Report of the "E-access for All" Workshop in
Bangalore, India
8-9 February 2007

Opening Session

Ms. Haiyan Qian opened the workshop by welcoming the participants and thanking the Karnataka Government for their support as co-host. She outlined the objectives of the workshop as noted in the aide memoire. She noted that the workshop will seek to develop a common understanding in producing some guiding principles to improve e-access for all. She looked forward to listening to the experiences of the participants in their successful endeavors to improve the lives of people. These experiences would become part of the UNDESA Compendium on Innovative E-Government Practices. She also suggested that this group form a network to share their collective knowledge and keep informed of what UNDESA is doing in the field of e-government.

The role of UNDESA in the World Summit on Information Societies was mentioned by Ms. Qian. She noted that UNDESA had the lead coordination role on 3 Action lines, namely: Action Line 1: The role of public governance authorities and all stakeholders in the promotion of ICTs for development Action Line 7: ICT Applications – E-government; and Action Line 11: International and regional cooperation.

Ms. Qian advised the participants that the workshop should be a venue for frank discussions and of innovative ideas on improving e-access for all. She noted that the workshops had participants from Africa, Asia, Europe and North and South America making the workshop truly international.

Mr. Rajeev Chawla, spoke on behalf of the Karnataka Government. He noted that this meeting was the result of the discussions at Public Service Award ceremony, where the government of Karnataka was honored for its work on land registration. He also noted that this conference was created to develop a platform for e-access for all.

He stated that IT help in administrative reforms, but that ICT development in business and IT in government does not always coincide, thus creating a gap that needs to be bridged. He gave a brief background on the current situation in India, noting that there are 600,000 villages in India, with a low Internet penetration rate and a high poverty rate.

Mr. Chawla stated that India needed to bridge digital divide and that 100,000 telecentres are planned to be develop to create a shared infrastructure for the people in India. The region of Karnataka has already installed 1,000 telecentres that have transformed villages into small IT hubs.

He briefly mentioned the Bhoomi project that handles 20,000,000 parcels of land. The ownership and registration of these parcels were always a problem. With the use of ICTs

as a foundation of Bhoomi, a secure process to register parcels of land was created. This has increase transparency and increase the trust of the citizens.

According to Mr. Chawla, Public Private Partnership is the key to implementing ICT for development. He noted that government should not be in the business of creating databases and online IT solutions, this was better left to the experts in the private sector. Governments should be in the business of building roads and other infrastructure in which it has a comparative advantage.

Mr. Simplicio noted that Special Unit for South/South Cooperation firmly believes that e-access is key to providing to the poorest the right of entry to the opportunities provided by the exploding digital connectivity, which is indispensable for economic and social advancement and global integration. In addition, e-access has enormous potential to contribute to broader South-South as well as triangular and global development cooperation.

He stated that ICT offers real potential for developing countries to leapfrog decades of economic advancement in order to recapture lost ground and to redeem long-standing promises of prosperity. Clearly, some countries of the South are already in the avant-garde of ICT. These few countries have already moved boldly and imaginatively to participate in the development, use and marketing of ICT. They have thus been able to exploit emerging technologies for the betterment of their citizens and to modernize their institutions and markets.

He added that the Special Unit strives to become a South-South knowledge management centre, complementing the global knowledge systems of organizations throughout the United Nations system as well as those of the international financial institutions and multilateral groupings such as the African Union, the Association of Southeast Asian Nations and the Organisation for Economic Co-operation and Development.

Country Presentations

Brazil

Mr. Carlos Ferraz of C.E.S.A.R - Centro de Estudos e Sistemas Avancados do Recife, presented the case of the State of Pernambuco, Brazil. Mr. Ferraz gave a brief background on C.E.S.A.R., noting that it was a world-class private institution that creates products, processes, services and innovative companies using Information and Communication Technologies.

He identified the problem to tackles was the lack of an adequate infrastructure for data communication at adequate quality of service and cost, specifically the lack of an infrastructure within government to communicate or operate and manage a large network.

The solution was to create an open for all network under the “PE Digital Network Project”, which would create a partnership among: government, ISPs, enterprises and

citizens. The strategy was to make the poorer and rural areas more profitable thus creating a unified IP network. The result of this partnership was an enhancement in government services, a decrease in government expenditure, a fully connected city, and greater transparency and accountability among the four partners.

India

Professor Subhash Bhatnagar presented the case of "Strategy for Digital Inclusion – Experience from India". He presented four large scale projects: Bhoomi, eChaupal, nLogue, Akshaya and milk collection centers, and discussed how ICT could assist rural citizens.

He suggested that government should focus on key issues that were of importance to the people. He also suggests that since 80% of the requests came from 20% of the population, mostly big clients, government should focus on support to big clients in order to facilitate government services.

