'396' Undergraduate Research Project Application Form

Office for Undergraduate Research in Science
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Form version 200603

Instructions for students

- *All fields are required, unless indicated otherwise.*
- Download and print this form. Complete Section 3 and sign.
- See "How students can apply" instructions in Section 2.10.
- Your supervisor or department will tell you if you are selected for this project. If so, you will receive permission to register for a '396' course on MINERVA.

1 Supervisor Information

Name:	Prof. Bettina Kemme
Email:	kemme@cs.mcgill.ca
Phone:	514-398-8930
Website:	www.cs.mcgill.ca/∼kemme
Department or Unit:	Computer Science
Course number:	COMP396

2 Project Information

2.1 Term:

Winter 2007

2.2 Project start & end dates:

January 3 - April 13, 2007

2.3 Project title:

Load-distribution in massively multiplayer games

2.4 Project description:

As massively multiplayer online games (MMOG) become increasingly popular, game platforms have to support thousands of concurrent players. This is achieved by distributing the load over several game servers. Typically, each server is responsible of a subset of players. However, inter-server communication is needed since players assigned to different servers might be interested in each other. There exist several options for player distribution from random to locality-aware distribution. The task of this project is to implement several of these strategies into JSiMMOG, an existing Java Simulator for Massively Multiplayer Online Games, and evaluate their performance along several gaming scenarios.

2.5 Prerequisites:

1 term completed at McGill + CGPA $\geq$ 3.0; or permission of instructor. Good knowledge in a programming language (preferable Java), a course in algorithms (e.g. COMP 251), and one systems oriented CS course (e.g., COMP 303, COMP 310, COMP 421, COMP 435 etc.)

2.6 Grading scheme:

Design, implementation and performance evaluation: 40%; Presentation: 10%, Final Report: 50%.

2.7 Other:

2.8 Status:

This project is:
( ) Open to applicants
(x) Already taken; no more positions available this term
( ) Taken, but contact me for other possible projects this term

2.9 Ethics, safety, & training:

Which of the following, if any, is involved?
( ) Animal subjects
( ) Human subjects
( ) Biohazardous substances
( ) Radioactive materials
( ) Handling chemicals
( ) Using lasers
For undergraduate students, ethics and safety compliance is the supervisor's responsibility.

2.10 How students can apply:

This project is taken.

3 Student Information. (1) Print legibly and sign. (2) See 'How students can apply' in Section 2.10.

Name:	
McGill ID:	
Email (first.last@mail.mcgill.ca):	
Phone:	
Program (e.g., B.Sc. Maj. Chem. Minor Biology):	
Level: (circle one)	U0 / U1 / U2 / U3
I have not applied for another 396 course this term.	
Student signature:	
Date:	

4 Approvals. (1) Print names and sign. (2) Notify Office for Undergraduate Research in Science. (3) Give student code to register for course on MINERVA.

Supervisor:	
Date:	
I certify that this project conforms to departmental requirements for 396 courses.	
Unit Chair, Director, or designate	
Date:	