عنوان مقاله:

Introducing a new approach to obtain average delay time inintersections & roundabouts using SIDRA and Optimized GroupMethod Data Handling software

محل انتشار:

سیزدهمین کنفرانس بین المللی مهندسی حمل و نقل و ترافیک (سال: 1392)

تعداد صفحات اصل مقاله: 14

نویسندگان:

Cristina Pronello - *TUD DC Chair, University polytechnic of Torino, Italy*

Mehrab pournasir - *Phd student, department of DIST, polytechnic of Torino, Italy*

Hossein Montaseri - *Master of traffic & transportation Engineering, The national university of Malaysia*

Foad shokri

خلاصه مقاله:

The average delay time of the nodes (intersections and roundabouts) in dynamictraffic flow is one of the major key elements of predicting travel time. On thecontrary, determining and updating the average delay time of the dynamic trafficflow in regard to calculation of travel time has received very limited attention,even though most of the current techniques use an historical data for their staticcalculations. Average delay time of the intersections and roundabouts needs to beupdated due to the changing of the dynamic traffic conditions.The aim of this study is to propose a method which leads us to find a formula foraverage dynamic delay time of intersections and roundabouts. The proposedmethod calculates the dynamic average delay time by using the output of theSIDRA intersection software (micro simulation transportation one) and finds therelationship among the effective parameters on average delay time by usingoptimized GMDH software. Hence, for evaluating the accuracy of our suggestedformula we compare the amount of average delay time which has beed obtainedfrom Highway Capacity Manual (HCM) instruction as one of the acceptablemethods among the other manuals and the real one and our purposed formula.Numerical analysis by SPSS also indicates that the solution approach can beapplied in practice in any size networks.

کلمات کلیدی:

Optimized GMDH, Roundabout, intersection, Average delay time, dynamicTraffic flow, SIDRA software

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