of intergovernmental nature and around which we are very weak in exploiting such forums and resources – particularly UN based initiatives. On the other, Ethiopia has the right to share the global resources and should be ready to compete for.

Above all, Ethiopia has a grand national initiative which we want it to be in line with global and regional visions and initiatives. We therefore, want to exploit the benefit of consultation among the stakeholders in responding to global agenda like that of WSIS.

Therefore, the Government of the Federal Democratic Republic of Ethiopia submit to the WSIS Secretariat the following response to the declaration of principles and of the plan of action of the World Summit on the Information Society for consideration.

2. BACKGROUND

Ethiopia acknowledged and fully recognized the principles and focus areas of WSIS as common denominator which can help monitor and evaluate the world's move towards the evolvement of Information Society.

In Ethiopia, the Government through the Ministry of Infrastructure, with the support of UNECA, has determined to prepare Ethiopia's position on WSIS. Assigning ETA as a focal point and facilitating the participation of stakeholders through consultative workshops was chosen to elicit ideas and consolidate responses. In this regard, key stakeholders on WSIS were invited to two consultative workshops, February 13 and May 23, 2003, to contribute to the active participation of Ethiopia in the WSIS and identify key issues that should be given top priorities vis a vis the WSIS agenda. The process was facilitated through an establishment of a National WSIS Preparatory Task Force.

The process has considered that:

- the ongoing process to organize a WSIS for Heads of States in Geneva (2003) and Tunis (2005), is targeted to promote, access by all countries and their people, to information, knowledge and ICTs for development, an initiative that Ethiopia need to actively participate, and

- the WSIS initiative will certainly help to speed up the process of national ICT capacity building programme in 'compliance' with the global direction, and also enable Ethiopia to adopt the millennium development goals and withstand the pressing globalization,

- the DECISION PLEN/1 (MARRAKESH, 2002) that considered the information society offers great potential in promoting sustainable development, with the following generic guideline, which is in line with Ethiopia's on going efforts in this regard,:

  a) securing the right to information and knowledge;

  b) promoting universal access at affordable cost;

  c) strengthening international cooperation;

  d) establishing an enabling environment;

  e) developing human capacity;

  f) promoting linguistic diversity and cultural identity;

  g) strengthening information and communication network security;

  h) improving market access, especially for products and services from developing countries;

  i) addressing global challenges.

- in reference to its national ICT Policy and the subsequent capacity building programme, Ethiopia should look forward and strive for:

  a) providing access to information and communication technologies (ICTs) for all;

  b) ICTs as a tool for economic and social development - and meeting the Millennium Development Goals;

  c) Confidence and security in the use of ICTs.

- Ethiopia's ICTs agenda to assist development efforts which address society at the grass root level through Woreda (District) level decentralization as well as education and training,

- with the concerted participation of the stakeholders, Ethiopia looks forward to being proactive towards the exploitation of ICTs as an accelerator of sustainable development through wise and swift selection and application of the appropriate infrastructure, skills and content,

- with an active participation of Ethiopia in the WSIS PrepComs, Ethiopia will strive for the proper inclusion of Ethiopia's position on the Summit and in the process of setting up clear agendas that can address issues of priority concern,

- Ethiopia is a country characterized by linguistic diversity, with a need for wide range of local content and media development, which calls for a strong national capacity building in the form of establishing an excellence centre which can support the establishment of solid ground to address the requirements of the various categories of the society,

- Ethiopia also recognizes the importance of Bamako (2002) declarations and programmes of NEPAD and AISI towards transforming Africa into a knowledge based society, and

- Ethiopia has a comparative advantage of its human working force to be strategically educated and trained, and actively involved in the evolvement of an information society.

3. GENERAL COMMENTS

The process of building an information society should take into account the severe constraints and challenges facing developing countries, in particular those in Africa, to make full use of the potential of ICT's which occupy a central place in shaping an information society. The issue of digital-divide should be addressed in the context of globalization and development.

