Proceedings of the 1st International Workshop on Pedagogically-driven Serious Games (PDSG 2012)

In conjunction with the Seventh European Conference on Technology Enhanced Learning (EC-TEL 2012), Saarbrücken (Germany), 18th September, 2012

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Introduction

Technology Enhanced Learning is a promising area where Serious Games can have an impact beyond pure entertainment. Despite this potential, two issues stand in the way of achieving learning effects:

- Few pedagogical theories are sufficiently formalized to allow implementation; therefore Serious Games seldom fully utilize the potential of pedagogy.
- Even if present, pedagogical principles are implicitly implemented in the game story, structure, and characters, so that it is very difficult to test different theories on the same game mechanics. This results in low reusability and high costs of pedagogically-driven serious games that hinder their widespread use.

To address these issues, this workshop focuses on:

- Formalizations of pedagogical theories potentially capable to drive the elements in a game's world, such as narrative and characters' behavior.
- Game frameworks based on storytelling, explicit game mechanics and intelligent agents that can provide a programmable environment to implement pedagogical formalizations.

Participants to the workshop are researchers from the following areas:

- Serious games and Technology-Enhanced Learning research in general
- Agent technologies (especially in an interactive narrative context). Efforts in the Agent community such as Pogamut that connect agent platforms to games like Unreal Tournament can be the ground where these approaches can be implemented.
- Storytelling and Interactive narrative research; narrative engines such as Brutus, Minstrel and Mexica.
- Pedagogy theories/frameworks especially at a stage close to or already formalized.

Topics of interest include but are not limited to:

- Formalizations of pedagogical theories for the purposes of serious games
- Game frameworks that provide a programmable environment to implement pedagogical formalizations, based on any of the following:
  - Storytelling
  - Explicit game mechanics
  - Intelligent agents
- Approaches to modeling the interdependencies between pedagogy, storytelling and game mechanics in serious games and the translation of these interdependencies into agent behaviour
- Empirical studies addressing the interdependencies between pedagogy, narrative and storytelling and game mechanics
- Architectures for serious games that allow reusability
- Existing programmable platforms, such as Pogamut, that connect agent platforms to games
- Approaches to "programmable" narrative and storytelling in serious games
- Approaches to "programmable" intelligent agents in serious games
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