

A Preliminary Development of Smart Traffic Control Using Multiagent Learning (研究の進捗発表 (シニア (大学4年生以上), 既発表))

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A Preliminary Development of Smart Traffic Control Using Multiagent Learning

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Looking at the current situation of traffic, there is a need of efficient and robust Adaptive traffic signal control. We are proposing a promising approach for optimizing urban traffic control (UTC) based on the real-time traffic conditions. In this system there are controllers (agents) at every signal, each controller (agent) coordinate signal control actions with neighboring intersections. Here Reinforcement Learning based Distributed algorithm will be used. A well-known Traffic Simulator SUMO will be used for modeling of traffic flow simulation. This work will present a preliminary implementation of a novel system of Multiagent Reinforcement Learning for integrated network of adaptive traffic signal controllers.

<既発表情報>

Raihan MD Golam, Naoki Fukuta, "Preliminary Analysis on Smart Traffic Control Using Multi-Agent Learning," IEICE Artificial Intelligence and Knowledge Processing Study Group (AI), December 2020.