Constructing microworlds with E-Slate

Chronis Kynigos *kynigos@ppp.uoa.gr*, **Nikoleta Yiannoutsou,** *nyiannoutsou@ppp.uoa.gr* **Foteini Moustaki,** *fotmous@ppp.uoa.gr*, **Marios Xenos**, *mariosxenos@gmail.com* **, Stamatina Anastopoulou** *sanastop@ppp.uoa.gr*
Educational Technology Lab, University of Athens

Description and Workshop Objectives

This workshop is about E-Slate is platform consisting of tools and components that allow end users to create their microworlds. E-Slate has adopted a black and white box approach (Kynigos 2004) in that it provides technically efficient black box components as higher – order building blocks to build software consisting of component configurations. These components are designed to be as generic as possible. E-slate microworld construction is not only based on the constructionist paradigm through building component configurations, but also on the connectivity metaphor, providing authors with multiple metaphors for connecting and thinking about component connections. Main component configurations can be organized in the following categories: a)data handling, b)turtle worlds, c)science simulations and d) gis (data bases connected on maps). ETL research group the constructs of halfbaked microworlds (Kynigos 2007) and of construction kits as instruments for engaging end users in microworld construction. A number of microworlds have been also developed by teachers, researchers and students covering a wide range of scientific fields (from mathematics to language). In the workshop participants will have the chance to use, play and deconstruct microworlds, halfbaked microworlds and microworld kits.

Outline

- Deconstructing a microworld: presentation of the main E-slate characteristics (components, authoring tools) by workshop organizers
- Hands on microworlds: participants open and play with microworlds already developed with E-Slate
- Hands on half-baked microworlds and construction kits: Participants will engage in changing a halfbaked microworld of their selection or develop a new microworld with a construction kit
- Discussion on the process of microworld design with E-Slate

Expected outcome

Familiarization with E-Slate, acquaintance with E-Slate functionalities through concrete examples, change and enrichment of halfbaked microworlds and construction kits.

References

Kynigos, C. (2007). Half–Baked Logo microworlds as boundary objects in integrated design. *Informatics in Education, 6*(2), 335–358.

Kynigos, C. (2004). Black and White Box Approach to User Empowerment with Component Computing. *Interactive Learning Environments*, 12(1–2), 27–71.