Unobtrusive Player Assessment in Adaptive Games

BA & MA Thesis Topic Areas

Player State Recognition for Adaptive Games

Adaptivity is seen as a means to deliver great experiences for players with different preferences and types. In order to adapt to the player a game must be able to detect the player's current state such as their current emotion or play style.

There are various questions regarding what player state variables are important for a game to be adaptable and how these variables are best measured. In this thesis you would examine different player state recognition techniques, e.g. emotion recognition in HCI, and evaluate their usefulness for adaptive games.

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Adaptivity for Specific Game Types

Special game genres such as mobile games, VR games, pervasive games, exergames usually feature game design that is quite different compared to games on more traditional gaming platforms. There are challenges and opportunities that are unique for a specific platform. In roomscale VR, for example, the player can move around freely in a predefined play space. This makes several recognition techniques difficult but offers another source of information, e.g. static behavior vs moving around a lot.

Theses in this topic explore these challenges and opportunities with regard to adaptivity of games in a specific genre.

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Integrating Self-Reports in Dialogs for Player State Recognition in Adaptive Games

A possible solution to detect the players' current state are self-reports. Previous research has shown the suitability of integrating self-reports as a means for emotion detection during game play by incorporating questionnaire elements as game play elements.

In a further step, this approach can be generalized to incorporate the players' self-reports by integrating them into dialogs with non-player characters. In this thesis you would design and develop a game and conduct a user study examining the suitability of this approach for players state recognition.

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Game Design for VR Games

Virtual reality (VR) games are getting increasingly popular due to the release of several consumer grade VR head-mounted-displays (HMDs).

In a thesis you would examine how current and future VR games are different or could be different from regular non-VR games. Possible topics could be interaction methods, game design, or visualization. Further social aspects such as social interaction through play configuration (e.g. multiplayer or singleplayer) have to be considered as well.

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Julian Frommel | julian.frommel@uni-ulm.de | O27/337 | uulm.de/?jf