Professor Bhatnagar went into detail in discussing the eChoupal infrastructure services. eChoupal are Internet kiosk in the house of a trained farmed, which was in walking distance to the farmers in the region. This Internet kiosk provided farmers with a better supply chain for farm inputs, customize knowledge on farm risk and management, and direct marketing channel for farm produce.

eChoupal allowed negotiation to take place between farmers and companies. This negotiation was facilitated through accurate pricing and community participation. Buyer and sellers were better able to communicate, which improved competition and logistics, thus produce lower transaction costs.

Mexico

Mayor Juan Blanco Zaldívar, Chihuahua, México, presented a video demonstrating how the municipality of Chihuahua used ICT to better the life of its citizens. The video focused on computer science community center (CLIC) that offered people academic skills in using IT and provided a digital culture amongst the community. As a result, the people using CLICs had full access to knowledge, information and services and build their own IT capacity.

Mayor Zaldivar started his presentation by outlining 5 fundamental issues, which would constitute a program, which sole goal was to make Chihuahua City the best city to live and work in Mexico. These issues were: economic and job development, comprehensive and harmonious development, social and human development, safety for its citizens, and a government closes to its community with a heart and feeling for its citizens.

He stressed that ICT was not the only way to meet the needs of the common man. He noted that more people still use offline mechanism to pay their taxes, through the local

stores than through online services. By providing multiple options to the citizens, Chihuahua City is meeting the needs of its people.

Mayor Zaldivar stressed that the financial benefits of e-government services and solutions should be one of the focuses evaluating e-government. He noted that ICT enables the government to save money on the transactional aspect of government allowing it to spend those savings on more citizen-oriented programmes.

Nigeria

Professor Raymond Akwule, CEO of NETPOST, Nigeria Ltd. introduced the use of post offices as a distribution hub for Internet services to Nigeria. One of the objectives of NETPOST is to establish modern communications connectivity between post offices across Nigeria and thus enable NIPOST to modernize its existing operations and services as well as to introduce new services to its public. This project seeks to bridge the digital Divide by providing Nigerians with greater access to the Internet and through the provision of nationwide services at affordable prices and via the post office in the form of e-mail and e-post.

Through NETPOST, Nigerians will be able to have access to government information and forms. They will be able to perform financial transactions through the various Internet centers located in the post offices. In addition, IT training is also available at these sites.

Republic of Korea

Professor Byung-Chun Kim, of KAIST Business School in the Republic of Korea introduced the "Information Network Village", which supports those who lack e-access in the country. He first gave the background on the activities that the government of Korea carried out on their journey to e-government from the computerization of databases to the establishment and advancement of an e-government infrastructure.

The goals of the Information Network Village (INVIL) was to create a favorable living condition for the people by reducing the digital divide, increasing the resident's income, increasing the use of e-government services and creating a balance of local development. The Information Network Village were supported by seven guiding principles: establish a robust IT infrastructure, distribute free PCs to households in need, build a physical village information center, develop information content, IT training for the residents, establish an operation system and develop a brand name.

The INVILs have had a profound impact on its citizens. The local economy has been revitalized by implementing a business model that has generated income; Citizens are more comfortable with the user-friendly environment and thus are using more e-government services and solutions; Farmers and fishermen are forming local

communities use ICT as a mean; and Residents of these villages have the opportunity of e-participation in the democratic process.

Rwanda

Ms. Baloko Malaka introduced Rwanda's vision 2020, which uses ICTs as an engine of development, springboard for global competition and economic growth and as an effective tool of information, reconciliation and consolidation of the Nation.

She described the Karisimbi Integrated Communication Infrastructure project that seeks to increase Internet connectivity in Rwanda. The project will also enable government to decentralized e-Government access to a basket of services, such as: video conferencing, local level web sites, government wide information sharing, online chat, galleries, surveys and polls.

The project will also provide infrastructure to digital radio, TV and video broadcasting, education content delivery, e-commerce at both the urban and rural areas, and e-health.

The government of Rwanda plans on expanding the use of m-government to include using mobile to make payment for utilities, access government portal and databases and increase communication throughout the country.

Singapore

Mr. R. M. Sanjay presented the e-access initiatives for Singapore's e-government. He describes Singapore's goal of moving from e-government to i-government (integrated government). i-government is about integrating the government internally, which involves integrating processes, systems and information, a shift from electronic to integrated.

Singapore will use m-government to a greater extend to increase the portability of e-services and e-solutions. The penetration for mobile in Singapore is over 100%, since a fair number of people have more than one phone per person. By 2008, Singapore aims to make close to 300 Government services available on your mobile devices.

