

AGENTS: INVESTIGATING ENVIRONMENT PERCEPTION

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ABSTRACT

Short summary of the contents...

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LISTINGS

ACRONYMS

API	Application Public Interface
UML	Unified Modelling Language
BDI	Beliefs Desires Intentions

Part I

SETTING THE CONTEXT

In this first part a introduction to the project is given, also some background information and an overview of the proposed computational model are presented. More details of the computational model are left to be shown later on with the experiments descriptions.

INTRODUCTION

1.1 EMERGENCE

1.2 DISTRIBUTED SYSTEMS

1.3 AGENT-BASED OBJECT MODELS

Chapter 6 of complex adaptive systems.

BACKGROUND INFORMATION

2.1 SOCIAL INSECTS

2.2 COMMUNICATION

2.3 CURRENT RESEARCH

MODEL OVERVIEW

3.1 ENVIRONMENT

3.1.1 *Nodes*

3.1.2 *Communication Stimuli*

3.1.2.1 *Chemical Communication Stimulus*

3.2 AGENTS

3.2.1 *Task Agents*

3.2.2 *Agent Types*

3.3 TASKS

Part II

EXPERIMENTS AND OBSERVATIONS

In this part of the report three experiments are proposed and executed. The results observed are discussed. At the end some possible improvements to the model and possible experiments are proposed.

EXPERIMENTS AND OBSERVATIONS

4.1 INITIAL PHEROMONE CONCENTRATION SENSIBILITY

4.2 WARNING PHEROMONE RESPONSE

4.3 FORAGE RADIUS INVESTIGATION

FUTURE WORK

5.1 MODEL IMPROVEMENTS

5.2 IMPLEMENTATION ISSUES

5.2.1 *Four way connected grid*

5.2.2 *Simulation handler*

Part III

APPENDIX

EXTRA EXPERIMENTAL RESULTS

MODEL AND SIMULATION SOURCE CODE

B.1 MODEL IMPLEMENTATION DETAILS

B.2 SOURCE CODE

