

# **Fourth Web for Development Conference**

**Nairobi, Kenya  
28-30 November 2007**

## **Conference Report**

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## 1. Overview

The meeting was convened to examine the theme, Driving Economic and Social Development with the Internet. Access to the web is limited. Some 450 million people worldwide are connected to computers. By contrast, only 14 percent of the global telephone users have Internet access. This is due to poor computer skills, illiteracy, and disabilities in a world where access is mainly visual and costly.

For these reasons, the digital divide with people at the bottom of the social pyramid in any country cannot be easily be bridged using the present computer-based technological ICT set up.

Most participants agreed that it is powerful tool for communities excluded from access to hard infrastructure such as roads, telephone lines. At the government level, it is an equally powerful tool for record keeping in every sector and helping cut back corruption while improving service delivery. For the private sector, especially the small business operator, it offers new horizons, markets and pertinent information. In health, it enables medical personnel in remote places to get access to the opinions and advice of top specialists at home and abroad. To youth living in poverty, it provides a window of opportunity to help them aim higher and seek new avenues for the future.

In short, it is a vital weapon in the battle to reduce global poverty and help attain the Millennium Development Goals. It is, however, important that the Internet be used to address the priorities of its users in the developing world, both for information sharing, and in mobilising people, especially young people. It is equally important that the information it carries is made accessible to those in need, especially those living in isolation, such as after a disaster. If the digital divide is to be bridged, the internet must be customised for an environment with limited computer skills, literacy, inadequate telecommunications and other infrastructure that still lags behind that of wealthier nations. Governments should take advantage of groups or organisations that help bridge this divide by helping them streamlines their services and record keeping.

Where major infrastructure is lacking in developing countries, it offers considerable wireless and satellite options. For urban poor, especially people living in slums, the wireless option can be problematic where tin shacks prevent wireless transmission. Thus innovative strategies are required to improve the outreach of the Internet.

Two essential keys to accessibility were raised: Reducing the costs of connectivity, software and hardware; and ensuring appropriate content relevant to users in the language. In both government support and policy backing is essential. Accessibility can further be enhanced by opening domestic bandwidth services, making internet education part of the school curriculum, using mobile telephones for internet access, or simply helping small farmers reach a wider market.

Mobile and internet technology are set to merge in the near future thereby creating new avenues of access, and the private sector is already researching the effect of the Internet on people not even connected. One innovative way of bridging the gap here is to bring school children from wealthier countries to show their peers in the developing world what they have learned, and how they have learnt it.

It is important to develop domestic energy capacity through fibre optic connections that take less energy than other connections. It is particularly important that the Internet is used purposefully to address the needs of its users.

Delegates felt it important to develop innovative new technologies for Internet access using audiovisual methods, and that special attention should be paid to enable those most vulnerable,

such as the disabled, refugees and street children to access the Internet. Otherwise, the world faces the risk of simply perpetrating the digital divide. Partnerships with the media, like the radio, are useful to expand use of the Internet – and thus help poor people identify cost saving strategies and cheaper options. Governments had to know not only how many disabled people were in their countries and cities, but help provide Internet access specially geared for them.

To achieve these aims, it was generally recommended that the Internet be presented in the simplest way possible, using old and new technology, to enhance use and access so that innovative ideas in all fields could become viable. Governments and the business sector have a responsibility to ensure this financially as well as through policy. . At the same time, both parties must be careful to ensure that the Internet is only a means to enhance development, rather than an end. It is best used as a means of enabling knowledge based decision making.

## 2. Introduction

Since its inception at a conference organized by the World Bank in 2003, the Web for Development (Web4Dev) meetings are now well established as a forum for the web community of UN agencies, governments, the private sector, civil society organizations and academic institutions interested in using their expertise to show how the Internet can promote development.

The fourth Web4Dev conference was held in Nairobi, Kenya, from 28-30 November 2007, under the theme ***Driving economic and social development with the Internet*** focused on maximizing the impact of the Internet in accelerating the achievement of the Millennium Development Goals (MGDs), particularly as the year 2007 represented the mid-point for countries to implement action towards the achievement of the goals by 2015.

## 3. Organizational Matters

### 3.1. Attendance

The fourth Web4Dev conference was attended by a total of 450 people. The gender ratio of participants was 25% female to 75% male. The table below outlines the type of participants based on the affiliation indicated at the time of registration on site. The actual attendance was 263 people – some of the participants from the United Nations agencies in Nairobi are not captured as they did not have to register for a badge (See Annex 3).

Partner Type	Percentage
Academic	5%
Government	0%
Inter-governmental organization	5%
Media	2%
National Government	5%
Non-governmental organization	21%
Other	1%
Private Sector	21%
Research Institute	5%
United Nations	35%

### 3.2. Opening Plenary

The Fourth Web4Dev conference opened with welcoming remarks from the Permanent Secretary from the Kenyan Ministry of Information and Communication, Dr. Bitange Ndemo, followed by statements from:

- Mrs. Elizabeth Lwanga, Resident Representative of the United Nations Development Programme, Kenya
- Mrs. Anna Tibaijuka, Executive Director of UN-Habitat, read on her behalf by Nicholas You
- The United Nations Assistant Secretary-General, Mr. Choi Soon-hong, read on his behalf by Mr. Jason Bellone, Chief of the Information and Communications Technology Section, UN Office in Geneva

The full statements are given in Annex 1.

### 3.3. Panel Discussion

The opening session was followed by a lively panel discussion led by Julie Gichuru, one of Kenya's premier TV personalities. She asked leading experts from government, the private, academic and civil society sectors and youth representatives how they believe the Internet can be most useful from their perspective in the quest for development. The experts interviewed include:

- Dr. Bitange Ndemo, Permanent Secretary, Ministry of Information and Communications, Kenya
- Ashima Bhardwaj, Vice President, One World Youth Project, India
- Kevit Desai, Director of Engineering Centurion Systems Limited, Kenya
- Christopher Fabian, Senior Communications Specialist, Division of Communication, UNICEF
- Catherine Fisher, Capacity Development Co-ordinator, Institute of Development Studies, United Kingdom
- Gajanan Kasbekar, Vice President, TATA Interactive Systems, USA
- Shem Ochuodho, Chairman, African Regional Center for Computing, Kenya
- Njeri Rionge, Chief Executive Officer, Ignite Consulting Limited, Kenya
- Adrian Wooster, Chief Technology Officer, Community Broadband Network, United Kingdom

The panel largely agreed that the Internet can accelerate social and economic development. For instance, it can help primary producers like farmers and fishermen, to access market information, to promote their products to larger markets and it helps businessmen and women to position their businesses better in the global marketplace. The Internet can also be used for education and training to communities to expand their horizons and opportunities.

Panelist examined the sectors on which the Internet had the most impact. Panelists argued that one sector could not be singled out – rather the power of Internet is facilitating information access and sharing among various actors across different sectors. It enables the sharing of strategies for dealing with the challenges in meeting the Millennium Development Goals is also a good advocacy tool for mobilizing the youth and others to take action towards achievement of the MDGs. Beyond information exchange, they said the Internet could be used for services such as medical diagnosis

of patients in remote areas and for education and skills transfer to remote communities. Panelists emphasized the need to focus on the priorities of communities rather than the technology.

The differences between rural and urban areas in accessing the Internet were highlighted. Panelists noted that new technologies, such as wireless technologies, were improving the accessibility of rural areas long deprived of traditional infrastructure. Complementing this trend is that rural communities and the urban poor are keener to participate in web-based development activities, although they both faced the problem of affordability in embracing this service. The difficulty of deploying web-based technologies in urban slums because the tin roofs, which abound in slums, prevent the transmission of wireless signals was contrasted with the problems of rural areas which lack adequate telecommunications and energy infrastructure.

Despite their political will, developing countries still face challenges in providing universal access to new information technology. The technology is more expensive in developing countries than in developed countries. Experts emphasized the need for policies, infrastructure and capital investment to help drive down the cost of Internet access. The development of local content that meets local needs and relevant applications that address social and economic priorities such as e-agriculture and e-health were also stressed. Another challenge in expanding access to the Internet is lack of computer skills and illiteracy, requiring greater audiovisual content to make up this deficiency. It was agreed that Internet education should be integrated into the entire education system.

Innovative ideas for expanding Internet use were also highlighted by the audience, particularly through the use of the mobile phones which are much more widely used in developing countries. Experts predicted that mobile and Internet Protocol technology would merge in the “near future” and this would allow the Internet to reach a greater number of people. Governments were urged to subsidize Internet access, and in Kenya, this is being done in selected places such as institutions of higher learning slums and rural areas.

To address the problem of inadequate electricity supply, energy saving technologies were proposed including solar powered laptops and fibre optic cables that consume far less energy than Asymmetric Digital Subscriber Line connections.

Panelists listed their top priorities to promote Internet for development. These ranged from developing relevant local content in local languages, ensuring accessibility and affordability, addressing literacy problems, and enhancing Internet skills to packaging the technology in the simplest possible way, developing domestic bandwidth services to prevent the uncontrolled influx of international service providers, and combining the Internet with other media such as radio and theatre.

In the ensuing general discussion, the audience said it was important to develop innovative new technologies for Internet access by using audiovisual methods. They noted that a key focus should be to help disabled persons, refugees, street children and other vulnerable groups' access to the internet. They urged involvement of the media in promoting and expanding use of the Internet, and proposed using the Internet to provide information that helps the poor access cheaper alternatives such as generic medication that can be bought at a fraction of the cost of branded medicines.

## 4. Programme

The programme included opening and closing plenary sessions. On the first day, delegates were taken on a tour of the CISCO Regional Academy that is educating underprivileged youth in the crowded Nairobi slum of Kibera. On the second day, a series of 20 expert workshops examined a wide variety of case studies on exploiting the Internet as a tool for development in many fields such as agriculture, health, education, access to water, delivering government services and addressing youth concerns. The third day concluded with a summary and recommendations on partners can best work together to use the Internet for social and economic development.

### Wednesday, 28 November, 2007

- 10:00 am**                    **Opening ceremony**
- Kenya's Minister for Information and Communication, Hon. Mutahi Kagwe
  - Mrs. Elizabeth Lwanga, UNDP Resident Representative, Kenya
  - Mr. Nicholas You, Office of the Executive Director, UN-HABITAT
  - Mr. Jason Bellone, Chief of the Information and Communications Technology Section, UN Office in Geneva
- 11:30-11:45am**            **Break**
- 11:45am - 12:45pm**      **Expert panel discussion – experts include:**
- Dr. Bitange Ndemo, Permanent Secretary, Ministry of Information and Communication, Kenya
  - Dr. Shem Ochuodho, Expert on Internet and Information and Communication Technologies in Kenya, Rwanda and Sub-Sahara Africa
  - Mr. Gajanan Kasbekar, Vice President, TATA Interactive, India
  - Ms. Ashima Bhardwaj, Vice President, One World Youth Project
  - Ms. Njeri Rionge, Founder of Kenya's ISP Wananchi.com
- 12:45 – 2.00pm**            **Press Conference and LUNCH**
- 2:00 – 4:00pm**            **Special Tour**  
Tour of the CISCO Regional Academy which provides education to the community

### Thursday, 29 November, 2007

- 9:00-12:30**                Ten workshops presenting best practices and case studies on using the Internet for development  
Training session (Geo Data Portal)
- LUNCH**
- 14:00-17:00**                Ten workshops presenting best practices and case studies on using the Internet for development  
Training Session (How to evaluate and ensure top quality websites)

### Friday, 30 November, 2007

- 10:00-12:30**                **Plenary**
- Summary presentations from workshops and training sessions
  - Closing remarks
- LUNCH**
- 14:00-15:00**                **UN closed session**
1. Permanent Web4Dev Secretariat
  2. Date and venue of next Web4Dev session

### Saturday, 1 December, 2007

Tour to Nairobi National Park for interested participants

## 5. Report on the workshops

A variety of topics were reviewed for application of the World Wide Web to meet development needs. These were as diverse as using the Internet for education and training and reaching rural communities to e-Government for better service delivery.

One innovation is technology that allows for telephone voice transmission and reception of content on the Internet, without the use of a computer. It permits users to receive and give vocal commands to obtain information and is useful in promoting education, e-government, e-commerce and e-health and e-banking. The technology can also benefit the blind and could be used in schools in areas where teachers are not able to use computers.

Internet Speech, a Silicon Valley-based company, has been working with the United Nations, civil society organizations and the communications community to deploy the technology worldwide. In future, it hopes to provide voice computers, micro browsers that allow web sites to be viewed on a cell phone screen without rewriting any of the content. However, to make the technology truly useful requires affordable telephone calling rates to connect to the Internet, incorporation of Voice Internet as part of computer training in educational institutions and availability of the service in cyber cafes.

UNICEF's workshop also tackled the problem of how to connect those without access to a computer with those that do. The United Nation's Children Fund turned to cell phones and radios as an option to bridge this divide because many more people have access to phones and radio than computers – it is estimated that 9 out of 10 people in the developing world have access to a radio and that 90% of the developing world will have access to a mobile phone by 2010.

Examples presented included using rapid Short Message Service (SMS) to gather data for online questionnaires. Broadcast SMS is used to contact large numbers of people and SMS responses are automatically inserted into the questionnaire and used to generate graphs and perform other data analyses. One application under development by UNICEF is community mapping whereby people can send information on the location of villages and living conditions via SMS. This information is forwarded to UNIWIKI for advocacy and to help improve conditions in different geographical areas.

UNICEF also demonstrated its UNIWIKI which uses wiki technology to connect with children and young people, including via mobile phones. Based on "open source philosophy", UNIWIKI gives young people a voice and captures the "pulse" of communities. Working with a wide range of partners, it connects to several e-clubs, conferences and regional websites for broader outreach.

Another recent technology presented uses USB sticks with laptops to pick up radio stories from the Internet and transfer them to FM radio for broadcast.

A major challenge in many of these applications is the cost of Internet access and that of mobile phone calls at local tariffs which are very still high in many developing countries. Local political situations can also present hurdles. For example, some countries have restrictions on SMS



services but UNICEF has succeeded in getting FM frequency in some countries through which UNIWIKI radio transmissions can be broadcast. To reach more people, efforts are underway to make UNIWIKI available in more languages.

Several workshops focused Internet applications for the youth. The World Bank presented its Youthink! website which informs young people about development topics, provides material for teachers and engages young people in discussions on development issues. A variety of methods are used to engage youth including blogs and competitions. The Bank also translates content to other languages for wider outreach.

