

पेटेंट कार्यालय  
शासकीय जर्नल

**OFFICIAL JOURNAL  
OF  
THE PATENT OFFICE**

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निर्गमन सं. 35/2024  
ISSUE NO. 35/2024

शुक्रवार  
FRIDAY

दिनांक: 30/08/2024  
DATE: 30/08/2024

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पेटेंट कार्यालय का एक प्रकाशन  
PUBLICATION OF THE PATENT OFFICE

(51) International classification :G06Q0010047000, H04L0045000000, G01C0021340000, G06Q0050260000, C07K0016120000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

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(57) Abstract :  
 ABSTRACT INTELLIGENT PATH TRAVEL COST ESTIMATION IN LARGE-SCALE NETWORKS USING ADVANCED MACHINE LEARNING The method for the development of the substitute for the conventional four-step method of modeling transportation networks is the merging of activity-based models (ABMs) with simulation-based dynamic traffic assignment (DTA). The least-generalized cost path-finding algorithm is used in DTA to direct travelers to the best routes, whereas travel-cost skims of the activities—regardless of actual paths—are used in ABM to evaluate the range of user options, including mode and destination selections. Transportation planning organizations have been looking at integrating activity-based models (ABMs) with simulation-based dynamic traffic assignment (DTA) as a way to solve emerging planning difficulties and transportation regulations like road pricing. At the DTA level, travelers must be routed using the optimal paths with the least generalized cost; at the ABM level, only the least generalized cost information is required. Hence, it appears that it is inefficient to repeatedly perform the least generalized cost path-finding algorithm throughout each iteration of ABM and DTA, particularly for large-scale networks. When routing engines—which handle shortest path problems on the back end—are utilized, the time required to obtain a cost matrix becomes costly. In actuality, just time or distance numbers are required for VRPs; information about the quickest way is superfluous. FIG.1

No. of Pages : 15 No. of Claims : 1