ABSTRACT

FERDIAN FEISAL. Modeling Multi-Agent in Futsal Sport Using Finite State Machine. Under the direction of AGUS BUONO.

Building agents for futsal scenario requires methodologies for implementing high-level complex behavior and efficient programming. With that hypothesis in mind, this paper will show that we can develop futsal agents using simple logic and rule-based manner with Finite State Machine (FSM). FSM provides a powerful way to describe dynamic behavior of systems and components. The systems adapt specific behaviors with the main focus on how agents should behave for current situation. This research is designed with State design pattern to implement FSM in object oriented languages. In order to describe procedural aspects of the agents behavior, the state machine represented by state diagram. Because of this, we can revise behavior of agents which is triggered by external events. From this research the system can describe agent’s behavior and specified the state of the current situation.

Keywords: Multi-agent, Finite State Machine, object oriented, State design pattern.