Also focusing on youth is the One World Youth Project, a non-profit organization aimed at bringing schools from both developed and the developing world together by linking sister-schools from different parts of the world. These schools then work together through the Internet and other means, focusing on one of the eight Millennium Development Goal's for a whole academic year. They share ideas, experiences, cultural issues, and study real life stories of people affected by the issues addressed by the MDG. Those without Internet access can participate in the discussion through letters, MDG awareness days, and regional forums where youth get together to discuss ideas and commit to support a Goal in their country. A major obstacle to wide participation is lack of good communications infrastructure, particularly for rural schools, and the limited capacity of the project to support all the interested schools.

Use of Internet technology to involve youth in Kenya in development matters was the topic discussed at the My Space for Social Good workshop. The difficulties recognized here are overcoming the language barrier, fear of individuals that their profiles will be misused, Internet insecurity, low literacy levels outside Nairobi and the slow implementation of government's Internet Communications Technology policies. The need to involve more local and international actors, link to the media and government ministries and enhance web filtering and system administration were highlighted.

An excellent example of using the Internet in government was presented by CHOICE, a company in the Indian state of Chhattisgarh, which provides a web-based one-stop solution to deliver a wide range of government services such as issue of certificates for births and deaths, local resident permits, property tax payments, building construction permission, payment of electricity bills, lodging of public grievance, etc. The services are delivered through a network of CHOICE centers run by private persons who have been formally designated as public servants.

The CHOICE e-Government initiative has succeeded in reducing waiting time for certain documents from 15-20 days to 1-2 days, reducing corruption, improving the efficiency and efficacy of government officers, and increasing transparency and accountability of the government. However, intensive training and capacity building government and private stakeholders and change management are critical in making this approach a success. Different business modes also need to be developed for rural areas.

The main recommendations from this case study were ensuring that a proper legal framework is established for sustainability of e-Government, providing content in the local language and thinking big but starting small with a view to scaling up quickly. The use of free open source software was

recommended but only if complemented by proprietary software where Open Source development and maintenance skills are lacking.

Government use of the Internet was also discussed in the workshop by the Government of Tanzania who presented use of the web to collect and disseminate statistics on Millennium Development Goals and sectoral development in different regions of the country. The data are presented as tables and visually using maps and graphs. The country's National Bureau of Statistics works with ministries and other partners to combine the country's development data into an integrated database using the DevInfo software, which is supported by UNDP. In this way, the web helps policy makers to prioritize development investments to the regions and sectors in most need, and to monitor progress towards achievement of the MDGs.

The workshop on e-Agriculture reviewed three case studies: how the *DrumNet* network in Kenya is using mobile telephones to provide farmers with information from the Internet and other sources on local and international market prices, buyers, and credit facilities for farm inputs. The United Nations' Food and Agricultural Organization (FAO) also presented its e-agricultural initiative which uses the Internet to promote agricultural development and food security through improved exchange of ideas, experience and good practices while the International Fund for Agricultural Development's (IFAD) First Mile Project discussed using mobile telephones with the Internet to enable small-scale producers, processors, traders and others in the market chain to communicate better, form partnerships and exchange information on innovative practices and market opportunities by linking to the IFAD supported Agricultural Marketing Systems Development Programme.

Here, the main challenges identified were limited access to modern communications technologies, particularly at the grassroots level, limited skills, the need to provide easy access to demand driven information that adds value and is relevant to the farming communities. Key recommendations included creating, capturing, processing, storing and disseminating local content to promote local networking, knowledge exchange, business transactions and best practices; training the rural youth as the interface between the Internet and farmers and providing information that covers the whole supply chain including logistical information on how to get farm produce to the right buyers.

Connecting rural areas was also covered by the workshop on establishing sustainable broadband services in rural areas with examples from Kenya, Malawi and Tanzania. These networks are targeted initially for providing access to basic public services such as education, health and local government services. A range of technical solutions were discussed including radio spectrum, optical fiber and wireless broadband technologies.

The rural network workshop concluded that the main drivers of success in this area are involving entrepreneurs in the delivery of end-user applications that meet the needs of rural communities and are affordable, considering ICT and communications infrastructure as a public utility like roads, water, sanitation, electricity, etc., and where possible, integrating strong fiber optic networks deployment in other infrastructural projects like road construction. The need to provide training in ICT skills, develop enabling policies and regulations, and create partnerships of key actors interested in using ICT for development were also highlighted.

Urban areas have relatively good access to the Internet – but the urban poor are often excluded. Linking poor urban areas was discussed in the Community Opportunity workshop. Community Broadband Network advocates the use of the cooperative model as a sustainable way of providing sustainable Internet access to poor communities. A pilot project is underway in Kibera, the biggest slum in the capital of Kenya's capital Nairobi with a population of some 700,000 people, to help the slum residents to organize themselves to provide and manage internet services that improve the well being of the communities in an economically sustainable way. The main challenge is finding seed capital to cover the initial setup costs of such projects where residents are extremely poor yet the cost of ICT infrastructure is much higher than that of wealthier countries. The hope is that the projects will be owned by the community and address the needs of residents who will cover the running costs by paying fees for the services.

Education and training featured strongly as a development area that would benefit from Internet technology. Cases presented included TATA Interactive's partnership with UN-HABITAT to use E-learning for urban management courses for local elected leaders, UNEP's use of the Internet in its Mainstreaming Environment and Sustainability info African Universities Partnership (MESA), and TechDis (UK) e-learning application to teach about governance. The importance of working with learning institutions and developing simple design of e-courses which can be used in places with low bandwidth were highlighted. The workshop also recommended mobilizing partners and resources from multiple sectors, focusing on local relevant content and applications, documenting success stories, providing free content, raising awareness of e-learning especially among educators, and complementing e-learning with non-computer methods. On the way forward, internet accessibility and affordability, availability of Open Source software and free courses were identified as key areas.

Web 2.0 technologies – the second generation of web-based communities such as social-networking sites and wikis – were widely recognized as key for social development. The GTZ-IICD workshop highlighted the potential and challenges of using Web 2.0 in the development context. The technology offers tools to exchange knowledge, ideas, experiences and needs, and to improve networking and collaboration. The challenges include the limited use of Web 2.0 in developing countries, concept of the system which is still changing rapidly, questions of trust in the content and potential for abuse and the high complexity for most users. Nevertheless, the technologies offer new opportunities that can benefit development and should be explored.

On the use of Web 2.0 technologies, UNDP also presented its WaterWiki, a knowledge platform and collaboration tool for water experts and practitioners in Europe and CIS countries. The system, which has proved to be an excellent tool for information gathering and sharing, features interactive maps, country pages, and has a non-hierarchical system which allows anyone to add, edit or remove information. Feedback from users suggested improvements which include better navigation tools, more structured content and resource pages that are more directly related to the work of water practitioners and experts.

The conference recognized the importance of translating content in languages other than English to communicate effectively and widely on development issues. In this context, the International Monetary Fund shared its experiences with web content in other languages. The workshop recommended starting small with multilingual sites focusing first on critical content, collaborating closely with content providers, developers and translators, undertaking usability testing and

collecting qualitative feedback. Use of local authors to translate key content and that of automatic translation tools for non-critical content, taking into account the risk of errors that these tools introduce, were also suggested to enable those from developing countries to benefit from the wealth of information that is currently published only in English.

The workshop on access to land for earthquake victims reviewed an information management system, designed by UN-Habitat, to track individual applications and financial aid to landless earthquake victims in Pakistan.

One major challenge of the scheme, known as the Landless Information Management System, was its location in mountainous areas of the country where Internet infrastructure was unreliable. In order that others might benefit from lessons learned in the implementation of this project, the workshop suggested that these experiences be documented and circulated for entry into a best practice database.

It was also decided that the Shelter branch of UN-Habitat and the agency's Pakistan office work to elevate the Land Information Management System into a comprehensive device for application in other countries.

Finally, the United Nations made a case for a unified United Nations systems Internet presence – through the One Source initiative. The aim of One Source is to make it easier for the UN's partners and others interested in the UN system including the public to search for relevant, current information on programmes, decisions and their impact, and the work of the UN system in general. The project's 2008-2010 plan has been approved by the UN's Chief Executive Board but there are multiple challenges, from budgetary constraints to dealing with the UN's highly complex and loosely connected agencies and programmes. Progress is being made, nevertheless, to standardized publishing formats, particularly metadata, to enable implementation of RSS (Really Simple Syndication) feed standards. RSS is a technology used to publish frequently updated content such as news headlines or blog entries. RSS makes it possible for people to keep up with their favourite web sites in an automated manner that's easier than checking them manually.

## **Annex 1. Statements and speeches**

**REMARKS BY THE PERMANENT SECRETARY MINISTRY OF INFORMATION AND  
COMMUNICATIONS, DR. BITANGE NDEMO,  
DURING THE 4TH WEB FOR DEVELOPMENT CONFERENCE  
AT UNITED NATIONS HEADQUARTERS, NAIROBI,  
28<sup>TH</sup> NOVEMBER 2007.**

The UNDP Resident representative in Kenya Mrs. Elizabeth Lwanga,  
Representative of the Assistant Secretary General, Jason Bellone,  
The Representative of the Ex Director UN -Habitat, Mr. Nicholas You,  
Delegates,

Distinguished Guests, Ladies and Gentlemen,

It is with great pleasure that I take this opportunity to welcome you all to this conference. I believe there are some participants who are visiting Kenya for the first time, Karibuni Kenya. I am also proud to take this opportunity to encourage you to tour other parts of the country to sample the diverse beauty of our country and our people.

This conference gives us a forum for us to explore ways in which we can use internet to accelerate achievement of the Millennium Development Goals. The Internet as it were is an important medium for communication and henceforth relevant towards the Socio-Economic development of a Nation. I acknowledge the fact that Kenya was indeed selected as the ideal host country for this conference in a bid to allow participants to see, at first hand, the achievements and challenges that developing countries face in trying to bridge the digital divide. This experience, I believe, will go a long way in enabling us generate new ideas and solutions on utilizing the web to achieve these goals.

As a matter of fact, the Kenyan government has embraced a common vision and strategy for an information and knowledge based society that recognizes Information Communication Technologies (ICTs) as a platform for socio-economic development as well as a means of bridging the Digital Divide.

I am therefore pleased to inform you that the Kenyan Government is currently undertaking various initiatives in the development of the ICT sector which I must acknowledge is bearing fruit. Such initiatives include launching of digital villages to take ICT to the rural areas in order to promote services like e-banking, e-learning, e-procurement, e-health amongst others.

Other initiatives include establishment of Business Process Outsourcing (BPOs), improved connectivity, reduced cost of telecommunication services as well as enhanced service delivery amongst others. Indeed the Kenyan Government has continued to play an important role in building a people centered information society through joint efforts among all stakeholders in the public and private sector. We have largely facilitated the marketing of locally assembled ICT products to help in the establishment of respective rural ICT enterprises.

Furthermore the Government is coordinating a number of initiatives in full recognition of the role information knowledge and technology is playing in facilitating rapid Economic growth, wealth creation and improving Kenya's competitiveness globally. You are all aware that the ICT industry is one of the fastest growing sectors of the respective Economies. It is in this regard that the Government has given priority to infrastructural development, notably the East African Marine System (TEAMS) and the EASSY projects.

I am glad to note that this year's session will also explore web solutions for the youth. The youth, who are our future leaders, constitute 70 percent of many African countries, including Kenya. We should recognize the fact that we need to come up with innovative solutions on how they will benefit from the internet.

As much as we acknowledge the fact that Information is the seed for an idea and only grows when it is watered, we should also realize that unless it is organized, processed and available to the right people in a format for decision making, then it becomes a burden, not a benefit. We should thus bear in mind the pros and cons of the content accessed by the youth through the internet. The information should be of benefit to them and not otherwise.

The Kenyan government is keen to see young people flourish and has taken bold steps to actualize this. In support of this, The Ministry of information and Communications is working closely with the ministry of Youth Affairs to support the youth. For instance, through the BPO operations in Kenya, there has been a significant impact on employment for our young people. The establishment of call centers has seen many of these young boys and girls benefit from the Information Technology field.

I am made to understand that there will be a special tour to show the delegates how the internet is being used to help young people and others in Nairobi's biggest slum, Kibera. I believe that this tour to the CISCO Regional Academy which develops our young people's capacity through training and offering them in depth internet skills essential in global economy, will stimulate our ambitions further as we embark on internet solutions for our youth.

Finally, it will be the pride of Kenya and the rest of the developing world to have affordable and speedy access to the internet regardless of the Geographical locations. I know that we are all looking forward to that era and I believe that is the major reason as to why we are all gathered here to make this dream a reality.

I wish to thank the organizers of this conference. It is tremendously important that we understand the role of let and the power of internet use in the achievement of the Millennium Development Goals.

I once again welcome those of you visiting Kenya for their first time, enjoy your stay.

Thank You All and God Bless.

**OPENING REMARKS BY THE UN RESIDENT COORDINATOR AND UNDP RESIDENT  
REPRESENTATIVE, MS. ELIZABETH LWANGA  
AT THE WEB FOR DEVELOPMENT CONFERENCE  
28 NOVEMBER 2007 AT THE UN COMPLEX GIGIRI NAIROBI**

The Permanent Secretary Ministry of Information and Communication, Dr. Bitange Ndemo,  
Mr. Nicholas You, Office of the Executive Director, UN-HABITAT,  
Mr. Soon-Hong Choi, Assistant Secretary General, Information Technology Office, United Nations,  
Ladies and Gentlemen,

On behalf of the United Nations System in Kenya, I take this opportunity to welcome you to this conference. I am informed that we have close to 400 participants representing 48 countries and over 50 colleagues from the UN.

This conference marks yet another milestone in global development as the original aim of WEB4DEV was to enhance the use of internet for development. It is most appropriate that this conference is being held in Africa this time, at a time when Africa is lagging behind in use of ICT and as a result has not been able to fully benefit from globalization. Africa, therefore, needs the necessary technical and infrastructure development support to participate and take advantage of the ongoing information technology revolution. Internet has made the World a Global Village. As a result information flow and use of Internet has become a key factor of production just as much as land, labour and capital, those that are able to tap into this factor can increase efficiency and effectiveness producing more economic benefits. In the area of social and economic development, the role of information technology cannot be over emphasized. It is crucial to social and economic integration and networking, where decision makers need to access accurate and timely information to enable them make informed and appropriate decisions. Hence Internet is needed not only to facilitate decision making at the national level but also to boost Global cooperation and integration.

