Multimedia Authoring II – virtual environments

with a focus on programming intelligent agents in virtual environments

Objectives By the end of the course students will have been introduced to the ideas of virtual communities, and will have a working knowledge of distributed logic programming language (DLP), especially a knowledge on the development and implementation of intelligent avatars for virtual environments and E-commerce.

Prerequisites Essential: Virtual Reality Modeling Language (VRML).

Approach

The main focus will be on the practical work of the students. They will have to make a number of assignments and give a presentation at the end of the course.

Course structure

1. Introduction – principles and applications of distributed logic programming language for virtual environments. Concepts: avatar, intelligent avatar, agent, web agent, logic programming, distributed logic programming
2. DLP for virtual environments I– VRML EAI, DLP and its EAI libraries. Examples: bus driving and ball kicking.
3. DLP for virtual environments II – multiple thread controls, cognitive models of intelligent avatars.

   Examples: WASP soccer games
4. Avatar Design – H-anim, specification for a standard humanoid, Blaxxun avatar studio. Using DLP to control the gestures of avatars. Examples: soccer player avatars and presentation avatars
5. Virtual communities – Blaxxun virtual communities, DLP for virtual communities. Examples: multiple users of WASP soccer games.

Material

Due to the lack of suitable, up-to-date, material, we will develop our own syllabus

Recommended additional reading

1 Anton Eliëns, DLP, A language for distributed logic programming, Wiley, 1992.

2 Zhisheng Huang, Anton Eliëns, Cees Visser, Progammability of intelligent agent avatars, Research report, Department of computer science, Vrije university, 2001.

3 Watson, M., AI Agents in Virtual Reality Worlds – programming intelligent VR in C++, Wiley, 1996.