Context and Mobile Learning Support

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dspace.ou.nl
http://www.space-invaders.com/
#1 Invaded land

#2 Learning in invaded land

#3 A model for all of this: AICHE

#4 Research needed
computers become ubiquitous and adapt to their environment
body network sensors, rooms
intelligent carpets, wall colour, or gesture tracking, building, architects already create completely new facades for buildings, public places and city planning new artefacts will enable dynamic routing and highlighting of space
Fast Human Enhancements

Donnerstag, 5. November 2009
Magic Artefacts

Donnerstag, 5. November 2009
No Phones.
No Internet.

Think about it!
### WORLD INTERNET USAGE AND POPULATION STATISTICS

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>991,002,342</td>
<td>4,514,400</td>
<td>65,903,900</td>
<td>6.7</td>
<td>1,359.9 %</td>
<td>3.9 %</td>
</tr>
<tr>
<td>Asia</td>
<td>3,808,070,503</td>
<td>114,304,000</td>
<td>704,213,930</td>
<td>18.5 %</td>
<td>518.1 %</td>
<td>42.2 %</td>
</tr>
<tr>
<td>Europe</td>
<td>803,850,858</td>
<td>105,096,093</td>
<td>402,380,474</td>
<td>50.1 %</td>
<td>282.9 %</td>
<td>24.2 %</td>
</tr>
<tr>
<td>Middle East</td>
<td>202,687,005</td>
<td>3,284,800</td>
<td>47,964,146</td>
<td>23.7 %</td>
<td>1,360.2 %</td>
<td>2.9 %</td>
</tr>
<tr>
<td>North America</td>
<td>340,831,831</td>
<td>108,096,800</td>
<td>251,735,500</td>
<td>73.9 %</td>
<td>132.9 %</td>
<td>15.1 %</td>
</tr>
<tr>
<td>Latin America/Caribbean</td>
<td>586,662,468</td>
<td>18,068,919</td>
<td>175,834,439</td>
<td>30.0 %</td>
<td>873.1 %</td>
<td>10.5 %</td>
</tr>
<tr>
<td>Oceania / Australia</td>
<td>34,700,201</td>
<td>7,620,480</td>
<td>20,838,019</td>
<td>60.1 %</td>
<td>173.4 %</td>
<td>1.2 %</td>
</tr>
<tr>
<td>WORLD TOTAL</td>
<td>6,767,805,208</td>
<td>360,985,492</td>
<td>1,668,870,408</td>
<td>24.7 %</td>
<td>362.3 %</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

NOTES: (1) Internet Usage and World Population Statistics are for June 30, 2009. (2) CLICK on each world region name for detailed regional usage information. (3) Demographic (Population) numbers are based on data from the US Census Bureau. (4) Internet usage information comes from data published by Nielsen Online, by the International Telecommunications Union, by GfK, local Regulators and other reliable sources. (5) For definitions, disclaimer, and navigation help, please refer to the Site Surfing Guide. (6) Information in this site may be cited, giving the due credit to [www.internetworldstats.com](http://www.internetworldstats.com). Copyright © 2001 - 2009, Miniwatts Marketing Group. All rights reserved worldwide.
consumers
prosumers
### Alexa Global Traffic Rankings

<table>
<thead>
<tr>
<th>Rank</th>
<th>2005 (1)</th>
<th>2008 (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>yahoo.com</td>
<td>yahoo.com</td>
</tr>
<tr>
<td>2</td>
<td>msn.com</td>
<td>youtube.com</td>
</tr>
<tr>
<td>3</td>
<td>google.com</td>
<td>live.com</td>
</tr>
<tr>
<td>4</td>
<td>ebay.com</td>
<td>google.com</td>
</tr>
<tr>
<td>5</td>
<td>amazon.com</td>
<td>myspace.com</td>
</tr>
<tr>
<td>6</td>
<td>microsoft.com</td>
<td>facebook.com</td>
</tr>
<tr>
<td>7</td>
<td>myspace.com</td>
<td>msn.com</td>
</tr>
<tr>
<td>8</td>
<td>google.co.uk</td>
<td>hi5.com</td>
</tr>
<tr>
<td>9</td>
<td>aol.com</td>
<td>wikipedia.org</td>
</tr>
<tr>
<td>10</td>
<td>go.com</td>
<td>orkut.com</td>
</tr>
</tbody>
</table>

Traffic rank is based on three months of aggregated historical traffic data from Alexa Toolbar users and is a combined measure of page views/users (geometric mean of the two quantities averaged over time).