Ladies and Gentlemen,

You may recall that in September 2000, the member states of the United Nations adopted a Millennium Declaration and identified key goals for development in the Millennium Development Goals, or better known as MDGs. This commitment sets specific MDG targets for reducing poverty and calls for concerted action to fight injustice, inequality and to protect the environment. Among the commitments they made was one to "ensure that the benefits of new technologies, especially information and communication technologies are available to all." This conference is therefore important in many ways:

First, we are confident that the conference will deliberate on the issue of how best ICT and the Internet can further the achievement of Millennium Development Goals, balance political, economic, and social interests, and help to bridge the gap between rich and poor.

Secondly, the conference brings together the United Nations, international development agencies, private sector and Non-Governmental Organizations to share knowledge, skills and ideas on using the web to stimulate and accelerate development. The ideas so generated will go along way in the effort to reduce extreme poverty by 2015 and to impact on the spread of HIV/AIDS, as well as achievement of the other goals. Of important consideration also is the need to monitor the progress made towards achievement of MDGs. The UN Development Programme in partnership with the Statistics Division of the UN Department of Economic and Social Affairs (DESA), Relief Web of the UN Office for the Coordination of Humanitarian Affairs (OCHA), and the United Nations Children's Fund (UNICEF) have launched an MDG Monitor

available on the Internet. Funding aid in-kind support for this were provided by Google and Cisco Systems. Development and promotion of such tools is an important milestone towards achievement of MDGs.

Thirdly, I note with appreciation that this conference has a special focus on the youth. Today the youth represents 70 percent of the population in Sub-Saharan Africa. Unfortunately the majority of the youth lack the necessary skills to participate in economic development. This conference should explore how other regions such as Asia have used the Internet to accelerate expansion of employment opportunities and increase export earnings as a result of the production of ICT-related goods and services and replicate the same for Africa.

Lastly and most importantly, this conference should offer an opportunity to further examine ways and means how the Internet could boost productivity; enhance Africa's competitiveness and growth within the economic sectors.

I would like to share with you some of the UNDP's experiences in the use of the ICT to promote development:

In China, the UNDP has been actively involved in assisting the government with provision of policy guidance to mainstream ICT into national development priorities such as distance education, health care, and creation of economic opportunities through access to ICTs in poor and remote areas. Another initiative in China is the establishment of rural telecenter networks in nationally designated poor counties in central and western provinces. The project has been well received and is achieving significant impact and results that are appreciated by beneficiaries and the local governments.

Another example, also in China, is the partnership with the State Customs Administration in which, UNDP introduced an innovative Governance Management of Customs Automation and Information Management System, which led to the efficiency of customs clearance and standardized customs management at all levels. The use of the Customs Automation and Information Management system has speeded up customs clearance of transactions in some places from 22 days to 2 minutes.

In Kenya, in 2004 UNDP supported the establishment of two telecenters in Kisii and Tabaka townships for use by soapstone carvers. This effort has resulted in 30 percent increase in the total direct export sales of soapstone carvings by soapstone producers that previously were only sold through middlemen in Nairobi.

UNDP is also working with the Government of Kenya through the EGovernance Secretariat to improve a number of government services and expand the access of these services through IT. Some of the main achievements of this project include E-Transactions policy presented to parliament, and 350 Government officials trained on ICT in the districts.

As I conclude these remarks, I wish to suggest that this Conference looks further into - what needs to be done to guarantee that access to information becomes as wide and inclusive as possible, bearing in mind that the cost of accessing the Internet is currently beyond affordable levels of the majority of the people in Sub-Saharan Africa; and furthermore look at how regional cooperation among telecommunication service providers can be strengthened in order to improve and develop quality communication services and minimize cost.

Once again on behalf of the United Nations system in Kenya, welcome and wish you fruitful deliberations.

Thank you.



**REMARKS BY THE UN ASSISTANT SECRETARY GENERAL AND CHIEF INFORMATION  
TECHNOLOGY OFFICER, MR. CHOI SOON-HONG,  
READ ON HIS BEHALF BY JASON BELLONE, CHIEF INFORMATION AND  
COMMUNICATIONS TECHNOLOGY SECTION, UNOG  
DURING THE 4TH WEB FOR DEVELOPMENT CONFERENCE  
AT UNITED NATIONS HEADQUARTERS, NAIROBI,  
28TH NOVEMBER 2007.**

1. Introduction

I am Jason Bellone, Chief of the Information and Communications Technology Section at the UN Office in Geneva. As you may be aware, Mr. Choi Soon-hong, UN Assistant Secretary General and Chief Information Technology Officer, was scheduled to make introductory remarks at Web4Dev Conference. However, due to other work requirements, he cannot come to this conference. At Mr. Choi's request, therefore, I am going to deliver his message to the conference.

First, I would like to briefly cover Mr. Choi's background.

Mr. Choi Soon-hong of the Republic of Korea is the Chief Information Technology Officer of the United Nations with the rank of Assistant Secretary-General. The UN General Assembly approved the position of Chief Information Technology Officer in July 2006, as part of the reform proposals put forth last year by the Secretary-General.

Mr. Choi, who assumed his duties in late August 2007, is responsible for all substantive and operational needs for the information and communication technologies employed by the United Nations. This involves developing, maintaining and monitoring the implementation of effective tools and strategies to modernize the organization. One of his immediate tasks is to oversee the introduction of the new Enterprise Resource Planning system across the organization. He is responsible for providing leadership and coordination in the area of IT to strengthen the ability of UN to deliver the change management needed.

Mr. Choi has 30 years of technical and management experience in the public and private sectors. He has lectured and researched in the fields of public policy, strategic management, and innovation and has presented his work in a number of major international conferences. His recent research interests include globalization, technology competition, digital society, knowledge sharing, and ICT for development.

2. Mr. Choi's Remarks

To the Honorable, thank you for your remarks and the opportunity to share the podium with you. I wish to add my sincere appreciation for UN-Habitat to host this important conference here in Nairobi – and the first to be held in Africa.

As you have heard from the introduction, I am new to my current position and I have been learning a lot about many important activities of the United Nations. I am pleased to note that this conference is one of a continuing series of annual sessions of the WEB4DEV conference addressing the intersection of two very important issues: the Internet and development.

And the theme of this particular session is significant to all of us: using the Internet to drive economic and social development. Such development is the work of all of us in the UN system, and it is very appropriate to convene such a meeting, right here, in Africa for the first time, and to emphasize our collective desire to move from discussion to action: driving development with the Internet.

I am not a newcomer to the UN system, nor am I a stranger to development issues. At this session, we are talking about the economic and social development of the world and showcasing current and future Information and Communications Technology (ICT) efforts that are supportive of the development. The UN is committed to development by the declarations and actions of member states; as individuals, UN staff are bound by our oaths of office to support the mission and goals the United Nations.

And of course there are many issues to be addressed here in Africa – and elsewhere in the developing world – as we strive to overcome the digital divide; in particular, access to computers remains limited on a per capita basis, compared to the developed world, and we need solutions for not just the physical infrastructure, such as computers, networks and so forth, but also for the human infrastructure: skills, education, training, etc. I hope this conference will help generate viable solutions toward this end.

We know of many Internet-based tools that can be employed to accelerate achievement of the Millennium Development Goals: eLearning, eAgriculture, eCommerce, and eHealth, for example, as well as online access to research and education materials and the innovative use of social networking tools to improve governance. This conference brings together the people who can assemble those tools by forging partnerships amongst governments, civil society, the private sector, and youth, complementing each other to spread the benefits of ICT, and then drive economic and social development using the Internet.

What role can the UN play? The UN Charter says, in part, that the UN's purpose is to cooperate in solving international economic, social, cultural and humanitarian problems... and to be a center for harmonizing the actions of nations in attaining these ends. In the 21st century, this is increasingly achieved by using information and communications technology – ICT: in short, by using the Internet to drive development, the focus of this conference. We at the UN will take an active role in bringing together all the actors from around the world – governments, international organizations, civil society, the private sector, and academic institutions – to address the issues. At the regional level, through our economic commissions and other institutions – specifically the Economic Commission for Africa on this continent – we can make sure that ICT is addressed in regional development strategies. Of course, the UN system makes extensive use of the Internet to support its own work in development and humanitarian activities and this will not only continue but accelerate.

But what specifically must the UN do? The Millennium Declaration of the General Assembly reaffirms the above purposes from the Charter and contains more specificity regarding ICT – I quote: In support of development and poverty eradication, to ensure that the benefits of new technologies, especially ICT,... are available to all. We must not only coordinate but must in fact ensure that the digital divide is crossed for all the peoples of the world.

One new initiative is the UN System Portal which will introduce standardized knowledge sharing practices and a common communication platform for the entire UN system family of organizations. You will hear more about this from my colleague Richard Maciver at a later session. [Jason, please put here a reference to your Web solution to be presented at the conference]. The MDG Monitor is also an important tool for tracking progress toward the Millennium Development Goals. In addition, the UN has also joined the Internet2 organization on behalf of the UN System and through that connection is gaining access to the global research and education (R&E) networks that will provide a direct Internet route among UN system agencies and millions of students, academicians, and researchers worldwide – those networks are forming in Africa as well and Nairobi is the center of that effort. Many other initiatives boost the forces of development, including the UN's own efforts to improve efficiency and effectiveness across the globe with new systems and improved infrastructure.

In closing I would like to touch for a moment on my role in the Organization. I advise the Secretary General in the area of information and communications technology and am the senior UN officer responsible for developing and implementing the ICT strategy. This strategy will both affect and benefit the global Secretariat - and the other organizations in the UN system, as well as our ultimate stakeholders – the people of all nations worldwide, and especially here in Africa where so much of our attention is placed. As his chief advisor on ICT, the Secretary General's concerns are of course my concerns and I will assist him in effectively bringing information and communications technology solutions to help realize the mission and goals of the United Nations.

The Secretary General has a serious interest in development – and I of course share that deep interest. The work that you do here at this conference is very important: harnessing information and communications technology resources to drive economic and social development. I assure you of my support for your efforts and trust your discussions will be very productive in forming the ideas and partnerships necessary to implement concrete actions to address this important mission.

Thank you very much.

**ADDRESS BY MRS. ANNA TIBAIJUKA,  
UNDER-SECRETARY-GENERAL OF THE UNITED NATIONS,  
EXECUTIVE DIRECTOR OF UN-HABITAT,  
AT THE OPENING OF THE FOURTH WEB FOR DEVELOPMENT CONFERENCE  
IN NAIROBI, KENYA ON WEDNESDAY, 28 NOVEMBER 2007**

Dr. Bitange Ndemo, Permanent Secretary, Ministry for Information and Communications, Kenya,  
Mrs. Elizabeth Lwanga, UNDP Resident Representative in Kenya,  
Mr. Jason Bellone, the representative of Assistant Secretary General, Choi Soon-hong,  
Distinguished Ladies and Gentlemen,  
Colleagues in the United Nations system,

I am presenting this speech on behalf of Mrs. Tibaijuka. She sincerely wished to join us here today, but is unable to because of other pressing engagements.

It is a great privilege to welcome you here today at the United Nations headquarters in Africa for this fourth session of the Web for Development Conference. Since its inception at a conference organized by the World Bank in 2003, the Web for Development meetings are now well established as a platform for experts in the UN system and international development civil society organizations interested in using their expertise to show how the Internet can promote development. In welcoming you all here today, I am delighted to recall that the three conferences already held have evolved to include not only the public sector, but the private sector as well. I wish to acknowledge, Mr. Richard MacIver, the Web for Development Community Coordinator for his role in this process and to express a big word of thank you to all of you who have joined us today.

This fourth conference is convened to examine how we can drive economic and social development with the Internet. The idea is that we produce new blueprints on helping developing countries bridge the digital divide. The Kenyan capital offers you a first-hand experience of what is involved in coming up with new ideas and solutions. In the developing world, these have to be customised for an environment with limited computer skills, inadequate telecommunications and other infrastructure that still lags behind that of wealthier nations. It is with this in mind that I am most grateful to the CISCO Regional Academy for so graciously offering to host you this afternoon on a special visit to Kibera. One of Africa's most overcrowded slums, Kibera is home to nearly a million people crammed into a space roughly the size of a golf course. I felt it important that you conduct this visit on the first day of this meeting. It is a poverty stricken patch of the world where young people in their thirties and below constitute up to 70 percent of the population. You will get to see how computer technology is being used to help these underprivileged young people. And it is my hope that their dedication to uplifting themselves and those around them will inspire you.

Ladies and gentlemen,

As our rapidly urbanising planet turns more and more into a "cybersphere", we have to ensure that everyone can "breathe" in it. Information, knowledge and the Internet are crucial to better socio-economic development. This is largely recognised throughout the world.

It is also recognised, however, that too many people are being left behind by the computer age. Ask yourselves if there are more people in this world who know about the Internet than those who don't. You might be surprised at the reality. This is why international agencies like the World Bank

and the United Nations Development Programme have taken the lead in making information and knowledge part of their strategy to combat poverty in the developing countries.

When the Millennium Declaration was adopted by the UN General Assembly in 2000, world leaders signed on to the Millennium Development Goals for fighting poverty, hunger, disease, illiteracy, environmental degradation, discrimination against women, and improving the lives of slum dwellers.

For those of you who may not be familiar with our role, UN-HABITAT is a UN agency that helps the urban poor by transforming cities into friendlier, cleaner, environmentally friendly places, with better opportunities, where everyone can live in dignity.

UN-HABITAT's programmes in more than 150 cities around the world have a measurable impact upon the lives of the urban poor as shown in its timely, accurate and quality reports on the agency's drive to help the world attain the millennium target set by world leaders of significantly improving the lives of 100 million slum dwellers by the year 2020.

Today half of humanity lives in cities. It is projected that by 2030 that figure will rise to two-thirds. It is an age of unprecedented, rapid, irreversible urbanisation. The cities growing fastest are those of the developing world, and the fastest growing neighbourhoods are the slums.

With our sister agency, UNEP, we are only too aware that the greatest impact of climate change takes place in cities, towns and villages. As our climate changes things are getting worse, threatening more extreme weather. If sea levels rise by just one metre, many major coastal cities will be under threat – Mogadishu, Mombasa, Dar es Salaam, Cape Town, Abidjan, and Lagos. Never mind the many smaller cities and island nations.

All of this we can see with satellites connected to computer systems. This is just one front in the battle where the Internet can be better used as an essential weapon.

As you prepare for this important meeting, I wish you to be aware of some new facts confronting us. According to UN-HABITAT's latest research, in 2005 Asia accounted for nearly 60 percent of the world's slum population with a total of 581 million slum dwellers. Sub-Saharan Africa had 199 million slum dwellers constituting some 20 percent of the world's total. Latin America had 134 million making up 14 percent of the total. At the global level, 30 per cent of all urban dwellers lived in slums in 2005, a proportion that has not changed significantly since 1990. However, in the last 15 years, the magnitude of the problem has increased substantially: 283 million more slum dwellers have joined the global urban population.

