

工程与应用

一种交通监测多Agent系统研究

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摘要 针对路口监测系统的不足, 提出一种分布于行驶车辆上的交通监测多Agent系统。采用本体语言OWL对有关概念及其相互关系进行描述, 方便了Agent间基于语义的信息查询, 从而可以构建开放、异构的交通信息系统。在JADE平台基础上进行了编程, 实现了Agent内的描述逻辑本体模型、OWL基础上的Agent通信以及符合SPARQL标准的信息查询。通过编程实验证明了系统的可行性。

关键词 [智能交通系统](#) [Agent](#) [本体](#) [语义Web](#)

分类号

Research on multi-Agent system for transportation monitoring

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Abstract

A multi-Agent system, which is distributed among moving vehicles, is proposed for transportation monitoring. Ontology is written in OWL to describe the transportation monitoring concepts and the relationship between them, so to facilitate semantic information queries between Agents. On top of it, an open and heterogeneous transportation information system can be constructed. Agent system is built on the base of JADE platform. The developed Agent has an inside ontology model based on description logic, and its communication is based on OWL. The information inquiries comply with SPARQL. Simulation proves the feasibility of the system.

Key words [intelligent transportation system](#) [Agent](#) [ontology](#) [semantic Web](#)

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