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(54) Title: TRAFFIC SIGNAL CONTROL SYSTEM AND METHOD

(57) Abstract: The invention relates to a traffic signal control system for controlling a plurality of signal junctions comprising a signal group oriented multi-agent control scheme, each agent operates independently and represents one or more traffic signals at a signal junction; means for each agent for determining traffic conditions at its signal junction and traffic conditions at neighbouring agents; and means for applying fuzzy logic in signal control operations, wherein signal control operation is based on traffic conditions at each agent and one or more neighbouring agents, such that the control operation is distributed to each agent to control each of said plurality of signal junctions. An advantage of the system is that this approach in combining the flexible signal group control with the artificial intelligence of fuzzy logic dynamic control is achieved. The operation of the control system is based on detector data input, that is refined to real time traffic situation model. Through the traffic model, the decision part of the system (fuzzy logic) is observing the traffic situation in the whole intersection. The signal control operation is based on signal group orientation, in which the control operation is distributed to several signal group agents.



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