

Cinematic replay of interactive drama

M2R internship proposal, September 2015

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Context

Interactive drama [1,2] are computer-based fictions where a user chooses actions for the main character. As a result, each session tells a "different story". Visually, the story is usually presented in a first-person view for the user/player, which facilitates interaction.

Objectives

In this master's thesis, we would like to recompose a movie (cinematic replay) [3] after a session of interactive narrative, showing that same story again, this time from a third person view. To reach that goal, the candidate will review current research in narrative theory [4,5] and study the requirements for staging and editing the actions in an interactive drama session into a movie [6,7]. Based on this theoretical investigation, a prototype implementation will be proposed on top of an existing framework [8].

The Master thesis will be supervised by Remi Ronfard at INRIA Grenoble in a collaboration with Nicolas Szilas at University of Geneva and is expected to lead to a PHD thesis on the topic of interactive movie-making, with the more ambitious goal of generating cinematic, third-person narratives in real-time.

Requirements

For this thesis, we are looking for candidates with a strong background in mathematics and graphics programming, and an interest in narrative theory and movie-making art and science.

References

- [1] Michael Mateas and Andrew Stern. *Façade: An Experiment in Building a Fully-Realized Interactive Drama*. Game Developers Conference, March 2003.
- [2] Nicolas Szilas. *The mutiny: an interactive drama on IDtension*. In Proceedings: DIMEA '2008.
- [3] Ponto, K.; Kohlmann, J.; Gleicher, M., "Effective Replays and Summarization of Virtual Experiences," in *Visualization and Computer Graphics, IEEE Transactions on*, vol.18, no.4, pp.607-616, April 2012
- [4] Mieke Bal. *Narratology: Introduction to the Theory of Narrative*. University of Toronto Press, 1997.
- [5] Peter Verstraten. *Film Narratology*. University of Toronto Press, 2009.
- [6] Remi Ronfard, Nicolas Szilas. *Where story and media meet: computer generation of narrative discourse*. Computational Models of Narrative, Jul 2014, Quebec City, Canada.
- [7] Quentin Galvane, Rémi Ronfard, Christophe Lino, Marc Christie. *Continuity Editing for 3D Animation*. AAAI Conference on Artificial Intelligence, Jan 2015, Austin, Texas, United States.
- [8] Quentin Galvane, Rémi Ronfard, Marc Christie, Nicolas Szilas. *Narrative-Driven Camera Control for Cinematic Replay of Computer Games*. Motion In Games, Nov 2014, Los Angeles, United States.