W3C Workshop on the Role Mobile Technology in Fostering Social Development

Educating the Architects of the Mobile Economy:
A Program for Mobile Computing And Applications Software Development

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Fostering Social Development Through Education on MTS

- Providing a structured education in Mobile Technology & Services (MTS)
- Develop the needed competence for the technology & service market.
- Emergence of a Local Mobile Content & Service Provider Sector
  - Employment Creation!
- Social development & economic development are interrelated.
Current Mobile Technologies & Services: GSM/GPRS/EDGE/3G/ & Mobile TV

- Operators are Comfortable with Voice & SMS services and revenues.
- Reasons NOT to Migrate to NG mobile Services.
  - Investment cost
  - Unavailability of mobile Content & Innovative data services.
  - Low subscriber base for mobile web & data services:
    - Usability & Affordability.
- Reluctance to support 3rd party content & service provider sector to grow: Fear of revenue sharing.
- Innovations on existing services: Context awareness.
Mobile Technology a Perspective

- Voice
- Data, SMS, MMS, e-mail
- Multimedia Games, GPS Web Services
- Terminals
  - NMT, AMPS
  - PSTN
  - AXE, GSM MSC, GPRS
  - Digital Systems
  - UMTS SGSN GGSN MGW MSS

- Multi-Service
- Multi-Mode
- Convergence
- ABC Terminals
- Wireless/Mobile
- Cognitive Radio

- M-Health
- M-Learning
- M-Payment,

Analog
Fixed
Bulky/
Spectral inefficiency
Inaccuracy
Single-Mode


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Misunderstood 3G phones cost both Subscribers and Mobile Industry, a UK study?

Source WDSGlobal, UK, 2006

What will the figures be for Developing Region Context?

“Mobile Computing and Apps. Software Development!”
How to address Important Growth Factors

- For Mobile Web Services to Foster Social development we need to Develop Capacity and Competence in:
  - Improving the Quality and increase number of Relevant Mobile Data Services.
  - Improving the usability and context awareness of Mobile Data Services.
  - The role of Educational and Research Institutes in Developing countries?

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Short Term Solutions
CTIT Addis Ababa

- Short Seminars & Workshops in Mobile Communication Technology & Services
  - Mobile VAS seminars and workshops.
  - Regulatory & Policy issues
- Short courses in Mobile Applications Programming: Students projects.
- Established Mobile Programming Lab.
- Continuity & Sustainability Problems
Long Term Solution
The MCASD Program: Motivations

- **Mobile is a Mass Market and an Enabler!**
- Harnessing mobile technology explosion in Dev. Regions:
  - Large no. of Mobile Application Software Developers.
  - Mobile Content & Web-service Developers.
  - Mobile Usability & Research Lab
    - Mobile Web & Social development
  - Emergence of a Mobile Service & Content Provider Sector: Entrepreneurial Aspect.
The Masters Program - MCASD
(Mobile computing and Application Software Development)

Educating the Architects of the Mobile Economy!

Three Pillars

Masters Curriculum in MCASD

Research Group: Mobile Technology, Content & Services

- Innovative Mobile Services

Mobile Lab.: R&D, Prototyping, Usability testing

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MCASD Facilitating Partnership for Technology Localization

Ethiopic Alphabets

Standard PC Keyboard Mapping: A result of decades of work

Ethiopic Keymat Layout

Mobile phone Keyboard Mapping: Made Possible!
Average TCO (Total cost of ownership) for the lowest income group (80 Countries in Developing regions included in the data)
Source: Nokia new horizons 1/2008/ www.nokia.com/NGM

13.16

Tax 15 % Services 74 % Handset 11 % Handset 8 %

- 5 %

Tax 14 % Services 78 %

- 33 %

Average TCO (Total cost of ownership) for the lowest income group
(80 Countries in Developing regions included in the data)
Source: Nokia new horizons 1/2008/ www.nokia.com/NGM
MCASD Challenges:

- University Curriculum Approval Process
  - Mobile Lab space and equipment- Nokia donation!
  - More time for research, prototyping & field testing of new mobile services.
  - Expected large intake – Popular course
  - University Policy on IPRs? on Progress.
- Collaborative research:
  - UCC, Mobile Operators & Nokia in Research group
  - Research group and projects started.

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A model:... Mobile-web Technology and Web services

- Web- services for developing regions
  - Mobiles act as thin-clients for Web-apps. hosted on Web servers.
  - Pros: Less requirement imposed on users
    - No need for installation and updates
    - Location and device independence
    - Services are independent of OS platform
  - Cons: Online Access
    - Exs. Google Gears, Zimbra Desktop,..
Conclusion

- Partnering in Educating the Architects of the Mobile Economy: MCASD.
- Research & Mobile Lab: Usability & Context.
- Innovative mobile Data Services
  - M-Learning, M-health, M-Payment, Mobile Web-services.....
- Mobile Service & Content provider sector.
- Sustainable Social Development.
- The role of basic infrastructures
“The most far-reaching changes will come, as they often do, from the kinds of social relationships, stake-holder collaborations, market and services that the ICT infrastructure makes possible “………………..ITU

Thank You