(1) Rankings as of 12/31/05, excludes Microsoft Passport; (2) Rankings as of 3/12/08
Source: Alexa Global Traffic Rankings, Morgan Stanley Research
Rich Content
Open Educational Content and Metadata: MACE Project
Each year 1.2 billion new phones, information can be accessed not only in city centres but much more important in rural areas, information will grow even more rapidly, mobile devices become more context-aware, new user interfaces

Mobile Access
mobiles as universal tools for reading, discussion, documentation, annotation, and others learning activities.
Mobile Phones are still considered as a toy or non-learning device in the classroom.
While a variety of senseful learning practices have already been described in 2002.
Sensors for learning

multi-method assessment measuring real world activities, long-term assessment, personal interaction logs, from formal to formative assessment

Displays for learning

embedded displays, reflection in and about action, anywhere anytime delivery, multimodal displays, personal and shared displays
# 2: Learning in invaded land
MOBILES

Time-to-Adoption Horizon: One Year or Less

The unprecedented evolution of mobiles continues to generate great interest. The idea of a single portable device that can make phone calls, take pictures, record audio and video, store data, music, and movies, and interact with the Internet — all of it — has become so interwoven into our lifestyles that it is now surprising to learn that someone does not carry one. As new devices continue to enter the market, new features and new capabilities are appearing at an accelerated pace. One recent feature — the ability to run third-party applications — represents a fundamental change in the way we regard mobiles and opens the door to myriad uses for education, entertainment, productivity, and social interaction.
Connecting the World and Digital Media
how do humans learn with augmented objects?
how can we unleash the power of **context** for the design of ubiquitous learning?
context gives meaning,  The term context is used in different research disciplines. Linguistics makes two claims about context. Context is defined as the text in which a word or passage appears and which helps ascertain its meaning. the surroundings, circumstances, environment, background or settings which determine, specify, or clarify the meaning of an event.
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### Table 1: A reference model for mobile social software for learning

<table>
<thead>
<tr>
<th>Content</th>
<th>Context</th>
<th>Purpose</th>
<th>Information flow</th>
<th>Pedagogical model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annotations</td>
<td>Individuality context</td>
<td>Sharing content and knowledge</td>
<td>One-to-one</td>
<td>Behaviourist</td>
</tr>
<tr>
<td>Documents</td>
<td>Time context</td>
<td>Facilitate discussion and brainstorming</td>
<td>One-to-many</td>
<td>Cognitive</td>
</tr>
<tr>
<td>Messages</td>
<td>Locations context</td>
<td>Social awareness</td>
<td>Many-to-one</td>
<td>Constructivist</td>
</tr>
<tr>
<td>Notifications</td>
<td>Environment or activity context</td>
<td>Guide communication</td>
<td>Many-to-many</td>
<td>Social constructivist</td>
</tr>
<tr>
<td></td>
<td>Relations context</td>
<td>Engagement and immersion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Context Dimensions**
Context and Episodic Memory
SenseCam in Context

The v2.3 SenseCam shown close up and as typically worn by a user. The model pictured here has a clear plastic case that reveals some of the internal components.
Context Indicators
# three: A Model for all of this

Ambient Information Channels

Donnerstag, 5. November 2009
AICHE components

Donnerstag, 5. November 2009
AICHE Processes
AICHE Processes

Donnerstag, 5. November 2009
AICHE used for
- system analysis
- innovation and engineering
- instructional design
Contextualised TV

Donnerstag, 5. November 2009
Donnerstag, 5. November 2009
# 4: Research Needed
Content in Context
contextualised delivery, media creation in learning situations, synchronisation of learning activities, ubiquitous learning environments, mixed reality mash-ups

Reflection in Context
framing of learning activities, visualisation of contextual information, context indicators, multi-channel synchronisation
Donnerstag, 5. November 2009
News/Death ratio, beware the hype!
posted By Marcus Specht, on 2009-06-13 09:32:51
This is a very nice analysis of the news reporting about current and daily happening catastrophes which calculates a news death ration for swine flu and tuberculosis. context, social media
Mobile Moodle

Medialab

The medialounge represents a learner’s home context.

Launch video

Last modified: Wednesday, 13 May 2009, 07:58 PM

Medialab

You are logged in as Marcus Specht (Logout)

Moodle1 → Medialab

BLOCKS
PEOPLE
ADMINISTRATION
MY COURSES
LATEST NEWS

Topic outline

3 The Team Room

Designed to represent a small meeting room or working area in a professional context, the team room allows medialab researchers to develop tools for a professional context, as well as providing excellent meeting facilities.

Team Room
Contextual Filtering

Figure 1 One variation of the language learning software using a room-based search to filter the learning content
Augmented Reality 4 L
thank you!
marcuspecht.de