Audio Wiki for Mobile Communities: Information Systems for the Rest of Us

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Media Lab UIAH - Where we are

- University of Art and Design Helsinki
- 130 years
- Products / Productions
- Focus on the end user / viewer
- 5 schools
  - Motion Picture & Television
  - Design
  - Art Education
  - Visual Culture
  - Media Lab
MobilED - project

Mobile Tools and Services for Formal and Informal Learning in Developing Countries

http://mobiled.uiah.fi
**MobilED Partners**

1. Media Lab Helsinki, Finland
2. Meraka Institute of the Council for Scientific and Industrial Research (CSIR), South Africa
3. Centre for Research on Networked Learning and Knowledge Building, University of Helsinki (FI);
4. Tshwane University of Technology (SA);
5. University of Pretoria (SA);
6. Escola do Futuro Universidade de São Paulo (BR);
7. WikiMedia Foundation, (US);
8. Center for Knowledge Societies (IN);

Discussions with partners in Colombia, Philippines and Indonesia
MobilED is designing learning environments that are meaningfully enhanced with mobile technologies and services.
Context
”Imagine a world in which every single person on the planet is given free access to the sum of all human knowledge. That’s what we’re doing.”

Digital Divide
Connectivity
Global Connectivity

Mobile phone subscribers in the world
2005 - 33%
2010 - 47%

Internet users in the world
2005 - 13%
- Slow growth

Source: International Telecommunication Union 2006
Competences and skills
Computer literacy

• Close to 50% of EU population have no computer skills

• 25% of 16-24 year old do not have the basic computer skills needed to use WWW

Source: Eurostat 2006
One Solution
Mobile Phones

collaborative, social, infrastructure, every-day technology, media, sharing, publishing, audio, texts, images, video, user-centred, personal, networked, portable, ubiquitous, durable,
R&D Context
Prototype Research
Model
Product
Service

Pedagogical Practice
Pedagogical Research

Technology Platform
Technology Research

Developmental Research
Sustainability – Massification – Acceptance - Dissemination

Outputs
Technology platforms
Sustainability models
Dissemination strategy
“Pedagogy” in MobilED

Empowering people
Human-centred learning
Group/community-centred learning
Project-based learning
Inquiry learning
Problem solving
“Technology” in MobilED

Basic GSM phones (audio, text messages)
  Smart phones
  Internet tablets
  Wireless networks: GSM, 3G, WLAN
Voice, speech and language technologies
Social software: Wiki engines, blogs, KB tools
Free/libre/open content
“Design” in MobilED

Ethnographic Action Research (EAR) (Tacchi, Slater & Hearn 2003)
Participatory design (Ehn 1992)
Scenario-based design (Carroll 2000)
Human-centred design (ISO 13407 - 1999)
Activity-centred design (Norman 2005)
Rapid video prototyping (Löwgren 2004)
Scenarios and Rapid Prototyping
MobilED Scenario Videos

Audio Encyclopaedia in informal learning (MP4, 9.1M)
How Audio Encyclopaedia works (MP4, 11M)
Audio Encyclopaedia in the classroom (MP4, 3.3M)
Smart phones in project learning (MP4 6.4M)

Videos online at: http://mobiled.uiah.fi/?page_id=3
MobilED Server
Requests article via SMS

Reads article

Contributes audio annotation

Plays audio annotation(s)

SMS gateway

MediaWiki

PBX

Text to Speech

MOBILED SERVER
MobilED Server

- Kannel - SMS/MMS communication interface/gateway
- Asterisk - PBX for audio telephony communications
- MediaWiki - wiki engine
- Flite - text-to-speech engine (Festival)
Field Tests
Field Tests in South Africa

• Two schools: private and public
• 6 classes: 25 to 40 students in a class
• 15-16 year old students with variety of cultural backgrounds
• Two (3x2) HIV/Aids group study project with podcasting activity
• One school trip case study
Tools and Services

• 5 x Nokia 3230 (Series 60)
• 5 x Nokia Music Stands MD-1 - speaker for the phones

• Access to the MobilED server with Wikipedia content
• Access to “emthy” MediaWiki engine to add your own “podcasting” to the server
Results from the pilots

+ Using mobile phones was an everyday skill - No need to study the use of the device
+ The service was fast to use
+ Podcasting experience was highly appreciated

• Using the touch tone keys to give commands was not easy, neither very complicate to learn

- Quality of the TTS was not good enough
- Level of the audio output was not loud enough
New Scenarios of Use

- NGO’s (non-governmental organizations), SME’s, work groups: for delivering news, guidelines, for gathering information, for discussion, etc.

- General governmental information services: “health”, “education”, “elections” etc.

- Village / community information services: “water”, “shops”, “clinic” and “forum” for public speech / feedback.
Thank you!