On this side of the digital divide, the majority have no access to computers, let alone the basic education to use them. They have been all but abandoned by the information age.

These figures show that we live in a very unequal world, and unless we do more to lift the hopes of people in poor countries, we will compromise our own hopes of giving our children a better future, even in the wealthier countries.

Therefore, although it may seem contrarian, when we speak of poverty, the Internet and connectivity, it is the world's poor themselves on whom we must focus – not the technology. The technology has to be engineered to their concerns and needs. They should not be technology driven, rather the technology must suit them.

That is how I see the essence of the theme of the conference – that we drive the Internet for them.

It is with this in mind that UN-HABITAT, like the World Bank and UNDP, views Information and Communication Technologies (ICT) as a powerful means both to improve and streamline local governance, and empower citizens by involving them in the running of their cities. As the hubs of communications and economic activity around the world, urban centres were the first to feel the

impact of the ICT revolution. Place these benefits within reach of the urban poor, and the positive impact will be huge.

Our agency's Best Practices database has some most interesting examples of this.

One of them is the case study of Bellandur near Bangalore in India. Information technology through the implementation of an online public records system, featuring information on property records, tax collection, births and deaths has transformed the village. Its implementation has drastically reduced corruption and red tape. Bellandur is credited with being the first village-level administration to introduce e-governance in India in 2002. The computerization of the public records has helped speed up tax collection and property transfers. The project has also helped recover large amounts of outstanding revenue for new community projects such as roads, underground drainage systems and wells.

In the Philippines, the city of Naga won the Dubai International Award for Best Practices for its e-governance initiative. It is a "people-driven" programme that promotes transparency, accountability, and public participation to enhance governance processes, local service delivery. It uses the Internet and text messaging to deliver information to its citizens. The Naga City People's Council and a local federation of approximately 100 local communities run the system. Since its inception, the initiative has sought to involve the least privileged citizens. By promoting transparency in local city management it has brought annual savings into city coffers amounting to the equivalent of 200,000 dollars a year. It has also enabled Naga city council to cope with a 10% annual rise in the number of city hospital patients, and a 7.7% increase in annual public school enrolment.

Ladies and gentlemen,

Besides bringing the urban poor closer to the decision making processes that concern them most, modern technology is also crucial to good urban policy and planning – especially where it requires accurate information on the size of a city, its streets, the number of households, the number of water connections, public transport and other important aspects of everyday city life.

Indeed, many municipalities around the world simply do not have an accurate idea of where slums begin and end, or how much lighting is provided along a back street, or which roads are in need of repair. Some have no idea even of the size of the local population.

It is here that UN-HABITAT's Urban Indicators Programme and Global Urban Observatory come in. The agency uses GIS, or Geographic Information Systems, to show how satellite photographs taken from space can be used to tackle such problems.

Using simple software, these images can then be taken, and given to a city mayor or a town water engineer. It is capable of providing a snapshot of the town, and a bird's eye view of a single neighbourhood or even a street. If they are doing a head count, or checking electricity supplies, a team is sent in to do a survey on the ground. This then enables those using the GIS software to fill in blanks and produce a simple, highly cost-effective map of any given situation.

Through the 1,000 Cities GIS Programme, UN-HABITAT, in partnership with the leading developer of GIS software, ESRI, distributes free software and training packages to municipalities around the world. Around 160 cities throughout the world have already benefited from the project.

It is thus, for example, that the city of Curitiba in Brazil uses GIS technology to help provide indicators so that elected city officials can get a good understanding of the complexity of urban migration, foreseeing growth trends and planning.

As well as advocating the use of online environmental data for public use, UN-HABITAT is actively helping local authorities better manage their environmental resources using a tool called

EMIS, the Environmental Management Information System which is used for collecting, organising and applying information relevant to urban development and the environment. UN-HABITAT provided equipment, software and spatial data to the Tanzanian capital Dar es Salaam so that it could develop up-to-date maps for a new city management plan. The EMIS system is now in use in more than 20 cities in the developing world. To date, cities such as Accra, Chennai, Dar es Salaam, Ibadan, Ismailia, Shenyang, Wuhan, and Zanzibar have developed locally relevant mapping standards and GIS software.

New ICT developments such as wireless internet technology, hold promise for the cities of developing world, as research from the Wireless Internet Institute (W2i) and the United Nations ICT Task Force recently demonstrated.

In wishing you every success in your quest for a new blueprint this week, I wish to conclude these remarks with a word of caution: Unless ICT and Internet development remains sensitive to the human and cultural values of the communities it serves, the world will see the emergence of a new digital divide in an even more complex cybersphere. Always bear in mind that the technology must suit them; or to use your parlance, it must be 'user friendly'.

Thank you.

## Annex 2. Workshop summaries

1. **Title of Workshop: Access to land for Pakistan earthquake victims**
2. **Date, Time and Location: 29 November 2007**
3. **Number of Participants: 12**

	Name and Contacts
Presenter	Golam Monowar Kamal
Outline of case studies	Landless Information Management System (LIMS) In supporting the Landless Policy implementation, UN-HABITAT has developed a comprehensive information system that tracks individual application, verification and financial assistance to landless population in the earthquake affected areas. Under the project: A rural landless means a person who owned land on the 8th of October, 2005 and is so recorded in the land records or a registered sale deed, and has, as a result of the earthquake, lost whole or part of the land, provided that the land not destroyed is less than 5 marlas. The purpose of this Landless Information Management System (LIMS) is to: 1. To facilitate the whole process from application to One Window Operation using computerized information system. 2. Gather the information of Rural Landless persons according the policy and verify the information. 3. Verify the applicants' information on the base of policy rules. 4. Centralized database and n-Tier Software architecture to implement the Security and robustness. 5. Monitoring the information on real time basis anytime, anywhere. 6. Cross platform integration capabilities.
Challenges	<ul style="list-style-type: none"> <li>• The project was based in the Mountain areas, where internet infrastructure is not reliable.</li> <li>• LIMS used UN-HABITAT's existing eight V-Sats in each Land Verification Units (LVU)</li> </ul>
Recommendations	<ul style="list-style-type: none"> <li>• Lesson learn from the activities should be document and circulate for best practice database</li> <li>• LIMS should be presented to GLTN and shelter branch for more understanding and network</li> </ul>
Way forward	<ul style="list-style-type: none"> <li>• UN-HABITAT Pakistan office should network with Shelter branch of UNHABITAT for scale up of LIMS into a comprehensive land tool that could be applied in other country for the similar land information management.</li> </ul>



**Workshop Title: Bridging the Digital and Language Divides**

**Presenter:** Emdad Khan, InternetSpeech

The workshop discussed and demonstrated using the telephone for voice transmission and reception of content on the Internet. The workshop concluded that voice Internet can help bridge the digital and language divides. It can help promote education and other key areas such as e-government, e-commerce, and e-health, and e-banking. Target users are businesses, governments, civil society among others.

**PROBLEMS and OPPORTUNITIES**

Internet access worldwide is limited. Present access to the Internet is through computer based applications and 450 million people worldwide are connected to computers. By contrast, only 14 percent of the global phone users have Internet access.

The impediments to Internet access are:

- lack of computer or computer skills
- access to PCs is difficult, limited, visual and costly
- many modes of mobile access, such as driving in a car or walking, are not practical with the visual display on a computer screen.

For these reasons, the digital divide with people at the bottom of the social pyramid of any country cannot be easily be bridged using the present computer-based technological ICT set up.

The solution that Internet Speech computer has come up with is to make Internet accessible through any simple telephone or cellular phone in what the company terms a True Voice-Internet technology. Using this technology, an intelligent agent, called NetEcho, mediates between the user and the Internet; it retrieves and renders text on any Web site or content modification; it makes messages short, precise, easy to navigate, and pleasant to listen to.

Thus, using the telephone a caller have their e-mail read and reply in a similar way; can browse; surf, search the Net; listen to music and radio, and get e-commerce information -all on voice over the telephone. The user may not have time to listen to everything on an Internet page and can use the Internet Interface to download and even translate into another language that part of a document wanted.

The system gives highlights of items only, rather than an entire page. The user then chooses the item wanted and gives verbal instruction for that to be read in its entirety. Paragraphs and pages can be skipped or revisited. The objective of the Internet telephone is to deliver any information by voice in a simple manner. The system has now started to be use in the United States and Canada. It is also in China and some European and African countries.

**CHALLENGES, ADVANTAGES and APPLICATIONS**

For education, many schools and students do not have computers. At home the students would not be able to do homework assignments. Even if they did, there may be more than one child wanting to access the Net. Many children, though, have telephones and could access the needed information using this Internet telephone system. More than one child could, therefore, access the Net simultaneously.

Voice recognition and accents is possible with Voice Internet: Internet Speech has created a vocabulary of less than 50 words, so it works very well and does not mistranslate. This system recognizes any accent. A voice interrogator will ask for clarification of request if the incoming voice or accent is not recognized or understood.

Many schools do not have teachers who know how to use a computer and the Internet. The Internet phone is thus good for people at the bottom of the social pyramid

The system is good for the phone companies, ISP and ASP and other service providers in that they could provide this service to the public

Voice Internet is low cost, an easy to learn practical way to meet the Internet access and e-learning needs

### **WAY FORWARD**

In the last 9 months Internet Speech has been working with the UN to deploy the system worldwide. It is also working with NGOs, governments, youths; educational institutions; service providers such as ISP and ASP, content providers, voice portals, and system integrators.

The strategy to deploy worldwide also includes sponsorship and participation in key educational, communication, economic and development projects.

Future products include voice computers, phone-based access to computer, micro browser – allowing all web sites to be viewed on a cell phone screen without rewriting any web site, and allowing Voice Over Internet Provider (VoIP) calls from any phone to call any phone without a broadband connection or broad band phone.

Developing countries, such as Kenya, would need a server here to test the system. Internet Speech can talk to local telecoms company and the mobile cellular operators to see if they can host a demonstration unit.

### **RECOMMENDATIONS**

The following policy steps are proposed in order to make the system usable.

- Ensure low affordable calling rate when the Internet is accessed by phone
- Make Voice Internet available to all Cyber Cafes
- Make Voice Internet as part of computer training
- Make Voice Internet available to all schools/educational institutions

### **COSTS:**

Costs for the server varies from one country to another. In the US it costs the consumer US \$14/month; in China is \$3/month. The cost depends on the deal Internet Speech has with its partner in any particular country.

**Report of the Workshop on e – Agriculture – (13 participants)**

Chair	Jonathan Campaigne
Speaker 1	Jonathan Campaigne – Pride Africa info@prideafrica.com info@drumnet.org
Speaker 2	Anne Aubert -FAO info@e-agriculture.org http://www.e-agriculture.org
Speaker 3	Roxana Satlii – IFAD ifad@ifad.org www.ifad.org www.ruralpovertyportal.org
Rapporteur	James Ohayo
Outline of Case Studies	<p><i>Case Study 1: DrumNet</i> by <b>Pride Africa</b> A mobile telephone service connecting certified, trained small scale farmer groups to the <i>DrumNet</i> database provides access to markets, financing, and information services, ensuring a fixed and reliable market for farmers' produce while facilitating access to credit through equity Bank for farm inputs. A <i>Transaction Insurance Fund (TIF)</i> amounting to 25% of the credit advanced to them is put up by the farmer groups with Equity Bank. At the end of the production cycle, the farmer groups deliver their produce to pre-identified collection centres and upon verification of quality, immediate payment is authorized through the <i>DrumNet / Equity</i> bank accounts. After deducting outstanding financial obligations, the bank transfers the net balance into the accounts of the farmer groups.</p> <p><b>Case Study 3: The e-Agriculture Initiative</b> by <b>FAO</b> The Initiative promotes sustainable agricultural development and food security through improved exchange of ideas, experiences, and good practices. A <i>Community of Expertise</i> comprising policy makers, planners, development practitioners, farmer organizations, researchers and information and communication specialists interact through regular forums and community networking to contribute a range of resources including case studies, success stories, lessons learnt, publications, learning resources, news, and announcements to the e-agriculture platform.</p> <p><b>Case Study 2: The First Mile Project</b> by <b>IFAD</b> The interface between mobile telephony and the internet enables small scale producers, processors, traders and others in the market chain to communicate better, form partnerships and exchange information on innovative practices and market opportunities through links with the IFAD supported Agricultural Marketing Systems Development Programme.</p>
Challenges	<ol style="list-style-type: none"> <li>1. Limited access to modern communication technologies, particularly at the grassroots level.</li> <li>2. Asymmetrical access to information and knowledge by various actors.</li> <li>3. Provision of and easy access to demand responsive, value enhancing and relevant information for farming communities.</li> <li>4. The need to develop viable and practical ways to interface indigenous knowledge and external knowledge.</li> </ol>

Recommendations	<ol style="list-style-type: none"><li>1. Create, capture, process, store and disseminate local content to promote local networking, knowledge exchange, business transactions and best practices.</li><li>2. Engage the local communities by providing information and content in a simple and easily understood manner, using the appropriate channels and adapting knowledge to local needs.</li><li>3. Promote ICT as an enabler to bridge the gap between smallholder farmers and other actors in the value chain.</li><li>4. Link systems to mobile phones which are more widely used</li><li>5. Promote twinning of farming communities in different parts of the country and the world to accelerate transfer of best practices and create</li><li>6. Improve networking between farming communities and rural based ICT centres.</li><li>7. Promote partnerships with local media and encourage them to disseminate best practices in agriculture</li><li>8. Train youth in rural areas as interface between the Internet and farmers.</li></ol>
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1. **Title of Workshop: Role of E-Learning in achieving MDGs**
2. **Date, Time and Location:** 29 November 2007
3. **Venue: Conference Room 1, Number of Participants: 50**