Lack of access to information and communication technologies are among the difficulties that contributed to many developing countries not to benefit from the opportunities created by globalization.

The overall approach in addressing issues that play major role in the evolvement of an information society be treated on the basis of the member states classified in their economic development levels. In this regard all the gaps, opportunities and partnerships, etc. should be examined and strategies be recommended in a more focused approach. This will assist member states, sub regions and regions to effectively address impact bearing issues, targets, strategies and actions. Furthermore, such an approach will encourage and guides towards explicitly defined goals and objectives as well as putting forward quantitative and qualitative benchmarks. In doing so, it is possible to achieve at identifying and defining the roles of Member states, regional and sub-regional organizations and the international systems.

4. SPECIFIC INPUT ON THE FOCUS AREAS

4.1. Information and communication infrastructure: financing and investment, affordability, development and sustainability

As Ethiopia's telecom penetration is about teledensity of 0.5 in year 2002, and PCs penetration of below 80,000 in year 2001, ICTs infrastructure is one of the key areas that the country must build up with a mix of technologies ranging from gigabit fiber backbone network to wireless solutions that speed up the penetration of ICTs to the grass root or rural community level. It is therefore a vital concern and a basis to the expansion of any ICTs services in Ethiopia. Hence, the issue of financing and investment, affordability, development and sustainability of ICTs infrastructure is a critical concern to Ethiopia.

Affordability – It is important to enable existing and new technologies to provide connectivity to all (mainly in a form of universal access) using already established institutions such as schools, libraries, post offices, and multi-purpose community centers. Community information and communication centers are necessary to provide affordable access to all especially in rural areas. Policies should be put in place that promote the best possible level of connectivity at reasonable cost to rural and under-served areas. Low cost equipment and multi purpose community access points should be provided and policies put in place for continuous provision.

Private sector participation in the development of ICTs in Ethiopia has been given place with the assertion to support it by favorable policies and transparent partnership modalities. Government policies include;

- o Facilitating private sectors participation to raise human capacity levels
- o Promoting the development and expansion of local ICT industries
- o Promoting the development of ICT parks
- o Encouraging private sector participation in electronic businesses hence building the capacity of the private sector
- o Encouraging further research and deve lopment by the private sector
- o Developing partnership modalities between the government and the private sector.

Financing and investments – Government and private sector efforts are necessary for financing infrastructure. Government policy gives due attention to;

- o Soliciting funds for development from domestic and foreign sources.
- o Developing a budgetary mechanism to finance the development of ICTs in a sustained manner
- o Adopting a nationally integrated program as a part of its national development plan.

- Development - The need to implement regional backbones to facilitate exchange between countries and within regions is necessary and important. Infrastructure necessary for enhancing development should be determined between countries in regions. Regional government policies should include regional development of infrastructure. In order to make tariffs affordable and satisfy users, the national infrastructure should be capable to transport broadband and IP based traffic to and from the individual customers. Such capacity should be built into the national gateways, backbones, distribution and access networks. This does not exist in its complete picture in Ethiopia.

Government policies give due consideration to the development of ICTs in government administration, service delivery, community access private sector and the knowledge economy.

Recent development initiatives such as the SchoolNet and District networks will provide access to schools, Districts and agricultural institutions. Several issues need to be included in these developments:

- Human capacity development – There is not a sizable amount of human capacity to sustain governments initiative at the moment and the tendency exists that such a laudable project might be jeopardized due to a lack of manpower to maintain and sustain it.
- Content – Initial content may have been sourced to correspond with the launch of the network. However, continuous content provision should be explored to maintain the level of content that filters down to the target audience.
- Private sector Participation – although the private sector may have been involved in the provision of the technology and limited services, strong local private sector need to be evolved in sustaining the model. Step by step measures should be taken towards privatization and competition, and introduction of incentive mechanisms to those who will be participating to reach out to the rural and community based services and applications.

