Lehr- und Forschungsgebiet Informatik 5
Prof. G. Lakemeyer, Ph.D.

KBSG
Knowledge-Based Systems Group

Diploma/Master Thesis:

Logic-based Controllers for Real-time Strategy Games

Description:

The logic-based programming language Readylog has already been successfully applied in other real-time domains such as in robotic soccer and for controlling game bots in the computer game Unreal Tournament 2004. Contrary to those domains where the agent controls a single entity, an agent for a real-time strategy (RTS) game has to cope with a large number of units that need to be controlled simultaneously.

The objective of this thesis is to develop methods that enable a Readylog-agent to efficiently control a RTS game. More precisely, concepts that make planning for larger numbers of units and the coordinated execution of generated plans possible need to be implemented. These techniques shall then be evaluated by implementing an agent in Readylog and by comparing its performance against existing agents. The RTS game in question is *ORTS* (see `http://www.cs.ualberta.ca/~mburo/orts/index.html`).

Requirements:

- Programming experience in C++ and Prolog
- Ideally the candidate attended the lectures *"Introduction to Artificial Intelligence"* and *"Introduction to Knowledge Representation"*
- Basic knowledge of logic is desirable

Contact:

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