

## *Executive Summary*

### *Workshop on “Innovative Mobile Technology & Services for Developing Countries” IMTS-DC2008.*

#### *Faculty of Computing & IT, Makerere University, Kampala, Uganda.*

The one day workshop was held, on the 1<sup>st</sup> of August, 2008, with an international and local expert participants and audience.

#### **Highlights:**

The workshop started with opening speech by the Ministry of ICT and keynote speeches by Exec. director of the Ugandan communications commission, UCC and Nokia Research Africa manager. The main points are that of addressing the sustainable development of mobile and technology and services in Africa, strategies to provide access to information services to the next billion rural communities in developing countries in Africa. The question of how mobile technology and services can be used for development ? Affordable and appropriate technologies, and enabling policy to harness the mobile technology explosion were addressed during the keynote. Example projects started to address these issues were also presented. Mobiles as platforms for delivery of public and private information services have been identified.

1.0 In session one, Mobile Technology & Application Software Development, Education and Innovative Mobile services have been identified. These were promoted as crucial for the future development of mobile technology, content and services development with in the context of developing countries. Developing countries should devise such programs to educate and develop a mobile service and content provider sector, and use it as spinoff for social and economic development.

1.1 The session discussed the initiative for short courses in Mobile Applications

Programming, initiated by the EPROM initiative from MIT media Lab in the USA.

The demand for mobile platform based programming is very high as compared to PC programming. The program also promotes the entrepreneurial aspect of local student projects.

1.2 Another presentation dealt with the long term aspect of developing, innovative and locally relevant mobile services and mobile content. The initiative in Mobile Computing and Applications Software Development, with educational, research and mobile usability lab components, launched by the faculty of Computing and IT, at

Makerere University, in Kampala, Uganda was presented. The program is planned as a masters program, with entrepreneurial and incubation aspects built into it.

## 2.0 The next session was Enabling Policy to Harness the Mobile Growth

The role of enabling policy in supporting the development of mobile technology and services in developing countries is of paramount importance. Issues that were raised during the workshop were.

- 2.1 It has been identified that building a common vision and a public private partnerships to realize the developmental aspects of mobile technology and services is very important
- 2.2 Migration towards the next generation technology, based on a standards based path and utilizing the benefits of convergence in telecom technologies is addressed. Mobile broadband technologies which can benefit.
- 2.3 Some of the regulatory interventions recommended in the workshop were:
  - 2.3.1 Reduction of the licensing fees, more competition and number portability to address the mobile services affordability problem.
  - 2.3.2 Incentives for small and medium enterprises (SMEs) involved in mobile content and service provisioning.
  - 2.3.3 Promotion of R&D in mobile technology and services, at local educational and research institutes is recommended to address the lack of qualified decision making and competent personnel. This will support the regulatory and policy making process. The sustainability aspect of the mobile technology could also be addressed by promoting the development of a local content and service provider sector.

## 3.0 Addressing the local language issues for mobile services in Africa was another session at the workshop.

Africa is the cradle of thousands of local languages. If mobile services are to succeed in addressing the poor local communities it should be designed to support local languages and have an easy to use user interface. Language technology tools addressing some applications using mobile based language learning and local language dictionaries was presented.

## 4.0 How to address low-income rural communities with mobile services

Crucial aspects and strategies in addressing poor rural communities with public and private information services using the mobile as the platform of choice were presented in this session. Challenges such as the limitations of the SMS, local language support, low literacy level, the need for substantial training and sensitization were addressed. Despite the challenges, once the threshold is passed, the technology uptake was found to be considerably

high. The development of an information hub in the form of village phone operators was recommended.

#### 5.0 Report from the W3C workshop on the Role of Mobile Technology for Social Development, held in Sao Paulo, Brazil June 2-3, 2008.

Main highlights of the above W3C workshop were discussed by a web-cast from the W3C site. A collaborative framework should be realized to promote a common understanding and vision, of the various initiatives thereby help the sustainable development of mobile technology and services, in the world.

6.0 Poster sessions: Students of FCIT, Makerere university presented their research work during the workshop for comments and collaboration between the different stakeholders.

#### Workshop Motivation:

Due to the explosive growth of mobile and wireless technologies and services in Africa, a number of questions are being raised by academicians, technology professionals, industry and policy makers on how it is going to affect the future development of society in Africa. The recent World Wide Web consortium (W3C) and World bank organized world dialogue and workshop in Brazil, have discussed issues on the effects of mobile technology for social and economic development. This was also partly motivated by the increased internet and web services emergence in the mobile area, and the possibility of using mobile terminals as a tool for delivering public information and services. A number of mobile projects for education, health, governance, banking and learning have been identified based on mobile and web technologies. In the opinion of the workshop organizers, the current few mobile SMS based services, appearing on the scene are just a proof of concept and announce the beginning of the thousands of mobile services that will engulf the mobile market of the future. At the same time local mobile content, affordability and total cost of ownership for mobile services are issues that need to be addressed for these services. The workshop therefore was aiming to initiate a dialogue between stakeholders and come up with proposals on how to promote these developmental challenges in a constructive way.

## Program Overview

**Welcome:** ..... Prof. V. Baryamureeba, Dean CIT .....9:00 AM

**Opening Speech:**.... Hon. Dr. Ham Mulira, Minister of ICT.....9:10-9:30 AM

**Keynote:** 1- Hon. Mr. Patrick Masambu, Exec. Director of UCC...9:30 – 10:00 AM

2- Mr. Jussi Impio, Nokia Research .....10:00 - 10:30 AM

### **Morning Session 1<sup>st</sup> August, 2008**

1- ***Innovative Mobile Services, Education and Development.*** ..... 11:00-11:30 AM

-Nathan Eagle, MIT Media Lab, Fisseha Mekuria, Faculty of Computing & IT

2- ***Enabling policies to Harness the Mobile Growth.*** ..... 11:30-12:00 AM

- Christine Mugimba, Uganda Communications Commission,UCC  
& Fisseha Mekuria Faculty of Computing & IT.

3- ***Language Technologies for Mobile Content in Africa*** ..... 12:00- 12:20

- Arvi Hurskainen, Helsinki University of Technology, Finland

***Panel Discussion: ..... 12:20-13:00***

***Research Projects at CIT Posters Sessions.....14:00 – 15:00***

### **Afternoon Session:**

4- ***Insights and Challenges in Serving Low-income Markets With Mobile Applications.***

.....15:00- 15:30 ..... Eric Kantor, Grameen Foundation

5- ***Report from the World dialogue on" the Role of Mobile Technology for Social and Economic Development."*** Stephane Boyera, W3C..... 16:00-16:15

***Closing Discussion & Resolutions..... 16:40-17:15***