- **Sustainability** – Connections amongst major information networks should be promoted, Regional traffic hubs (e.g. IPX) created to reduce interconnection costs allowing the penetration of access networks to be expanded hence sustaining existing infrastructure.

Recent government initiatives indicate that the School networ k will be made available for other bodies including private sectors hence providing a model of sustainability. It was also stated that products will be priced appropriately to allow for third party use of such network as a business plan is currently under development to include third party organizations in sharing the network.

However, it should be noted that pricing of products from the sole provider has been in the favor of the monopoly. Services have also been such, as the recipient has no medium to channel their grievances. The model for pricing for the use of government networks or infrastructure may need be developed in a fair and objective manner in order to promote and improve the use of such facilities.

There is a need to maintain constant monitoring and evaluation of projects at all levels with mechanisms for feedback.

4.2. Access to information and knowledge

- **Making information available** – Information should be made public and easily accessible. Information is the basis of a well-functioning and transparent decision-making process and a pre-requisite for any democracy. Knowledge is the key agent for transforming both our global society and local communities. It is therefore global initiatives like WSIS should create an opportunity to increasingly bridge the gap that most developing countries are facing today.

- **Ensuring equitable access to information** – Sharing and strengthening global knowledge for development can be enhanced by ensuring equitable access to information for educational, scientific, economic, social, political and cultural activities, leading to a vibrant public domain of information.

  The WSIS implementation programmes and projects should such initiatives as that of Ethiopian Government to ensure equitable access up to grassroots level and in all walks of life. In doing so, it should give due consideration to:

  - Setting up of national community based information service centers,
  - Setting up computer based information systems targeted at community based government services,
  - Development of public information kiosks,
  - Facilitate the rapid deployment and exploitation of ICT based services within the community, and
  - Promote gradual ownership of computer and Internet connectivity.

- **Removing barriers to equitable access** – Barriers to equitable access result from differences in education and literacy levels, gender, age, income and connectivity.

  In an effort to remove such barriers, the following actions should be supported:

  - Establishing community based initiatives targeted at diffusing ICTs at the community level.

  - Encouraging social groups to participate in the provision and dissemination of ICT based services and products.

  - Creating public awareness program targeted at promoting the transformation of knowledge based society and the implementation of ICTs for the attainment of socio-economic development, democratic society and good governance.

  - Giving due emphasis to the applications of ICTs that purposefully be focused on the youth and unemployment, since the population structure of developing countries have a large proportion of young generation and unemployed.

  - Building research capacity to adapt or seek ICTs solutions that support large population, without whose transformation, progress might be very difficult, as large illiterate society is the feature of many developing countries like Ethiopia.

4.3. The role of governments, the business sector and civil society in the promotion of ICTs for development

Information society development needs the full participation of all stakeholders at national, regional and international level. This can only be achieved through encouraging cooperation and partnership and the full and effective involvement of all stakeholders, and by clearly defining their roles, responsibilities and goals. In view of this, the following actions need to be undertaken:

- Set up a network or forum with representatives from the Government, private sector, civil society, and the media that will take the lead in ensuring the implementation of national action plans for the development of the information society.

- Encourage cooperation and partnership among all stakeholders for effective design and implementation of various initiatives, giving priority to locally available human resources.

- Devise appropriate mechanisms for participation of all stakeholders in resource mobilization for:

  o increasing investment in the national telecommunication infrastructure;
  o building ICT human capacity by encouraging private and public IT colleges, IT Parks, etc.;
  o developing policy frameworks and sound implementation plans by mainstreaming ICT development in government budgets;
  o setting up an enabling environment, including an incentive scheme for joint ventures and private investment with special attention to increased local ownership and/or participation; and
  o encourage local contents and provide support to the use of local languages (eg. Ethiopic alphabets)

- Encourage ICT manufacturing capabilities through providing support to local IT companies involved in innovative endeavors, promoting the concept of setting up IT parks in capital cities and regional towns, supporting school IT clubs and research networks, and introducing preferential tax incentive schemes to encourage IT investment in the underprivileged areas.