Mr. Sanjay described several m-government services that are already in place in Singapore, such as: Type and Go, which allows users to register events; One Motoring, which allows users to check road condition while they are driving; crime alerts; access to social security information; etc.
In order to effectively use m-government, the Government of Singapore needed to create the proper infrastructure to fully implement its m-services. They have created a shared database of mobile phone numbers for quick deployment of alerts & notifications. A Common SMS number for all SMS-based government services has also been introduced, so the public does not have to remember different numbers for each agency or m-service.

A Common SMS message format to access and interact with services has been implemented to facilitate m-government.

Singapore has also developed Citizen-Connect Centres to assist people who do not have access to computers or the Internet.

South Africa

Mr. Chris Morris of Meraka Institute presented the case of South Africa. He pointed that out that the regulatory environment still favors existing monopolies. Competitors have to overcome barriers that protect the status quo of monopoly rule. Thus, how can rural communities overcome failures in regulatory policy by implementing innovative, low-cost connectivity solutions in order to promote sustainable development?

He suggested the use of community-based networks that would create a shared infrastructure and thus reduce the cost of communication. He added that community owned networks should have special privileges to by-pass the existing rules of the monopoly to ensure access to the rural area.

Mr. Morris also suggested the use of mesh wireless networks as oppose to hub and spokes networks. Mesh wireless networks would have the following advantages: self-forming, self-healing and self-routing; no large masts typical of a hub and spoke architecture; adding subscribers increases coverage and robustness, and Omni directional antennas simplify installation, maintenance and reconfiguration., thus making a cost-effective and efficient network.

He also present the case to the "digital doorway", which is a very robust 4-terminal computer system that is put into poor communities around South Africa to provide a means for people in that community to teach themselves basic computer skills. The majority of the content on the digital doorway is open source, which reduces the cost of the portal.

United Kingdom

Ms. Helen Gulden of the Communities & Local Government Department presented the case of the United Kingdom. She focused on the setting up of the "Digital Challenge for Local Communities, to tackle issues relating to social exclusion and poverty through innovative application of ICT.

She noted that 10 towns and cities, spanning both rural and urban areas with a multi-culture makeup and pockets of severe deprivation took part in this challenge. These towns received assistance from a vast partnership of private and public sector entities to ensure that those who were left behind would now have an opportunity to benefit.

As a result, these towns and cities have developed innovative and unique ways of developing partners from non-traditional sources as well as the private and public sectors. They have begun to exploit the use of digital TV as a means of distribution of knowledge as well as implemented a number of WiFi networks.

She noted that the challenge of financial sustainability still persists for these town and cities, since most the initiatives are funded from one-off grants. Therefore, these towns and cities must develop a business model that will generate a revenue stream, which will allow them to continue meeting the digital challenges. This has been done by charging for some services, aligning core activities with policy funding streams, developing partnership to reduce the cost of transactions, and encouraging social innovation and entrepreneurship.

Karnataka E-government Initiative:

Bhoomi: Land registry application

Mr. Rajeev Chawla, Secretary of the E-government Department of the Karnataka Government presented to case of Bhoomi: the online land register application. He noted that the Karnataka Government is tearing up over 20 million land records and is fully automating the land register process. Bhoomi introduced the concept of "first in first out", which eliminates favoritism. In the past, people with influence and/or money could jump the queue and receive preferential treatment, with this new system, everyone is treated equally.

Land records that use to take at a minimum several days in some cases months are now delivered in 5 minutes these connected kiosks.

Khajane: Treasury application

Khajane is an online bill clearance and budget monitoring tool, which is connected to all 216 treasuries via a VSAT connection. Thus all transactions happen in real time. This application has increase accountability in the Treasury and has increased the confidence of the citizens.

Information is available on the government web site to all line departments about expenditures and bill details. Digital information for pension beneficiaries is available in real time.

Kaveri: Registered document delivery system

The application allows citizens to go to their local Bhoomi kiosks and obtain registered documents online. This has reduced the registration process from 30 days to 30 minutes. Citizens can pay for their documents and have it stamped to ensure authenticity.

Ericsson's Communication for All:

Mr. George Paul of Ericsson presented Ericsson's case of using Mobile technology to tackle the issue of e-access for all. He noted that since mobile phones were less expensive than laptops and that they are more readily available to the people, mobile phones would be the primary means of e-access in the future.

He spoke about the case of rural India and the use of mobile phones. He noted five themes in rural India about mobile: a modern infrastructure that works, a symbol of class and modernity, generating income, enabling direct contact and privacy, and strengthening family networks.

In the rural areas, mobile phones are shared resources. They are used by family members and community members. As mobile technology becomes more mature and competition increases, volume services will be delivered with lower margin. In order to ensure maximum penetration, barriers starting from regulation policies and taxation regimes, cost of the terminal, the total cost of ownership of the network, and volume service delivery must be addressed through an equitable partnership of public and private sectors and civil society.

