



Lecture Notes

Seminar in Software Engineering
Software Engineering Program,
Department of Computer Engineering,
School of Engineering, KMITL

67011352 Theepakorn Phayonrat[0.5cm]

Contents

1	Lecture 1: Intelligent Agent	2
1.1	What are agents in AI?	2
1.1.1	An Agent as a Logical System	2
1.2	Agents for Traffic-Light Control	2
1.3	A Smart Home as an Intelligent Agent	2
1.4	SCADA as an Generic Intelligent Agent	2
1.5	Agents for Traffic-Light Control	2

Chapter 1

Lecture 1: Intelligent Agent

1.1 What are agents in AI?

An agent is anything that can be viewed as **perceiving** its environment through **sensors** and **acting** upon that environment through **actuators**

Example of agents in human body: eyes, ears, nose, tongue, skin

Agent can have actions, e.g. Vacuum cleaner \rightarrow Agent: Detect dirty space, Action: Clean

Type of Agents:

- Rule based Agent
- Logic based Agent

1.1.1 An Agent as a Logical System

Any logical system consists of a knowledge base & inference engine.

Example of Intelligent Agents in real world application:

- Traffic-Light Control
- Smart Meter
- Smart Home
- Smart Factory (SCADA)

1.2 Agents for Traffic-Light Control

Rule 1: IF ($\text{current_state}(P) \wedge \text{state_counter}(N) \wedge N \leq 0$)

1.3 A Smart Home as an Intelligent Agent

1.4 SCADA as an Generic Intelligent Agent

1.5 asdf