4.4. Capacity building: human resources development, education, and training

Capacity building is the cornerstone for the information society development process. It is generally understood to constitute three interrelated elements: human resource development, institutional capacity, and technological capacity. However, the focus of the WSIS Draft Action Plan (Item 4 on Capacity Building) was mainly limited to only skill development and HRD.

Therefore, the following actions should be undertaken in light of capacity building for information society development:

- The capacity building action plan should address issues of institutional and technological capacity building apart from skill development and HRD issues. The institutional capacity building refers to the institutionalization of the implementation of the action plans, ability to select, expeditiously deploy and exploit relevant and appropriate technologies; and capacity to coordinate and negotiate, etc. The technological capacity refers to the availability of appropriate technologies to the people at an affordable cost.

- Support and revisit the ICT for education capacity building programme of the government

- Promoting the use of ICTs in education to bring more efficiency and better quality in education services by:

  o strengthening IT clubs in schools and professional associations to increase their capacities in awareness creation and public discussions

  o encouraging the participation of media in promoting ICT4D

  o mainstreaming ICTs in educational curricula as well as other literacy programs and provide for equitable access by pupils and/or students at all levels (primary, secondary and tertiary)

  o promoting knowledge for all: adult education/life-long learning

  o integrating ICTs in teacher training institutes and colleges

  o strengthening partnership with bilateral, multilateral and international institutions, and actively participate in regional and international ICT programmes

- Building capacity for ICT use so that people have enhanced levels of ICT literacy and ICT skills to make the best use of the information society by:

  o giving special attention to disadvantaged segments of the population (youth, women, people with disabilities, etc) through innovative partnerships and build capacity to effectively utilize ICTs

  o encouraging the participation of women in the ICT sector

  o supporting youth ICT clubs, specially for out-of-school youth

  o encouraging public ICT awareness programmes through the mass media

- through building strong partnership mechanisms, solicit for technical and financial resources to implement ICT programmes
- supporting adult education programmes through distance learning
- effective use of community media for teaching and awareness creation programmes on ICTs

- Improving basic and advanced education to help create a critical mass of highly qualified and skilled ICT professionals and experts by:
  - providing technical assistance and training for communication experts in the installation and maintenance of ICT equipment
  - developing and managing ICT Centres of Excellence to provide basic and advanced ICT training, and support ICT R&D activities. The centers of excellence should be spread evenly to regional and woreda levels to bring services nearer to the people
  - encouraging the participation of the Ethiopian Diaspora in implementing ICT programmes
  - devising appropriate incentive mechanisms to retain the locally based ICT skilled manpower and exploit the opportunities offered by the new technologies that will enable professionals to work from anywhere.

4.5. Building confidence and Security in the use of ICTs

Ethiopia recognizes that security is a major factor for the development of the information society. Building a secure ICT environment on which users can have confidence to exchange all kind of information is of paramount importance.

In particular, supporting developing countries in creating awareness and fighting cyber crimes is an important component for insuring security in the cyber world. Otherwise cyber crime paradises may be created in these countries endangering the whole information society.

Therefore, international organizations should assist developing countries in:

- creating cyber security awareness of the users,
- training of cyber-crime fighters (cyber-policemen),
- creating adequate cyber laws, and
- training their judges and reorganizing their judicial system to fight effectively cyber criminals.

Supporting ICT professionals of all countries to use their knowledge for personal and national development will prevent the professionals from being attracted by the illegal cyber crime world. Otherwise, if some group of ICT professionals cannot fully participate in the legal market due to trade, capital or other barriers, they will be pushed to use their capacity in the cyber crime world; a situation similar to the rise of narcotics production in South America when the price of coffee

and other agricultural products has decreased will be created. The situation will be even worse for cyber crimes since it is easily exportable. Therefore:

- Governments of the third world should be helped in promoting the legal ICT market so that ICT professionals are not attracted by cyber crime activities.

