



SYSC 5103 – Software Agents

RoboCup Project

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Introduction

- BeliefDesireIntention (BDI)
- AgentSpeak
- Jason Framework
- Eclipse IDE



Beliefs-Desires-Intentions (BDI)

- Beliefs:
 - Ball location: distance, direction
 - Opponent's goal location: direction
- Desire:
 - Scoring a goal
- Intentions:
 - Locating the ball and/or goal
 - Orienting to the ball
 - Approaching the ball
 - Kicking the ball



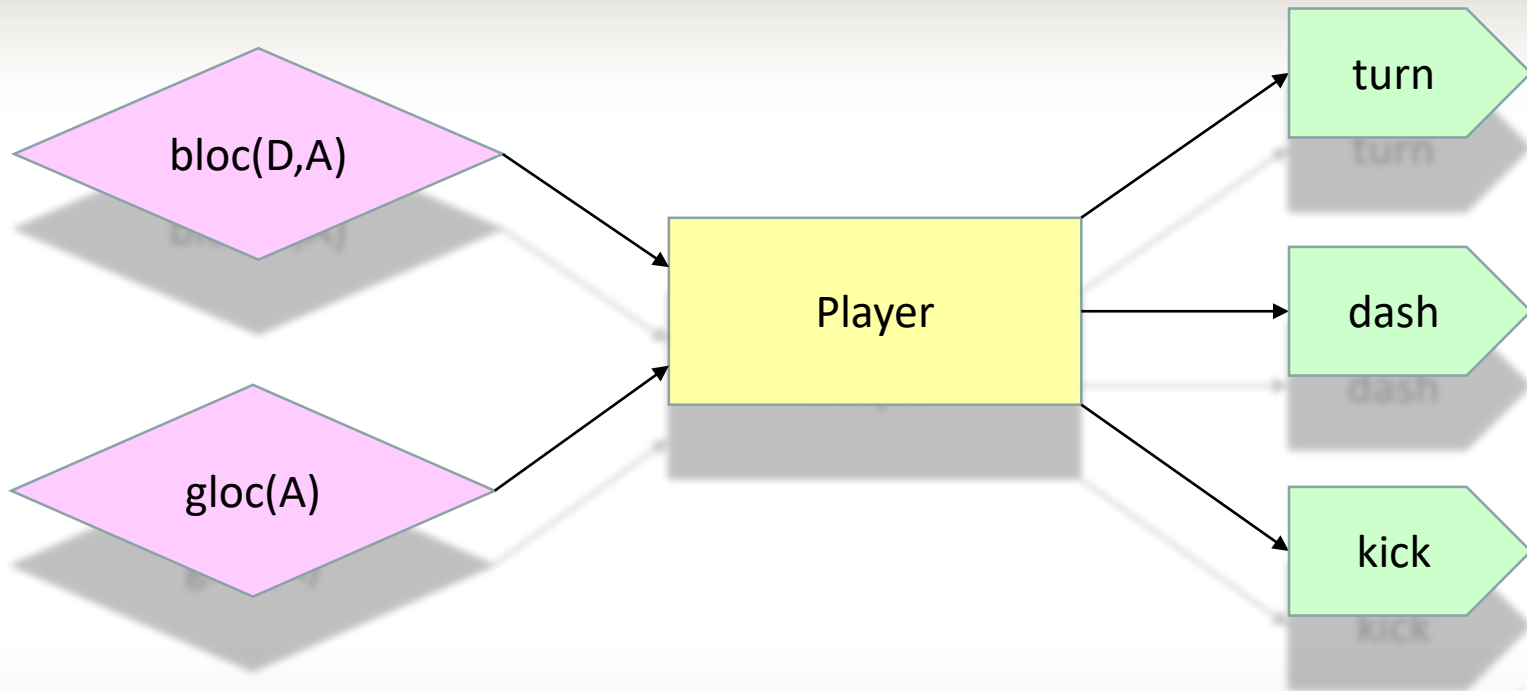
Percepts and Actions

- Percepts:
 - bloc(D, A)
 - gloc(A)
- Actions:
 - At the start:
 - move
 - During play:
 - turn
 - dash
 - kick



Interactions

Environment Percept → BDI Agent → Action



AgentSpeak

- Extended version
 - Jason interpreter
- AgentSpeak agent
 - `player.asl`
- Jason as an Eclipse plug-in



RoboCup

- RoboCup soccer simulation
 - Server and Monitor
 - Krislet
- Modified Krislet by changing the `Brain` class
 - extends Jason's `AgArch` class
 - `perceive()` and `act()` methods
 - implements Krislet's `SensorInput` class
 - implements Java's `Runnable` class
 - `run()` method



Running the Code

- Start the server
- Start the monitor and connect it to the server
- Start the clients and connect them to the server
- Use the monitor to begin the game



Conclusion

- Jason Installation
- Modification of Krislet Code
- Implementation of BDI (AgentSpeak) Agent
- Running the Code



The End