Panelist/Speaker 1	Eddah Kaguthi (UNEP)
Panelist/Speaker 2	Gajanan Kasbekar (Tata Interactive Systems)
Rapporteur	Bridget Oballa (UN-Habitat), Moses Ako, Nelson Kimanzi (UNEP)
Outline of case studies	<p><b>Names of case studies</b></p> <ul style="list-style-type: none"> <li>• MESA (Mainstreaming Environment and Sustainability info African Universities Partnership)</li> <li>• UN-Habitat Local Elected Leadership eCourse</li> <li>• TechDis (UK): eLearning for teaching Learning practitioners on creating accessible content.</li> </ul> <p><b>Lessons learnt – what went right</b></p> <ul style="list-style-type: none"> <li>• MESA: Importance of partnerships (North-South, South-South), inclusion of University Top Leadership from the start.</li> <li>• UN-Habitat: Simple design that can also be modified to other languages, easy to download, small filesize</li> <li>• TechDis: Effective use of eLearning to teach guidelines &amp; governance around Learning development.</li> </ul>
Challenges	<p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>• MESA: Time Lag in University Curriculum Development, Reaching critical mass of University users, Inadequate resources</li> <li>• UN-Habitat LEL: Reaching the entire potential target audience</li> </ul>
Recommendations	<p><b>What actions need to be taken</b></p> <ul style="list-style-type: none"> <li>• Demystify eLearning by laying emphasis on benefits</li> <li>• Mobilise and harmonise resources for elearning from multiple sectors including private sector</li> <li>• Emphasize on localisation of content besides technology</li> <li>• Document and make available success stories and case studies</li> <li>• Leverage open source architecture in reducing infrastructure costs</li> <li>• Identify and make available free content</li> <li>• Complement eLearning with non-computer dependent forms of education</li> <li>• Increase awareness on eLearning e.g. among educator</li> <li>• Recognise the role of media in promotion of eLearning</li> </ul> <p><b>Who are the key actors</b></p> <ul style="list-style-type: none"> <li>• Governments • UN agencies • Private sector • Media • Civil Society Organisations • End users</li> </ul>

Way forward	<p>1-2yr strategy</p> <ul style="list-style-type: none"><li>• Focus on increasing internet access and affordability</li><li>• Complement eLearning initiatives with non-computer based initiatives</li><li>• Make available open source software and free courses</li></ul> <p>3-4yrs</p> <ul style="list-style-type: none"><li>• MDG8 – foster partnerships in north-south and south south collaborations</li><li>• MDG7 – mainstream environment and sustainability into online education</li><li>• MDG1 – Use eLearning to teach skill sets in communities to increase self reliance for poverty reduction</li><li>• MDG2 – use self-based interesting eLearning to reduce teacher dependence, helping achieve universal primary education</li></ul>
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1. **Title of Workshop: My Space for Social Good**
2. **Date, Time and Location:** 29 November 2007, C-13, 11 – 13 Hours
3. **Number of Participants:** 15

**Speakers:** Patricia Sudi, Erick Ochieng Otieno and Sean Amos  
patsbo@takingitglobal.org seanamos@yahoo.com eribros2003@yahoo.com

**Rapporteur** Kibe Muigai, Kibe.Muigai@unhabitat.org

### **Case study – Taking IT Global i.e. using IT to connect the youth on development matters**

#### **Lessons learnt – what went right and wrong**

Outreach can be increased by applying other media of communication apart from internet There is need to avail computers, and partner with other organisations for exposure to share positive results. There were cases of spam and conmanship leading to almost criminal activities.

#### **Challenges of using the Internet for the broader development area**

Challenges included language barrier, fear of individuals that their profiles will be misused, internet insecurity, low literacy levels outside Nairobi, and slow implementation of ICT policies by the government.

#### **Key actors**

Local and international development agencies, youth groups, professionals, student community

#### **Way forward**

- Creation of partnerships
- Resources mobilisation
- Involving more actors from the community
- Link to the media and ministry departments
- Create local connections in eastern Africa
- Enhance web filtering and system administration

**Title of Workshop: One Source, Business Case for a Unified UN System Internet Presence**  
**Date, Time and Location: 29 November 2007, 9.00-11.00 am Venue: Press Room Number of**  
**Participants: 15**

Panelist/Speaker	Richard Maciver, Chief Executives Board for Coordination (CEB) – Secretariat (richard.maciver@unsystem.org), David Galipeau Founder of eighty20.org, (david.galipeau@eighty20.org)
Rapporteur	Kennedy Kamau, UN-HABITAT
Outline of case study	The main objective of the workshop was to raise awareness and inform the community of the One Source initiative. Its main aim was to enlist support and welcome volunteers wishing to contribute toward the solution's design and implementation and find a solution that fosters enthusiasm within the community, potential opportunities and challenges facing this venture. One Source business case recognizes the need for coherence and presents a knowledge sharing solution for the UN system. The business driver is to lessen the burden on UN system stakeholders (in particular, the general public) in searching for relevant, up-to-date information required to evaluate progress, efficiency or impact of ongoing decisions, programmes and projects. The UN System High-Level Committee on Management (HLCM) approved the One Source project, as a component of CEB Secretariat's Business Practices proposal, during its 14th session in New York (20-21 September).
Challenges	The UN is highly complex and consists of loosely connected agencies and programmes The organization of information is intricate. In addition, there is lack of efficiency in aggregation of such information There is cross messaging in relation to branding and image Lack of Standards i.e. UN agencies do not implement similar content management systems Lack of coordination between agencies in information sharing hence resulting in duplication Difficulties in finding information that proposes value Mixed messages which results in difficulties in creating coherence Budgetary constraints in implementing the framework
Recommendations	UN agencies to publish data in standardized formats especially in meta data, implement RSS feeds standards
Way forward	There is a provisional project plan from Jan 2008 – Jan 2010 Project already approved by CEB management Raise awareness among UN agencies and programmes concerning the framework



1. **Title of Workshop: Online Access to Research in the Environment (OARE)**
2. **Date, Time and Location: 29 November 2007**
3. **Number of Participants: 6**

	<b>Name and Contacts</b>
Chair	Mohammed Atani
Panelist/Speaker 1	Mohammed Atani
Rapporteur	Ernest Imbamba
	<b>Proposed format of the sessions</b>
Outline of case studies	<b>Names of case studies</b> <ul style="list-style-type: none"> <li>• OARE focus on environment journals</li> <li>• HINARI focus of health journals</li> <li>• AGORA focus on agricultural journals</li> </ul> <b>Lessons learnt – what went right and wrong</b> <ul style="list-style-type: none"> <li>• OARE gives free access to more than 1300 scientific journals coming from more than 340 international publishers and scholarly societies</li> <li>• Access to information is crucial for developing countries to develop their research and help policy makers to face environmental challenge</li> </ul>
Challenges	<p>There are fewer researchers involved in research in Africa than any other continent. Factors that have contributed to this included:</p> <b>Lack of</b> <ul style="list-style-type: none"> <li>• Internet Access</li> <li>• Infrastructure</li> <li>• Limited information searching skills</li> <li>• Trained Library Staff</li> <li>• Access to scientific information and local content</li> </ul>
Recommendations	<b>What actions need to be taken</b> <ul style="list-style-type: none"> <li>• Marketing of OARE is needed.</li> <li>• There is a need to capture publications and research that has been done locally</li> <li>• Explore ways to expose “grey literature”</li> </ul> <b>Who are the key actors</b> <ul style="list-style-type: none"> <li>• Research Institutions,</li> <li>• Universities,</li> <li>• National Academy of Science, Students,</li> <li>• NGOs</li> </ul> <b>What is the time frame for the action</b>
Way forward	<b>Suggest the next steps (moderator or the chair)</b> <ul style="list-style-type: none"> <li>• Embark in marketing campaign</li> </ul>

**Title of Workshop: GTZ-IICD, Potentials of Web 2.0 for development****Date, Time and Location:** 29 November 2007, 2.00-3.15 pm**Venue:** Conference Room 4,**Number of Participants:** 30

Panelist/Speaker	<a href="mailto:Christian.Kreutz@gtz.de">Christian Kreutz (Christian.Kreutz@gtz.de)</a> , <a href="http://www.gtz.org">www.gtz.org</a> Nynke Kruidierink ( <a href="mailto:NKruiderink@iicd.org">NKruiderink@iicd.org</a> ) <a href="http://www.iicd.org">www.iicd.org</a>
Rapporteur	Kennedy Kamau, UN-HABITAT
Outline of case study	The session presented the potentials of Web 2.0 in the development context by best practice at the web2fordev conference in Rome in September 2007. It identified the potentials and challenges when using Web 2.0 technologies within a development context. Web 2.0, offers opportunities and challenges to enhance collaboration. It facilitates the voicing of ideas, experiences and needs from which especially development projects all over the world could benefit. The session presented the potentials of Web 2.0 to further improve networking, collaborating and exchanging knowledge in the development context. This new shift in the development of the internet, often called Web 2.0, is promising. It focuses on participation of the users. The growing number of social networks and the opportunities to participate, share and contribute media and content reflect this evolution. When combined with technological advancements like open source software or universal standards, knowledge becomes more accessible and can be pooled more efficiently. Furthermore, these new social internet tools have become more user-friendly, allowing collaboration in multiple ways and open a two way conversation for development.
Challenges	<ul style="list-style-type: none"> <li>• There is a small percentage use of Web 2.0 in developing countries</li> <li>• The concept and definitions of Web 2.0 is still shaping itself</li> <li>• It is potentially easy to focus on tools and forget the approach.</li> <li>• The known issues of the digital divide apply for Web 2.0 as well</li> <li>• Trust and transparency from using Web 2.0</li> <li>• Web 2.0 is changing rapidly which results in resistance to change</li> <li>• Web 2.0 is highly complex for most users</li> </ul>
Recommendations	People and organizations involved in the development sector should think about how to: open their networks and knowledge engage in a participatory manner offer transparency about what they do embrace the opportunities Web 2.0 provides join and participate in the web2fordev movement
Way forward	The development sector, policy makers and practitioners, need to be aware of, and where appropriate, embrace Web 2.0 approaches and tools. Awareness raising, capacity building, sharing case studies, piloting projects, are all necessary to ensure we make use of the promising opportunities it provides.

## **Scalable Models for Establishment of Sustainable Broadband Services in Rural Areas of developing regions**

Panelists: 1: Björn Pehrson, 2: Amos Nungu, 3: Marco Zennaro

2007-11-29 14:00-15:15

Conference room: 3

Number of Participants: 20

### **Outline of case studies**

This session was focused on connectivity and presented experiences based on available communication infrastructure, to an increasing extent optical fibre, to provide broadband services,, as well as experiences using infrastructure-less communication systems using self-configuring ad-hoc network technologies to establish sensor networks for environment monitoring. Cases were presented from Rural Tanzania, Kenya and Malawi.

### **Challenges**

The challenge is to develop “markets” where demand, provided by consumers and their ability to pay, and supply, provided by technical solutions and entrepreneurs provisioning affordable services sustainably, can meet in areas where both are small but not negligible. We regard Usage, Technical Solutions and Entrepreneurship as the three enabling pillars of our approach and add Impact Analysis as a validation mechanism.

### **Usage**

To attract infrastructure investments the usage initially targeted is focused on basic public services, education, health and local government services, including environment monitoring and support to rural entrepreneurs. In the operation phase, no stone should be left unturned in the search for customers willing and able to contribute to covering the operational costs. The trick is to find value for users by reviewing traditional work procedures to produce more for less.

In the education sector, tertiary, secondary and primary education have different needs and impact. Universities are in many ways self-sufficient and prime motors in the establishment of the knowledge society in most countries. Most have private campus networks that are becoming interconnected via national research and education networks and regional backbones between continents to share global resources for research and education. Tertiary level ICT education is, however, a severe bottleneck in the development process in all sectors of society. Secondary and primary level education need teacher training in ICT usage, both pre-service and in-service, connectivity and learning material taking advantage of the medium.

In the health sector, the obvious targets include acute logistics (ambulance), sentinel surveillance, remote consultations, patient records, hospital information systems and continuing education of health workers.

Local government can benefit from ICT usage in most their responsibilities, including budgeting and accounting, education and health, a wide spectrum of environment issues, services to the citizens, utility services such as water supply, support local entrepreneurs, both as users of ICT and as service providers, etc.

### **Technical Solutions**

The potential technical solutions in a specific area, depends on what infrastructure is available or can be deployed, be it radio spectrum or optical fibre cables, the most powerful communication infrastructure. It is our strong recommendation to include deployment of fibre in all infrastructure projects, such as power networks, pipelines, railways, roads, etc. The marginal cost is marginal. Network equipment with reasonable availability is inexpensive and straight forward to use. Servers

and clients are also becoming inexpensive but require more competence to configure, maintain and use. Competence in the areas of network design implementation and administration, computer system configuration and administration, and information systems design and implementation is in short supply, as well as education in these areas. Universities have a role to play in this field, by encouraging and stepping up the exchange, production and dissemination of educational information.

Where fibre is missing, inexpensive wireless broadband technologies can be used to extend network coverage up to 100 Mbps. A mixture of point-to-point and point-to-multipoint technologies can form backbones providing connectivity to remote villages over distances up to tens of kilometers. Beyond the horizon, the resort is broadband VSAT or narrowband shortwave radio links up to a few kbps.

### **Entrepreneurship**

The availability of end-user applications and of technical solutions are necessary but not sufficient for services to be provisioned. Entrepreneurs are necessary spanning the value chain for providing communication services, from passive infrastructure, cable deployment, equipment distribution and repair, to systems and network administration, software support, help-desks and business development to take advantage of ICT. Missing links in the value chain may define business opportunities or may call for special arrangements, such as the entrepreneurial cooperative efforts or community intervention.

### **Impact analysis**

There are no generic methods for benchmarking the development of sustainable broadband communication markets in rural areas. Such methods would support the structuring of the development process and track progress, stimulate discussion and cooperation and facilitate for donors and funding agencies to monitor, document and communicate progress in its development programmes. Attempts have been made to outline such a generic benchmarking method based on the development strategy outlined above. The benchmarking parameters suggested include:

- Relevant policies and regulations, in particular in the areas of communication and competition, including law and law enforcement
- Stakeholder analysis describing value chains, actors and business models
- Maturity of the usage of ICT and business development activities in the public and private sectors and in the civil society, with a focus on the most important areas for the progress towards the Millennium Development Goals: healthcare (eHealth), education (eSchools), support to local entrepreneurs, and local administration (eGovernment)
- A generalized teledensity parameter including the penetration of terminals for data communication, broadband access and backbone capacity.

### **Recommendations**

The adoption of open policies regarding access to communication infrastructure, both wired and wireless, is an efficient way of making broadband connectivity more available. Infrastructure like optical fibre should be regarded a utility like roads, water supply and sanitation systems, power supply, etc. Return on public investments will be indirect, in terms of lower communication costs for public sector and increasing tax revenues from new commercial activities made possible by access to this infrastructure.

Since the availability of human resources is a major bottleneck in making broadband access ubiquitous, integration of development and capacity building is an efficient way to build capacity. Problem-oriented development projects have been successfully used to drive individual learning towards diplomas and degrees, organizational learning towards certificates and consortial learning refining the understanding of the roles of different actors on the market being developed.

**Way forward**

The pavement of the way forward is open policies and regulatory frameworks, The first step is deployment of open access infrastructure. Mass movement requires stakeholder analyses and formation of local multi-stakeholder partnerships interested in ICT use, development of human resources, organizational certification and a deeper understanding of the market to be developed.