It is impossible to fight cyber crime without international cooperation since the cyber world does not respect national territory. Therefore:

- An international convention on cyber crime, which clearly specifies the role and responsibilities of each country in fighting cyber-criminality as well as punitive actions against those who do not follow the convention, should be a high priority.

- Interpol should play a bigger role in the support of national polices for the establishment of cyber polices in the cooperation of the national polices for the fight against cyber crime.

The current bans that the developed countries have imposed on export of powerful ICT security technologies should be lifted to enable better transfer of technology in the area.

4.6. Enabling environment

Ethiopia believes that enabling political, legal and regulatory environment is a prerequisite for the development of ICT. However, similarly to most developing countries, it lacks the human resource that can put in place the policies, laws and regulations. Therefore:

- International organizations as well as the developed countries should support developing countries in developing enabling policy, legal and regulatory framework particularly in the development of market environment, protection of the consumer, the fair usage of IP addresses and Internet governance.

4.7. Promotion of development-oriented ICT applications for all

It is an already established fact that ICTs can play critical role for the development of nations provided they are used up to their full potentials. ICTs can be deployed to solve a number of development-related problems. Nevertheless, LDCs such as Ethiopia are currently suffering not only from the extremely low penetration of computers and telecommunication infrastructure, but also from the very low level of utilization of ICTs. One of the major reasons for the poor utilization of ICTs for development is the low level of emphases given to the application and local content development in the local languages. Computerization in such countries was initially meant the purchase of computers, later on it grew to be networking with little understanding and emphasis given for automation or application software development. However, without appropriate applications suited to local needs, the deployment of hardware and network infrastructure alone will not bring about development. Below are some of the major actions that

need to be taken in order to address this problem.

- The development and deployment of appropriate applications and local content cannot be overemphasized. Additionally, the sustainability of the deployed applications as well as their evolutions needs to be given proper attention.

- The development of new form of applications targeting the majority of the illiterate society in developing countries should be encouraged.

- SMEs in developing countries should be encouraged to be engaged in the development of new applications for the sustainability and economicality of the systems to be deployed.

- Developing countries should be supported and encouraged to develop software engineering activity to a competitive industry level. Local research and development needs to be promoted for the sustainability of applications.

- There are already cases of outsourcing of projects from companies in developed countries to companies in developing countries. In the new information society, the cases of subcontracting application development projects as well as the provision of application services from developing countries to other developing as well as developed countries will become one important business model. Appropriate legislation for protecting such business activities should be put in place at international as well as national level.

4.8. *Cultural identity and linguistic diversity, local content and media development*

The principles and action plans put under this theme seem to be satisfactory. The need for true multilingualism have been specifically mentioned. However, existing situation with respect to multilingualism in the Ethiopian case is far from satisfactory. Various professionals and companies have been using various ad hock solutions that are incompatible with each other and that are not basically suited for real processing of information. This difficulty has been the result of a number of factors such as absence of national and international standards for Ethiopic character set encoding, lack of support of Ethiopic languages from major software platform providers, lack of coordination among the various efforts, etc. A positive development in the right direction is the inclusion of the partial Ethiopic character set in the Unicode 3.0 standard. However, the following problems are still observed.

- Probably for being a late inclusion and also may be for lack of business interest, the Ethiopic characterset is not yet fully supported by many of the major system providers. Localization issues with respect to Ethiopia are also not supported.

- The set included in the current Unicode standard is still incomplete when looked at from the national character set standard. This will hinder the development of local contents and promotion of linguistic diversity in languages that will make use of Ethiopic character sets.

Therefore, for Ethiopia, and other similar developing countries who have their own scripts, to be fully a member of the information society,

- Their characterset (Ethiopic in the Ethiopian case), as well as their local languages, needs to be fully supported by all ICT products including internet domain names despite probably the unattractive business potential for the work

- Local research efforts targeted at the development of local language processing needs to be supported. (It should be noted that there is no any regional or national body that undertakes extensive research work in the development of such locally used languages)

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