

Automatic Generation of Game Level Solutions as Storyboards

David Pizzi, Jean-Luc Lugin, Alex Whittaker, and Marc Cavazza

Game programmers rely on artificial intelligence techniques to encode characters' behaviors initially specified by game designers. (úvod do problematiky) Although significant efforts have been made to assist their collaboration, the formalization of behaviors remains a time-consuming process during the early stages of game development. (popis problému) We propose an authoring tool allowing game designers to formalize, visualize, modify, and validate game level solutions in the form of automatically generated storyboards. (prinos práce) (začiatok popisu riešenia) This system uses planning techniques to produce a level solution consistent with gameplay constraints. The main planning agent corresponds to the player character, and the system uses the game actions as planning operators and level objectives as goals to plan the level solutions. Generated solutions are presented as 2-D storyboards similar to comic strips. (koniec popisu riešenia) We present in this paper the first version of a fully implemented prototype as well as examples of generated storyboards, adapted from the original design documents of the blockbuster game *Hitman*. (čo práca obsahuje)