- 1 **Title of Workshop:** The Community Opportunity
- 2 **Date, Time and Location:** 29 November 2007, C-13, 14 – 16 Hours
- 3 **Number of Participants:** 15

**Speaker:** Adrian Wooster, CTO, Community Broadband Network, UK.

**a.wooster@broadband.coop**

**Rapporteur :** Kibe Muigai, Kibe.Muigai@unhabitat.org

### **Case study -Kibera Community Broadband Network Project**

The project seeks to develop internet cafes and training, community portal and wireless network. It works through local organisations and addresses local needs. It uses the cooperative model that has worked in the United Kingdom and other European countries. The idea is that communities organize themselves to provide and manage internet services that improve the well being of the communities in a way that is economically sustainable.

### **Lessons learnt – what went right and wrong**

The business model is based on cooperative structures so as to retain economic benefits for the local members, strengthen local economy, democratic strategy and control and encourage longer term view as well as environmentally and socially sustainable ethos. There has to be a viable business model that provides a set of basic services to the community and additional local services, creating an “US” feeling. The community communication is essential, and so are customer care and quality network.

Communities should benefit from family business model so as to think through challenges, gain consensus for improvement and define projects to take them there. Only then should one look at IT to help.

A community technology plan has to come from within and community involvement is essential. The local approach requires that the handover to the community is essential, and so is linking to other projects and encouraging evangelism. Further lessons are to ensure processes to identify opportunities and engage authorities. Local IT projects need to engage people, and IT is only useful if it serves a purpose such as local services based on local needs.

### **Challenges of using the Internet for the broader development area**

Funding for the initial pilot phase lacks seed capital

### **Recommendations**

Joint fundraising strategies with UNHABITAT

### **Key actors**

Community Broadband Network, UN-HABITAT, local residents and cooperative banks.

Communities in other cities in the region – for future projects

### **Way forward Suggest the next steps (moderator or the chair)**

Local people will run the project while external support will only advise and guide. Over the next three years the project will build 10 sustainable social enterprises.

## Tools for Connecting People

### Presenter: Christopher Fabian, UNICEF

Christopher Fabian began by showing the participants a video of the Innovation Sections latest project to be launched in New York on the 6 December, 2007. The Project is entitled "Our Stories" and aims to get 5 million online, SMS-sent stories by 2010. The project has been developed in conjunction with Google.

The Innovations section of UNICEF was begun 9 months ago. One of the main issues it has been tackling with is how to connect those without access to a computer with those that do. UNICEF turned to cell phones and radios as an option to bridge this divide as they are proven to have a growing rate of access-with 90% of the developing world having access to a cell phone by 2010 and 9 out of 10 people in the developing world having access to a radio.

WIKI technology was also seen as a means of better connecting with children and young people. The UNIWIKI approach encompasses an "open source philosophy" so that young people can be given a voice and so that the "pulse" of the community can be better captured and understood. UNIWIKI acts as a database connector and the holding point for information sent in via SMS. The core use began with addressing the needs of people who needed information. Someone needing information would SMS in to request for information on a particular event or circumstance, UNIWIKI would then call back with an audio answer while putting out the query to all of those who have signed up for alerts. They can then call in to leave an audio reply.

UNIWIKI has now been taken to a new level, serving not just the needs of young people, UN workers and journalists but also providing an opportunity for agencies like UNICEF to initiate projects such as the soon to be launched "Our Stories".

Other recent IT developments are the use of USB sticks as radios. With ROSCO technology a laptop can be connected to the UNIWIKI system. ROSCO can pick up the radio story from the internet which is then transferred to an FM radio which then broadcasts the story. Rapid SMS is another new project whereby someone can put up a form with questions online and then insert the mobile numbers of the people they want to answer the questionnaire. When they respond a graph is then created online which allows the questioner to gather data as quickly as possible. A final initiative still in its infancy and used by UNICEF is community mapping whereby people can note down the location of villages and relevant sites via SMS. This is then forwarded to UNIWIKI-this has been used for advocacy and to change geographic situations on the ground.

UNICEF has entered into partnerships with a number of websites such as TakingItGlobal and Mdialog to make UNIWIKI as incorporative as possible. UNICEF has worked with its regional websites to arrange that certain e-clubs feed directly into UNIWIKI space and has also arranged that during certain conferences (such as the recent Africa Ft for Children) their web-space is linked to UNIWIKI.

UNIWIKI is working on localising itself by making itself available in a number of languages. Regarding the question of costs -all the equipment needed for accessing UNIWIKI is relatively cheap. However, the costs of cell phone and internet usage is still dependent on the local situation. It is hoped that local providers of both internet and air-time will subsidise the costs to make UNIWIKI more readily available for people in the developing world. Political problems are another hurdle when it comes to accessing UNIWIKI. The example of Ethiopia was cited where until recently there had been no SMS service available for over three years. After removal of the ban, UNICEF was given an FM frequency through which UNIWIKI radio transmissions could be broadcast. <http://x.mepemepe.com>

## **Using web 2.0 to build global youth partnerships for Development**

29 November 2007, 9 am, United Nations in Nairobi

Approximately 40 participants

### **Youthink! Presentation-Christine Sedky, Worldbank**

Christine Sedky introduced the Worldbank's Youthink! Website aimed at the global youth population.

Inspired by the Washington Post's Young Post supplementary, a small group of workers at the Worldbank began a website aimed at children which addressed development issues-Kids Dev News. However, it was soon realized that the target age group should be moved up to the high school and university age group.

Youthink! began as very small-scale operation with little championing by the higher decision-makers in the Worldbank and with small-scale funding from the President's contingency fund. It was only after the results achieved by Youthink! that funding was increased for the project.

The Goals of Youthink! were clear from the beginning:

- to inform young people on development topics
- to provide material for teachers
- to engage young people on these topics

The strategy of Youthink! was to discuss development issues rather than just explain the Worldbank's role in development. As Youthink! progressed it affected outreach mechanisms and tools working with its country offices, engaging in consultations with other parties and constantly improving and updating itself so as to keep in-line with recent technological innovations. Most recently it has introduced a blog on the site so as to make it more interactive and create a 2.0 environment.

Youthink! also uses competitions such as the Big Splash photo contest to engage young people and share their experiences with others who visit the site.

Youthink! has been gradually translated into other languages so as to ensure that it is as current and relevant for its other language audiences as it is for its English audience.

To date Youthink! records over 30, 000 visits a month and received a Webby Award in the Activism category for the year 2006. Plans for the future include the expansion of its language base and more multimedia engagement through social networking sites.

An important lesson for Youthink! is the need to be sustainable and different from the thousands of other Worldbank sites.

### **One World Youth Project presentation-Abdulnuur and Ashima Bhardwaj**

The One World Youth Project is a non-profit organization aimed at bringing schools from both developed and the developing world together. The main way of achieving this target is linking up two sister-schools from different parts of the world. These schools then work together on one of the eight Millennium Development Goal's for the duration of the academic year-sharing ideas and experiences and cultural exchange and studying the real life story of a person affected by the



issue addressed by the MDG. Communication between these schools is done via the internet, letters and cultural exchange boxes.

For those children and youth who do not attend school the One World Youth Project tries to get them involved in some of their other activities such as their MDG awareness days. While originally there had been hope of having an annual forum for all youth involved in the project this was not feasible and instead the One World Youth Project has organized regional summits where youth can get together and discuss ideas as well as support a Goal in the host country.

A problem faced by the One World Youth Project is their limited ability to involve all the schools interested in participating in the project with the result being that they had to reject interested schools. The problem of quick communication and correspondence is another issue especially with schools located outside of large metropolis where access to internet is difficult.

**Water Wiki**

<b>Moderator</b>	Juerg Staudenmann – UNDP Bratislava Regional Centre Europe and the CIS juerg.staudenmann@undp.org www.undp.org/europeandcis http://WaterWiki.undp.sk
<b>Rapporteur</b>	James Ohayo, UN-HABITAT
	Case Study: <i>WaterWiki</i> by UNDP Modeled on the similar lines to Wikipedia, <i>WaterWiki</i> was conceived as a means of collecting information and systematically documenting the situation on <i>Water Governance</i> in Europe and the CIS. It is a knowledge platform and on-line collaboration tool for water practitioners and experts in Europe and the CIS revolving around a community of Practice (CoP). An on-line information collection and interactive knowledge mapping process that allows a wide range of people to benefit from the information base <i>WaterWiki</i> facilitates update of information by and improves information sharing between UNDP staff. The main page has an interactive map, resources pages and country pages as entry points. It has an easy to use, non-hierarchical and simple structure which allows anyone to add, edit, or delete information. Every edit can be undone through a rollback function. Democratic and consensus driven, it supports on-line and real-time editing of joint “ouvres” and is essentially ANARCHIC in nature. It has no rules, no molds and no “musts” Inaugurated with the help of two interns and a zero budget in September 2005, <i>WaterWiki</i> adopted a bottom-up approach , gathering as much information online as possible and allowing as many people as possible to contribute information.
<b>Challenges</b>	<ol style="list-style-type: none"> <li>1. <i>WaterWiki</i> carries a lot of good information but it is not easy to find or adequately presented.</li> <li>2. Water experts and practitioners have expressed a need for resource pages directly related to their areas of work.</li> <li>3. There is lack of spontaneous sharing, with most of the posted information based on specific requests.</li> <li>4. <i>WaterWiki</i> has only made a limited contribution to the work carried out by most members of the Community of Practitioners.</li> <li>5. Given the lack of funds, <i>WaterWiki</i> has been run on a part-time basis by the Regional Water advisor, with the help of interns, resulting in the site becoming an <b>organically grown chaos</b>.</li> <li>6. <i>WaterWiki</i> needs more structure and orientation, advanced tagging functions and automated listings.</li> <li>7. The Navigational aids need to be improved</li> <li>8. There is need to enhance <i>WaterWiki</i> with additional features (e.g. links to e-mail, or blogs) to encourage more spontaneous sharing of knowledge.</li> </ol>
<b>Recommendations</b>	<ol style="list-style-type: none"> <li>1. <i>WaterWiki</i> should be developed to become the one stop information and knowledge shop for water practitioners and experts.</li> <li>2. Needs to improve user friendliness with the incorporation of additional functions</li> <li>3. Promote <i>WaterWiki</i> to UN-Water in order to generate the financial support needed to take it to the next level.</li> <li>4. Choose the best modules from existing open-source solutions and incorporate to enable task to be performed based on compatibility.</li> </ol>

<b>The Way Forward</b>	Enhance the appeal of <i>WaterWik</i> by making it a true Wiki by: <ol style="list-style-type: none"><li>1. Increasing knowledge and experience by focusing on collaborative writing and publishing by water practitioners and experts</li><li>2. Outsourcing non-wiki functions.</li><li>3. Upgrading functionality, increasing incentives to participate and making it fun to participate.</li></ol>
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**Title of Workshop:** CHOICE, a web-based solution for providing Government services

**Date, Time and Location:** 29 November 2007, 9.30-10.15 am

**Venue: CR1 Number of Participants: 15**

Panelist/Speaker	Mr. <b>Aman Kumar Singh</b> , Joint Secretary, Information Technology and Biotechnology, Government of Chhattisgarh and CEO of CHIPS (Chhattisgarh Infotech and Biotech Promotion Society) <a href="http://www.chips.gov.in">www.chips.gov.in</a> <a href="http://www.choice.gov.in">www.choice.gov.in</a>
Rapporteur	Raf Tuts, UN-HABITAT
Outline of case study	<p>CHOICE, a web-based solution for providing Government services</p> <p>Chhattisgarh, one of the youngest Indian States with a population of 21 million and with low per capita income, low life expectancy and high infant mortality rates is the first State to develop a comprehensive e-governance system with the aim to complement the delivery system of the Government services.</p> <p>The State of Chhattisgarh recognizes the importance of Information and Communication Technology as a key enabler in its economic development and improving the quality of life. It seeks to provide all citizens widespread and easy access to government services, in the local language effectively addressing the existing digital divide and promoting entrepreneurs.</p> <p>The State created the Chhattisgarh infotech and biotech Promotion Society (CHiPS) as a nodal agent in Information Technnology and Biotechnology. CHOICE is the comprehensive e-governance system developed by CHiPS for the State of Chhattisgarh. The objectives of CHOICE are to provide one stop solution for all G2C services; to provide government services with care, courtesy, efficiency, transparency; to develop a robust system, which is scalable and extensible; and to automate the back end operations of government.</p> <p>CHOICE provides around 20 Government-to-Citizen “G2C” web based Services, which are offered with the help of choice centers run by private persons who have been notified as public servants.</p> <p>The bouquet of Services offered is very rich and includes Birth/Death Certificate; Local Resident Certificate; Income Certificate; Public Grievance; Payment of Electricity Bill; Payment of Property Tax ; Mutation of Property; and Building Construction Permission. Services soon to be added include Land Records including maps and mutation information; Education; Telemedicine; and Agriculture Information.</p> <p>CHOICE has curtailed the waiting time for certain documents from 15-20 days to 1-2 days. In addition, it has resulted in a definite reduction in corruption, improved the efficiency and efficacy of Government Officers, and increase in transparency and accountability of the government.</p>

	<p>CHOICE is underpinned by a capacity building programme for internal and external stakeholders. Training for political representatives in leadership and change management was critical in making CHOICE a success. However, also training for all levels of Government employees is indispensable.</p> <p>CHOICE has multiple linkages with Millennium Development Goals, including health, agriculture, land tenure, and education. In addition, the Public Private Partnership model behind CHOICE generates significant employment in the private sector.</p>
Challenges	<ul style="list-style-type: none"> <li>• E-governance needs different approaches in urban and rural areas. The business model of CHOICE, which works well in urban areas is not applicable to rural areas.</li> <li>• High levels of attrition in CHiPS: it is difficult to find and maintain qualified people to manage the CHOICE system as Government salaries are not competitive with private sector.</li> <li>• Corruption related to contact between citizens and government officials has been significantly reduced, but it is not fully removed. Measures have been taken to further reduce possibility of corruption, for instance through the “first in first out” principle.</li> <li>• It is prudent to adopt a pragmatic approach to Open Source Software: use it whenever possible, but be ready to complement with proprietary software when development and maintenance skills are lacking.</li> </ul>
Recommendations	<ul style="list-style-type: none"> <li>• Proper legal frameworks are essential for the sustainability of e-governance initiatives</li> <li>• Content and application are equally important; too much emphasis on technology may be counterproductive; it is extremely important to provide contents in the local language.</li> <li>• Think big, start small, and scale fast!</li> </ul>

**Workshop Title: Languages Other than English**  
**Presenter: James McNulty, International Monetary Fund**

During our workshop, we looked at lessons learned by the IMF on using languages other than English. The workshop concluded that:

- it is advisable for multilingual sites to start small
- they require close collaboration between content providers, developers and translation experts,
- usability testing and qualitative feedback are key

The discussion agreed that websites represented at Web4Dev contain content that could be very valuable to those users if translated into more languages.

