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City Routing Velocity Estimation Model under the Environment of Lack of Floating Car Data

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ABSTRACT

After introducing the principle of float car data (FCD), this paper gives the primary flow of pre-handing and map-matching of the FCD. After analyzing the percentage of coverage of FCD on the road network, large quantity of heritage database of routing status is used to estimate the routing velocity when lack of FCD on parts road segments. Multi liner regression model is then put forwarded by considering the spatial correlativity among the road network, and some model parameters are deduced when time series is classified in day and week. Besides, error of velocity probability and error of status probability are achieved based on the result from field testing while the feasibility and reliability of the velocity estimation model is obtained as well. Finally, as a case study in Shanghai center area, the whole routing velocity in the road network is estimated and published in real time.

KEYWORDS

Road Network; Multi Linear Regression; Floating Car Data (FCD); Velocity Estimation

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