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April 11-13, 2011 – Utah State University
Logan, Utah USA
Research Groups

• Proativa - Group of Research and Production of Interactive Environments and Learning Objects
  – Coordinator: Professor Aires
  – Objective: Research, Production and Application of Educational Resources

• Great - Group of Computer Networks, Software Engineering and Systems
  – Coordinator: Professor Rossana
  – One of the Objectives: Research and Development in the fields of Software Engineering (development process, test, quality, etc) and mobile computing
Guided Customization for Learning Objects

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José Aires de Castro Filho, Prof. UFC Virtual Institute
Rossana Maria de Castro Andrade, Prof. UFC Department of Computer Science
Open Software

• In the last years, the idea of open software
  – Expanded and involved new applications
    • More freedom to users
    • Democratizing information and Knowledge

• One kind of freedom provided by open software
  – Users can adapt them to their needs
    • However
      – Users need access to software codes and
      – Technical knowledge to perform the adaptation
Open Software

• Even with this type of restriction
  – freedom to adapt this was a great evolution

• This idea evolved and included
  – Educational Environment

• Open Educacional Resources (OER)
Educational Resources

• In the case of OER
  – Adjustements are quite specific
    • focus on context and target audience
  – Requiring in this case, direct intervention of a teacher
Educational Resources

• A teacher knows how to present the content so that it is better suited for his/her students

• However, teachers do not necessarily have the knowledge to modify at the level of the code
  – Thus, the possibility to modify only the code is not appropriate
Our Approach

- Strategy for Opening Educacional Resources
  - Specifically Learning Object (LO)
- Guided Customization
Traditional Development Process of LO
Guided Customization for LO (CLO)

• Guided Customization
  – What can be adapted in the resources at the design step
• The development team can then build customizable educacional resources
Example (before CLO)

Main Screen of an activity 1

In this activity you will choose one of the following scenarios to illustrate. Then you just write your little story.

- Farm
- Beach
- Circus
- Forest
- Country
- School

links: PROATIVA RIVED
Example (before CLO)

Main scene architecture

In this activity you will choose one of the following scenarios to illustrate. Then you just write your little story.
Nessa atividade, você vai escolher um dos cenários ao lado para ilustrar. Depois, é só você escrever a sua historinha.
Nessa atividade, você vai escolher um dos cenários ao lado para ilustrar. Depois, é só você escrever a sua historinha.
Authoring Tool

CLO Studio
Final Remarks

• Thus, with our approach the resources can be
  – Customized by users, in this case, teacher
    • Modification when using the LO
    • Without compromising the content
Final Remarks

- The real benefits of this opening strategy can be reflected in practice
  - giving more autonomy to teachers