It's clear that while English is the lingua franca of the web, a large fraction of users do not speak English – and that includes visitors to our sites.

It was clear that more translated content can contribute to several MDGs, but as this was a lesson-learning case study about a specific multilingual site moving into its first phase, there is no concrete proposal for the conference.

However, the workshop offered a few thoughts to add to points already made during Web4Dev about content in local languages.

First, multi-lingual content does not need to be perfect to be able to make a big difference to users -and this is reflected by the growth of web-based translation tools.

Second, it was suggested that to cover more languages, and to be more flexible, our organizations should consider the idea of being more proactive about releasing and channeling content through auto-translation tools on our users behalf -although accepting the risk of error that this brings may require a change in the way we think about content.

Third, it was suggested that small amounts of our key content that could be of particular interest and value to our most disenfranchised audiences could be identified or written from scratch by local authors, translated into their languages, and made available in the most accessible format for those audiences.

## Training Sessions

1. GEO Data Portal - a training workshop by UNEP on the GEO Data Portal. Participants will use the online databases to determine the variables used under Target 9 Millennium Development Goal 7 and display them as maps, graphs, data tables or download the data in different formats on the fly. <http://geodata.grid.unep.ch>. A good case study on using the Internet for environmental protection.
2. How to evaluate and ensure top quality websites - A combined training session by FAO and UNESCO.

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**Annex 4. Participant Evaluation Report**

**Fourth Web for Development Conference**

**Nairobi, Kenya  
28-30 November 2007**

**Participant Evaluation Report**

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## Acronyms and Abbreviations

ISS	Information Services Section
MDGs	Millennium Development Goals
NGO	Non-Governmental Organizations
UN	United Nations
UN-HABITAT	United Nations Human Settlements Programme
Web4Dev	Web for Development

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## Executive Summary

This report presents an evaluation of the Fourth Session of the Web4Dev Conference that took place in Nairobi, Kenya, from 28-30 November 2007. It was attended by 263 participants from 18 countries. The report is the result of analysis of answers to the participant survey questionnaire. It is hoped that the assessment findings, lessons learned and recommendations will feed into programming and design; and improve the Fifth session of the Web4Dev Conference to be held in a venue yet to be decided.

The participant's survey questionnaire targeted 263 initially estimated participants to the Conference. Questionnaires were distributed and collected at the end of the conference. A total of 100 participants completed and returned the survey questionnaire, representing a 38% response rate. Analysis was done using statistical software, SPSS.

Overall, the results of the participant survey are positive on all questions. In terms of participation, the conference attracted 263 participants from 18 countries. The conference attendance continued a growth pattern from 2006, with 59% increase over Third Web for Development Conference. The Conference had a male participation at 66% and female 34%. It was also inclusive, bringing Governments, Local Authorities, civil society organizations, private sector, the media and other Habitat Agenda partners to the conference. The United Nations/International Organisations had the highest share (32%) of participation.

Most participants were satisfied with the Conference. This is asserted by over 77% of respondents being very satisfied and satisfied with the Conference in terms of timeliness of information on conference objectives, usefulness of information on the Conference programme, logistics, content of Web4Dev websites, ease of registration, quality of facilities, communication facilities, and availability of support and assistance.

In aggregate, more than 69% of respondents indicated that their expectations were fully or significantly met by Web4Dev in terms of relevance of topics and themes, quality of speakers and presentations, organization of training sessions, organization of workshops and opportunities for participant discussion. The Conference was also rated as useful. Overall, 77% of respondents rated the opening and closing of the Conference as very useful or useful. Over 75% and 90% of respondents rated the workshops and the training sessions respectively as very useful or useful. The tour to CISCO academy was rated as very useful or useful by 73% of respondents. 57% of respondents found the exhibitions very useful or useful.

Survey respondents also gave the Conference a high utility rating of 73% indicating that they are very likely or likely to apply ideas learned at the Conference in their local context. 77% of the respondents indicated that they were likely to maintain networks and contacts established at the conference. On the question of likelihood of participating in the next Web for Development, 73% of respondents indicated they were very likely or likely to participate in Fifth session of Web for development.

Despite the positive results, there is still need for improvement. Some of the respondents asserted that they were very dissatisfied with the timeliness of information on the conference objectives (less than 11%); less than 13% of the respondents felt that information on the conference programme was not useful; expectations were not fully met (less than 5%); participants unlikely to apply what they learnt (2%). The reason for some of this dissatisfaction may be due to the fact that the fourth Web for Development Conference included more sessions on developmental issues rather than focusing only on technological solutions.

In the view of the above, the following main recommendations are put forward for consideration. They are divided in four parts.

**A Planning:** There is a need to reduce the number of workshops and to cluster related workshops more to ensure that all participants get time to attend; translation in other UN languages is needed; allocate more time to hands-on experience; few plenary speakers but allocate more time to workshops and training sessions;

**B Format:** The idea of an expert panel discussion should be explored more; training sessions gave excellent opportunity for learning, allocate more time to training (preferably 2 days); Ensure that the conference theme runs throughout the presentations and workshops. Ensure participating speakers and presenters are well prepared to address the topic; Ensure youth are engaged partners in the presentation, and exchange of new ideas and strategies.

**C Logistics:** improve the quality of hotels booked; Information on the Conference website should be updated throughout the conference; improve on transportation arrangements as well as the quality of internet connection.

The limited bandwidth and instability of the power supply in Kenya, which was outside the control of the organizing committee, posed problems of poor internet connectivity and power cuts during presentations. Nevertheless this illustrated the challenges of delivering ICT solutions in developing countries.

**(For details of the evaluation, Please read the entire report).**

# Participants Evaluation Report of the Fourth Web for Development Conference November 28-30 2007, Nairobi, Kenya

## 1. Introduction

Since its inception at a conference organized by the World Bank in 2003, the Web for Development meetings are now well established as a forum for the web community of UN agencies, and international development civil society organizations interested in using their expertise to show how the Internet can promote development. The three conferences already held have evolved to include not only the public sector, but the private sector as well. The Web for Development Conference is convened every year.

The 2005 conference of the Web4Dev was held in Washington DC, USA, was attended by 130 participants. The 2006 session was held in New York, USA, and it attracted 157 participants. The 2007 conference which attracted 263 participants from 18 countries was held in Nairobi, Kenya, from 28-30 November 2007.

The theme of the 2007 Session of the Web4Dev was "Driving economic and social development with the Internet", and focused on helping developing countries maximize the impact of the Internet in speeding up the achievement of the Millennium Development Goals (MDGs). It had four objectives: take stock of current and past programmes of the United Nations and its partners for development; identify the challenges, gaps and opportunities in using the Internet to drive development; identify key stakeholders and their complementary roles; develop a framework for the United Nations to deliver as one and to work with other maximum impact in using the Internet to drive socio-economic development.

The conference was organized around 20 workshops and 2 training sessions. Participants represented a wide range of Habitat Agenda partners including governments, parliamentarians, Local Authorities, Non-Governmental Organizations, private sector, professional and research institutions, foundations and the media.

This evaluation report has been prepared as part of the Monitoring and Evaluation functions of UN-HABITAT. It is a result of analysis of answers to Participant Survey Questionnaire.<sup>1</sup> The report provides the Web4Dev community and other stakeholders with the evaluative assessment of Fourth Web for Development Conference, from participants' point of -view.

## 2. Purpose and Scope

The main purpose of the participant evaluation was to assess the success, usefulness and relevance of Web4Dev. It was a self-evaluation study to find out what worked, what didn't work and to reflect on findings and lessons learnt, through evaluative evidence, to improve future Web for Development conferences.

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<sup>1</sup> The information and data used in the report is based on the answers given to the survey by participants of fourth Web4Dev, 28-30 November 2007, Nairobi, Kenya.

UN-HABITAT conducted the participant evaluation which targeted 263 initially estimated participants to the conference. It used the Survey Questionnaire as an assessment tool. The Questionnaire consisted of 28 closed-ended and two open-ended questions to participant satisfaction. Questions focused on gender issues; organizational affiliation; knowledge about Web4Dev; participant satisfaction; whether the Conference met participants expectations; usefulness of training and workshops sessions as well as suggestions/comments to improve future conferences.

A total of 100 participants completed and returned the survey Questionnaires, representing a 38% response rate. This report is the result of the analysis of answers to the Questionnaire.

### 3. Methodology and limitations

In order to assess participant satisfaction with the Web4Dev, a Survey Questionnaire was designed by UN-HABITAT. Questionnaires were distributed to participants, after the conference. They were also placed in strategic places like networking and dialogue rooms, exhibition hall and at the Evaluation desk. Participants were requested to complete and return the questionnaires. Volunteers assisted in distributing and collecting of completed questionnaires. At the end of the Conference, 100 participants had responded to the questionnaire.

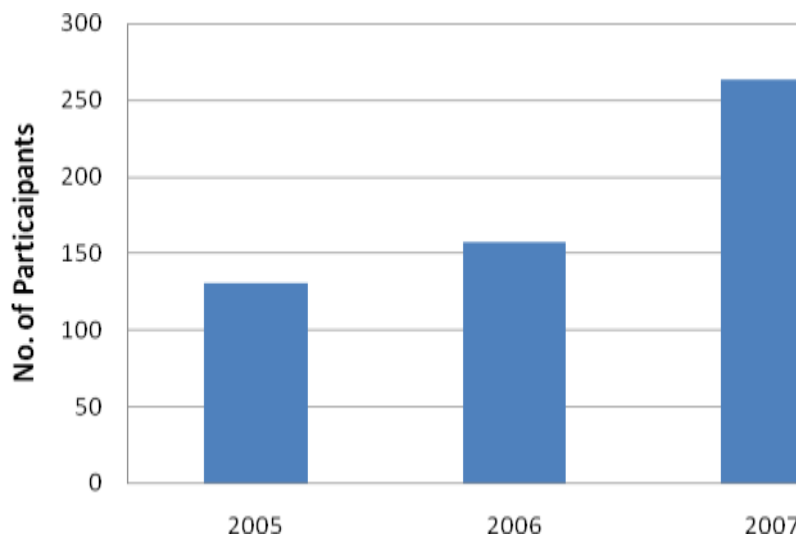
Information from respondents was entered into the computer and analyzed using statistical software, SPSS. The participant data that was used for the comparison was provided by Information Service Section (ISS), UN-HABITAT. The data was cleaned to delete duplicate records and correct any inconsistencies.

## 4. Findings

### 4.0 Participation at the Conference

Fourth Web4Dev conference registered a total of 479 participants with a total of 263 participants attending. This figure does not include some participants from the UN agencies in Nairobi whose registration details were not captured as they did not require registration badges. The target number of participants to attend fourth Web4Dev was 500. Figure 1, shows attendance to the Conferences since 2003.

**Figure 1: Conference Attendance Rates by Year.**



## 4.1 Participation by country

The first question on the survey questionnaire asked participants the country they normally reside in.

**Table 1: Participation by Country – Top Six Countries**

	Country	No. of Participants	% of the total
1	Kenya	56	55.4%
2	U.S.A	8	7.9%
3	UK	6	5.9%
4	France	4	4.0%
5	Italy	3	3.0%
6	Ethiopia	3	3.0%

Some comments from the respondents on country representation are:

I believe this is an eye opener to the youth like me. However, I think more needs to be done so that many youth can get to be involved e.g. inviting a group of students and youth groups to such events.

Too little representation/accessibility for grassroots organizations etc. Too much domination by specialists.

It is worth noting that there was limited representation from Latin America and future efforts must be done to enhance their participation.

## 4.2 Participation by gender

Advancing women's equal participation with men in all of the UN-HABITAT's interventions was also evident at the Web4Dev. The second survey question attempted to determine participation by gender. Table 2 summarizes the responses

**Table 2: Percentages of participation by gender**

	Gender	Percentages
Participant's Gender	Male	66%
	Female	34%
	Total	100%

Out of the respondents who reported on their gender, 66% were male and 34% female. With the confidence level of 95%, gender participation of the survey is in line with actual frequencies from the participant database where male participation is 74.3% and female is 25.6%.

### 4.3 Participation by organization affiliation

UN-HABITAT works directly with Governments, Local Authorities, civil society organizations, private sector, the media and other partners in implementing the Habitat Agenda and UN-HABITAT work programmes. A question was asked to gather information on the types of organizations participants represented.

**Table 4: Participants by organizations affiliation**

Which of the following are you most closely affiliated to?		Frequency	Percent
	United Nations/International Organisation	32	32%
	National Government	5	5%
	Private sector	8	8%
	Non-governmental organization	17	17%
	Academia/Research institute	26	26%
	Local government	1	1%
	Individual participant	3	3%
	Other	8	8%
	Total	100	100%

There was a high profile of United Nations/International Organisation (32%), followed by Academia/Research institute and National government and Private sector by 26% and 8% respectively. The Local government had the lowest representation of 1%.

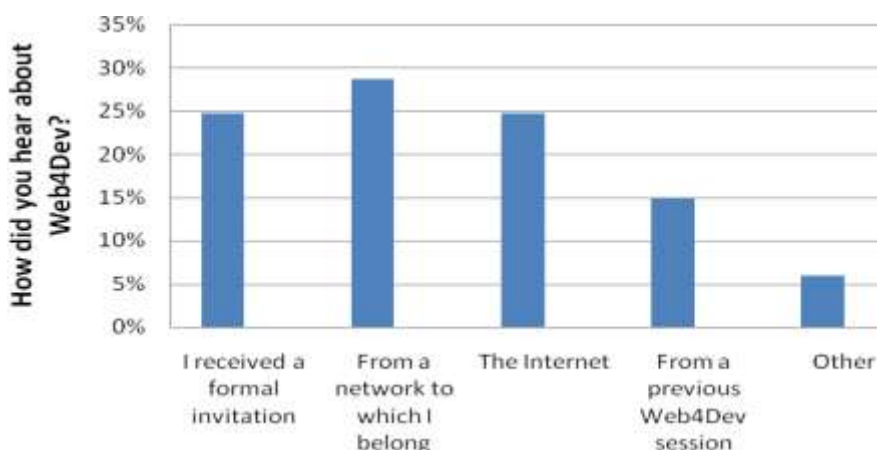
The following are some of the comments from respondents of organization representation at the Conference.

