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6.3 Example: Contract Net Protocol; 6.4 Exercises; 7 User-Defined Components; 7.1 Defining New Internal Actions; 7.2 Customising the Agent Class; 7.3 Customising the Overall Architecture; 7.4 Customising the Belief Base; 7.5 Pre-Processing Directives
7.6 Exercises8 Advanced Goal-Based Programming; 8.1 BDI Programming; 8.2 Declarative (Achievement) Goal Patterns; 8.3 Commitment Strategy Patterns; 8.4 Other Useful Patterns; 8.5 Pre-Processing Directives for Plan Patterns; 9 Case Studies; 9.1 Case Study I: Gold Miners; 9.2 Case Study II: Electronic Bookstore; 10 Formal Semantics; 10.1 Semantic Rules; 10.2 Semantics of Message Exchange in a Multi-Agent System; 10.3 Semantic Rules for Receiving Messages; 10.4 Semantics of the BDI Modalities for AgentSpeak; 11 Conclusions; 11.1 Jason and Agent-Oriented Programming
11.2 Ongoing Work and Related Research11.3 General Advice on Programming Style and Practice; Appendix: Reference Guide; A.1 EBNF for the Agent Language; A.2 EBNF for the Multi-Agent Systems Language; A.3 Standard Internal Actions; A.4 Pre-Defined Annotations; A.5 Pre-Processing Directives; A.6 Interpreter Configuration; References; Index

Sommario/riassunto

Jason is an Open Source interpreter for an extended version of AgentSpeak - a logic-based agent-oriented programming language - written in JavaTM. It enables users to build complex multi-agent systems that are capable of operating in environments previously considered too unpredictable for computers to handle. Jason is easily customisable and is suitable for the implementation of reactive planning systems according to the Belief-Desire-Intention (BDI) architecture. Programming Multi-Agent Systems in AgentSpeak using Jason provides a brief introduction to multi-agent sy
