Context-Aware Model in a Ubiquitous Learning Environment

Cássia Nino, Débora N F Barbosa, Jader Marques
Unilasalle University
{cassia,nice}@unilasalle.edu.br, jader@uniritter.edu.br

Jorge Luis Victoria Barbosa
University of Vale do Rio dos Sinos
jbarbosa@unisinos.br

Cláudio Fernando Resin Geyer
Federal University of Rio Grande do Sul
geyer@inf.ufrgs.br

Iara Augustin
Federal University of Santa Maria
august@inf.ufsm.br
Summary

- Motivation
- GlobalEdu and ISAM
- Context Aware Model
- PA Architecture
- Scenario
- Contributions
- Future Works
Motivation

• Towards Ubiquitous Learning

The distributed, mobility and context-aware possibilities requires new models of educational applications.

Global connectivity scenario
Motivation

• Ubiquitous Learning

For us, one of the characteristics of U-learning is that the daily context of the user can be connected with the local context, joining current information with educational objectives

GLOBALEDU
a ubiquitous learning proposal
GlobalEdu and ISAM

- GlobalEdu architecture

![Diagram of GlobalEdu architecture]

Educational Services:
- Profile Management
- Context Management
- Content Management

Support Services:
- Presentation
- Access
- Communication
- Persistence

ISAM Execution Environment
GlobalEdu and ISAM

- ISAM (Infra-estrutura de Suporte às Aplicações Móveis)
  - Software architecture that manages large-scale pervasive environment
GlobalEdu and ISAM
• GlobalEdu architecture
GlobalEdu

- Support Services
  - Presentation
    - Interface
  - Access
    - Presence of PAs
  - Communication
    - Protocol between Services and PAs
- Persistence
  - Learners's data
GlobalEdu

• Educational Services
  – Profile Management
    • Learner model
    • Metadata
  – Content Management
    • Learning Objects
  – Context Management
    • Learner Context
Context Aware Model

• Social Context
  − Location Context
  − Presence of others PA's
  − People, Events, Resources

• Physical Context
  − Devices, network

• Representation: ontology
Scenario

- Environment
Scenario

- **U-inContext**
  - A context aware application
Scenario
Scenario
Scenario

:::U-inContext:::

Minhas informações  Sobre

Visibilidade
Informações Pessoais
Objetivos
Interesses
Competências

:: Informações de seu contexto ::

:::Competencias:::

Conteúdo: 
Habilidades: 
Descrição: 

Adicionar

:::Interesses:::

Tipo: Educacional
Conteúdo: 
Descrição: 

Adicionar

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<thead>
<tr>
<th>Tipo</th>
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<td>Educacional</td>
<td>Computação Pervasiva</td>
</tr>
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</table>
Contributions

- GlobalEdu contributed by the using the educational agents and educational services to implement and improve the ubiquitous learning.

- The ISAM project is extremely interesting because it supports a stabilized pervasive environment.
Future Works

• Validation
  – Content Management Module
  – Profile Management Module

• Adaptability to other devices

• Algorithms to optimize the matching between the PAs
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