- *Too little representation/accessibility for grassroots organizations etc. Too much domination by specialists.*
- *It is very important if the marginalised and the vulnerable are invited for such conferences.*

### 4.4 Sources of hearing about the Conference

The question on hearing about the Conference was asked to assess how participants learned of the event. Eight sources were given for participants to choose from. Figure 3, shows responses in percentages.

**Figure 3: Percentages of respondents on sources of learning about Web4Dev**





Majority of the respondents 29% of respondents heard from networks they belonged to. The next most common source was formal invitation (25%). Technology is playing an increasing role in both the promotion of information and internet was the third common way of hearing about Web4Dev (24%). Respondents that heard from the previous Web4Dev conferences were 15%.

#### 4.5 Participants satisfaction

A set of ten questions were asked to assess whether participants were satisfied with the Conference (before the conference and during the conference). Table 4, indicates the degree to which respondents were satisfied.

**Table 5: Percentages showing how survey respondents were satisfied with the Conference**

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Total Response Rate
<b>Before the Conference: How satisfied were you with the Conference in terms of:</b>					
(a) Timeliness of information on conference objectives	5%	12%	52%	28%	100
(b) Usefulness of information on the conference programme	7%	14%	42%	35%	100
(c) Availability of information on the conference logistics	2%	4%	46%	26%	100
(d) Organization and content of Web4Dev websites	7%	10%	49%	32%	100
(e) Ease of registration online	4%	10%	36%	38%	100
<b>During the Conference: How satisfied were you with the Conference in terms of:</b>					
(f) The ease of obtaining photo ID and badge	9%	7%	36%	38%	100
(h) Communication facilities (including internet access)	1%	9%	34%	34%	100
(i) Availability of support and assistance	3%	11%	48%	25%	100
(j) Transport logistics	4%	13%	32%	18%	100

The majority of respondents were satisfied with the Conference. 80 % of respondents indicated that they were very satisfied or satisfied with the timeliness of information on conference objectives. 77% were very satisfied or satisfied with information on the conference programme. 72% were very satisfied or satisfied with the availability of information on the Conference logistics and ease of registration online. Over 81% respondents were also very satisfied or satisfied with organization and content of Web4Dev website. More than 66% of respondents were very satisfied or satisfied with ease of obtaining photo ID, quality of facilities, communication facilities, and availability of support and transport logistics.

However, 15% respondents were very dissatisfied or dissatisfied with the Conference arrangements before and during the conference.

Some of the comments from respondents are:

- *Well done! Please update your website regularly throughout the conference.*
- *The conference was good for me but I would have preferred it in French.*
- *The organization of everything was great.*
- *It was a wonderful idea to have it in a developing country particularly the field visit to Kibera.*
- *Some of the conference rooms were not easily available like Room 6.*
- *Good internet reminders/updates. Well researched works. Good tutors/teachers. Speaker profile no contacts.*
- *Participation and breakfast and lunch should be improved in order to make these most important seminars to continue effectively, if there are no funds, then you should be funded so as to improve this Conference.*
- *No water for participants. Lack of technical sessions, poor organization and lack of information. Very disappointed overall.*
- *Organizers should be time conscious and make sure transportation and the quality of internet access and power is improved.*
- *A very disorganized conference, logistics, preparations etc.*
- *Poor conditions at 680 Hotel.*

#### 4.6 Meeting participants' expectations

Five questions were asked to assess how the conference met expectations of participants. Table 5, summarizes the responses.

**Table 6: Degree on how the Conference met expectations of survey respondents**

	Not met	Somewhat met	Significantly met	Fully met	Total Response Rate
<b>Did the Conference meet your expectations in terms of:</b>					
(a) Relevance of topics and themes	1%	33%	36%	29%	87
(b) Quality of speakers and presentations	14%	22%	38%	26%	100
(c) Organization of workshops	13%	21%	25%	30%	96
(d) Organization of training sessions	9%	22%	33%	36%	64
(e) Opportunities for participant discussion	6%	18%	38%	38%	87

In aggregate, more than 66 % of respondents reported that their expectations were fully or significantly met. On the question of relevance of topics and themes, 65% of respondents had expectations significantly or fully met. The quality of speakers and presentations significantly or fully met expectations of 64% of respondents. Organization of workshops fully or significantly met expectations of 55% of the respondents. Organization of training sessions significantly or fully met the expectations of respondents by 69%. Opportunities for participant discussion significantly or fully met expectations by 76%.

Less than 9% in all five questions reported that the Conference did not meet their expectations.

Some of the comments from respondents are as follows:

- All the workshops were useful; however I could not attend as many as I would have wished. Perhaps next time consider clustering 3/4 that are similar so as to ensure participants benefit from more than one. Otherwise keep it up!
- I would have wished to see more discussion on 1.Content development.2.Practical demonstration. 3 .The exhibitions of key networking tools such as Wikis, SMS broadcast etc.
- It would have been good to have more workshops and less plenary sessions. There were too many workshops happening at the same time so I could not attend. Greater emphasis on networking would be good. Sessions could have been more participatory.
- There were too many workshops, covering too much ground and variable quality. Several were enormously inspiring while one or two were very poor.
- Not so bad, but you need to have time for all of us to attend all workshops. They are important to all of us. Probably have 3 workshops a day and extend the conference to a week. Well done!
- The MDG theme was silent in most workshops. It would be advised to keep the theme of the conference running throughout the presentations and workshops. Why not invite and have more visionaries like Jeffrey Sachs, Stephen Lewis, and David Suzuki?
- There were too many workshops at the same time.

#### 4.7 Usefulness of Conference sessions

The Questionnaire also attempted to determine the usefulness of the conference sessions to Participants. Respondents were asked to rate how useful each type of five Conference sessions was. Table 6 summarizes the responses in percentages.

**Table 7: Degree of how the Conference was useful to survey respondents**

	Not useful	Somewhat useful	Useful	Very useful	Total Response Rate
<b>Please rate how useful each type of Conference session was to you:</b>					
(a) Opening/closing of conference	6%	17%	45%	32%	88
(b) Workshops	2%	8%	37%	53%	59
(c ) Tour to CISCO Academy	2%	27%	37%	35%	60
(e) Exhibitions	9%	29%	38%	24%	72
(f) Cultural/networking events	19%	8%	34%	28%	89

The opening/closing session was to provide Conference participants with inspiring and relevant messages regarding the conference and the web for development issues. Overall, respondents rated opening/closing of the Conference as very useful or useful by 79%. Workshops provided participants with opportunities to learn and share experiences on new and emerging trends in using web for development. Over 77% of respondents rated the conference workshops as very useful or useful. The exhibition hall provided opportunities for participants to get services and programme information from exhibitors. The majority of respondents (62%) found exhibitions to be very useful (24%) or useful (38%). However, 6% of respondents indicated that the opening/closing session was not useful.

Some of the comments from respondents regarding usefulness of the Conference sessions are:

- *Was most useful especially between the session discussions with new people as we exchanged new ideas.*
- *The idea of the expert panel discussion appealed to me. Having people and participants submit recommendations brought tangible outcomes to the event.*
- *This conference is very good but more support is needed from UN organization to make the recommendation true.*
- *In future, participants should be able to attend all sessions/workshops. More time should be allocated to hands on exercises on the use of internet for development.*

#### **4.8 Likelihood to apply ideas learned, maintain networks and participating in the next Fifth Session of Web for development**

The Questionnaire also asked the likeliness to apply ideas, maintain networks and how likely participants of Web4Dev were to participate in Web4Dev V. The results are summarised in table 8 below.

**Table 8: Responses on likelihood to apply ideas learned, maintain networks and participate in Web4Dev V**

	Unlikely	Somewhat Likely	Likely	Very Likely	Total Response Rate
<b>How likely are you to:</b>					
(a) Attempt to apply ideas learned at the conference in your local context	2%	13%	33%	51%	86
(b) Maintain networks and contacts established at the conference	1%	10%	24%	64%	86
(c) Participate in the next Web4dev Conference in 2008	5%	12%	30%	53%	86

Overall, survey respondents gave the conference a high utility rating with 84% indicating that they are very likely or likely to apply ideas learned at the Conference in their local context. On the question of likelihood of participating in the next Web for development, 83% of respondents indicated they were very likely or likely to participate in Web4Dev V. 88% of the respondents indicated that they were very likely or likely to maintain networks and contacts established at the conference.

Some of the comments from respondents are as follows:

- *Thank you very much for organizing such a good conference. I picked up a great deal of useful advice and ideas to apply to my work. The UN location was marvellous, so was the hospitality.*
- *The information and contacts that I got from this conference is priceless.*
- *I wish we can be arranging more Web4dev for me to know and learn more.*
- *I commend the conference. It has given me new ideas and ways of how I can work with the society to achieve MDGs with ease and with complete resource use.*

- *I believe this is an eye opener to the youth like me. However, I think more needs to be done so that many youth can get to be involved e.g. inviting a group of students and youth groups to such events.*
- *Since participants (who travel from so far) spend 3 full days at the conference, we could actually have workshops/training sessions for at least 2 full days instead of just one.*

## 5. Conclusion

The Fourth session of Web for Development was evaluated by UN-HABITAT using the Survey Questionnaire. The survey aimed at assessing participation in and satisfaction of participants with the Conference. Overall, results from the survey are positive. Most respondents positively highlighted how inclusive, useful, educative, inspiring and catalysing the conference was. They also rated positively the usefulness of information presented, workshops, training sessions and the likelihood of participating in future Web for Development conferences.

Some Indication of the Conference's success is highlighted as follows:

- Broad attendance in large numbers (59% increase over Web4Dev III)
- Gender participation adequate (66% male, 44% female)
- Over 72% respondents satisfied with preparations before and during the conference
- Over 66% had their expectations met by the Conference
- Over 70% respondents rated the Conference useful
- 84% respondents would apply what they learnt at the Conference to their local context
- Over 50% of additional comments thanked the organizers of the event, highlighting how the Conference provided the needed motivation and inspiration to address challenges of using the Web to accelerate social-economic development.

## 6. Recommendations

The following recommendations were made to improve future Conferences. They are divided in four parts:

**A Planning:** Early planning and involvement of all stakeholders; importance of working within realistic timeframes and having necessary resources; regional preparatory meetings could be useful; ensure that women are given equal voices and that gender analysis is mainstreamed all sessions; translation in other UN Languages; reduce number of background papers and focus on few quality papers; sessions to be facilitated by skilled facilitators with experience of working with diverse groups; speeches at the opening and closing sessions to be few, shorter and focused (*Three hours of the opening and closing sessions were considered too long*); few speakers and enough time for interaction, or solutions to be identified or discussed; Web4Devs provided excellent opportunities for training and more training sessions should be organized at the next Conference.

**B Format:** Increase number days for workshops and training sessions to at least 2 days; allocate more for agencies to get together to discuss their views, challenges and projects; Ensure that the theme of the conference is runs throughout the presentations and workshops; Ensure youth are engaged partners in the presentation, and exchange of new ideas and strategies.

**C Logistics:** Improve transportation to venue, quality of internet access and power supply; Hotels booked were below par in quality and service; provide coffee and water to delegates to enable them have ample to time to socialise and network among themselves.

### D Workshops and training sessions

Survey results indicate that some participants had difficulties in attending their desired workshops because some run concurrently. Suggestions were made to extend workshops and training sessions to at least 2 days. Cluster related workshops to enhance attendance and possibly extend the conference to a week to cover all the topics and themes. Allocate time to hands-on exercises on the use of internet for development.

## APPENDIX A UN HABITAT PARTICIPANT SURVEY

### Introduction

The purpose of evaluating the Fourth Session of the Web for Development is to assess the success, usefulness and relevance of the conference. The assessment findings and lessons learned will assist in planning future Web for Development conferences. We would be very grateful if you could take a few minutes to complete this questionnaire.

The information you provide is for research purposes only and will be administered in accordance with applicable privacy laws. Your specific responses will be anonymous and will not be attributed to you as an individual. Please refrain from including specific information that may allow for the identification of any individual(s).

### Participant profile

#### 1. Which country do you normally reside in?

---

#### 2. Participant's Gender:

- Male  Female

#### 3. What is your partner type/organizational affiliation? (Please check only one)

- |   |  |
|---|--|
| <input type="checkbox"/> National government (including Embassy, Civil Servant, Parliament)   | <input type="checkbox"/> Academia/Research Institute (including Educational Institute, Polytechnic, College, University) |
| <input type="checkbox"/> Local government (including City, Local Authority, Local Government Association)                                   | <input type="checkbox"/> United Nations/International Organisation   |
| <input type="checkbox"/> Private sector   | <input type="checkbox"/> Individual participant  |
| <input type="checkbox"/> Non-governmental organization (NGO) (including Community-based organization, Faith-based organization, foundation) | <input type="checkbox"/> Other: (please specify) _____   |

#### 5. How did you hear about Web4Dev? (Please check only one)

- |   |  |
|---|--|
| <input type="checkbox"/> I received a formal invitation           | <input type="checkbox"/> From a network to which I belong  |
| <input type="checkbox"/> The Internet                             | <input type="checkbox"/> From the previous Web4Dev Session |
| <input type="checkbox"/> Media coverage (television, print, etc.) | <input type="checkbox"/> Other: (please specify)           |

#### 6. How satisfied were you with the Conference in terms of:

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	N/A
<b>Before the conference:</b>					
a) Timeliness of information on the conference <i>objectives</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Useful information on the conference <i>programme</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Information available on the conference <i>logistics</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Organization and content of Web4Dev website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Ease of registration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



<b>During the conference:</b>	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Not Applicable
f) The ease of obtaining photo id and badge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Quality of facilities (i.e. room, lighting, sound)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Communication facilities (including Internet access)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Support and assistance available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Transportation logistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 7. Did the Conference meet your expectations in terms of:

	Not Met	Somewhat Met	Significantly Met	Fully Met	Not Applicable
a) Relevance of topics and themes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Quality of speakers and presentations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Organization of workshops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Organization of training sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Opportunities for participant discussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 8. Please rate the Conference in order of the usefulness to you:

	Not Useful	Somewhat Useful	Useful	Very Useful	Not Applicable
a) Opening/Closing of the session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Workshops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Training sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Tour to Cisco Academy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Exhibitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Cultural/Networking events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 9. How likely are you to:

	Unlikely	Somewhat Likely	Likely	Very Likely	Not Applicable
a) Attempt to apply ideas learned at the conference in your local context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Maintain networks and contacts established at the conference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Participate in the next Web4Dev	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 10. Additional comments:

**Thank you for your participation!**