HP – PrintCast: Using Broadcast to Deliver Documents

Ms. Rama Vennelakanti, of Hewlett Packard presented the case of "Augmenting Distance Learning on Broadcast Networks with Synchronously Delivered Print Documents". She noted that PrintCast was a pilot project that is being used to transmit government documents, forms, policies, etc. to residence of India via broadcast television.

Many people today in India have a problem in receiving documents, forms, policies on a timely basis thus adversely affecting them. The PrintCast sends the latest policies and forms to a printer that is connected to the television. The user sees an alert at the bottom of the screen telling them that there is a new document to download. This document is then printed and the community is apprised of the new document.

This system also has tremendous benefits for distant learning and e-health. Curriculums, briefing notes, papers, etc. can be transmit to students throughout the country via the television using the current infrastructure that already exist, thus minimizing cost. Medical practitioners can receive updated information and knowledge through the same format.

Cisco System - Innovative Solutions and Technology for Connecting the Poor: Building Networks and Capacity

Mr. Fred Baker of Cisco Systems presented the case of using ICT to support rural connectivity. He noted that there are two fundamental issues with rural networks: building them and supporting them.

He stressed the need to be flexible in designing a wireless network. The emphasis should be on affordability, bandwidth and sustainability of any network in a rural environment. He suggested that fiber is often the best choice. It is least expensive to lay and maintain; it has a low resale value so the chance of theft is minimal and has a high data rate. He also suggested that rural networks should focus on networks that deliver useful connectivity and not simply a certain bandwidth number.

Effective government policy is critical to the development of a rural network. The best policy is one that promotes good business and user interest. The deployment of the Internet should be seen the same way as the building of roads and other infrastructure.

The role of government should be a facilitator of ICT development by having the right policies and guidelines in place to ensure that an ICT-friendly environment is developed. The role of the private sector should be one of an innovator and solution provider.

Cisco System: Networking Academy Program

Mr. Lokesh Mehra presented the Cisco Networking Academy Program, which is an e-learning model that combines curriculum, assessment and instruction to improve student learning under a partnership among Cisco Systems, academia, private sector, governments and community organisations.

The objective of this program is created a foundation of IT savvy men and women that can effectively manage networks. This public-private partnership model serves students, schools, businesses and government. The students acquire IT skills that lead to employment opportunities. The schools are able to provide their students with an e-learning curriculum and are able to attract more students to their campuses. Businesses have a readily available IT talent pool to choose from to keep their respective networks up and running. Finally, governments can build on this foundation to become more active in the global economy.

General Discussions

Are telecentres the main means of increasing access for all in developing countries?

The issue of telecentres was greatly discussed as most of the success stories presented at the workshop had some link to a telecentre model. One clear consensus was that the telecentre model must be fully sustainable and commercially viable and should not depend on government or donor support in order to survive. Sustainability would heavily depend on the content available at these centres. The content had to be user-driven otherwise the users would not purchase the services.

Telecentres should be secure so that signed documents are legally recognized, so users can obtain birth certificates, permits, licenses, and other documents.

M-technology should not be seen as a replacement for telecentres, but as a complement to them. As more services are made available on the mobile phones, telecentres will need to adapt to this change and offer different products and services.

Alternate sites, such as stores and post offices, should also be encouraged for online payment to gain the trust of the poor. The level of trust needs to increase to ensure full use of telecentres to pay utilities bills, taxes, and other financial transactions.

Telecentres that are currently being financially supported by government or donors should have a clear exit strategy that will enable them to become independent. They should also have clear performance criteria.

Infrastructure development: Mobile vs. PC

The group noted that the number of prepaid mobile service will be the majority of users globally and thus for the poor, there should be the option for lower minimum denomination to top-up their phone cards. This figure could be as low as $1 for the rural area.

As a result of the dramatic increase in mobile use, financial services are being processed via mobiles, such as using prepaid card as a form of Western Union to pay bills such as school fees, electric bill, via a mobile business centre.

Infrastructure development: Broadband vs. Fiber

The group agreed that a shared infrastructure among telephone companies and on a revenues sharing would be the ideal solution to e-access for all. In addition, the Universal Service Fund should be used to build out the infrastructure and reduce the communication cost. The fund could also be used to discount air time for e-education or e-medicine, or other socially accepted practices that have a greater impact on citizens than simply the financial bottom line.

Fiber was agreed upon as one of the infrastructure of choice in developing countries due to its robustness and cost. Although, each situation should be looked at an individual case and one should not have a ready made solution without looking at the basic needs of the community or town.

The group also agreed that governments should have a simple legal regulatory environment that fosters competition and innovativeness.

Community-based Networks

In order to provide e-services to rural and poor areas, the idea of community-based networks was discussed and supported. These networks would force telecoms providers

to share their infrastructure thus reducing cost. In addition, the community-based networks would foster economic equality, social mobility and equality, diversity and content will have a greater local flavor. Community-based networks should run a platform of free and open source software.