STUDY OF VEHICULAR INTERACTION IN HETEROGENEOUS TRAFFIC FLOW ON INTERCITY HIGHWAYS USING MICROSCOPIC SIMULATION

V. Thamizh Arasan [(a)] & Shriniwas S. Arkatkar [(b)]

[(a)] Professor, Transportation Engineering Division, Department of Civil Engineering,
Indian Institute of Technology Madras, Chennai - 600 036, India
[(b)] Ph.D. scholar, Transportation Engineering Division, Department of Civil Engineering,
Indian Institute of Technology Madras, Chennai - 600 036, India

[(a)] arasan@iitm.ac.in, [(b)] s_arkatkar@yahoo.co.in

ABSTRACT
Study of the basic traffic flow characteristics and comprehensive understanding of vehicular interaction are the pre-requisites for highway capacity and level of service analyses and formulation of effective traffic regulation and control measures. This is better done by modeling the system, which will enable the study of the influencing factors over a wide range. Computer simulation has emerged as an effective technique for modelling traffic flow due to its capability to account for the randomness related to traffic. This paper is concerned with application of a simulation model of heterogeneous traffic flow, named HETEROSIM, to study the relationships between traffic flow variables such as traffic volume and speed. Further, the model is also applied to quantify the vehicular interaction in terms of Passenger Car Equivalent (PCE) or Passenger Car Unit (PCU), taking a stretch of an intercity road in India as the case for the study. The results of the study, provides an insight into the complexity of the vehicular interaction in heterogeneous traffic.

Keywords: Heterogeneous Traffic, Micro-Simulation, Passenger Car Unit and Highway Capacity.

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AUTHORS BIOGRAPHIES

Prof. Dr. V. Thamizh Arasan is currently a full Professor in the Transportation Engineering Division of the Department of Civil Engineering of Indian Institute of Technology Madras, Chennai, India, which is one of the seven national level higher technological institutions in the country. He has a professional experience of about 30 years in teaching research and consultancy in the area of Transportation Engineering. Travel demand modeling and traffic flow modeling are his areas of research interest. He has guided a number of doctoral degree students and has published more than eighty research papers in international and national journals and conference proceedings. Three of his papers published in journals have received awards for excellence in research. Prof. Arasan has successfully completed several sponsored research projects both at national and international levels. The international projects are: (i) Development of Transportation Planning Techniques for Indian conditions in collaboration with the Technical University of Braunschweig, Germany and (ii) Enhancing the Level of Safety at Traffic Signals in collaboration with the Technical University of Darmstadt, Germany.

Mr. Shriniwas S. Arkatkar is a Ph.D. Scholar in Transportation Engineering Division, Department of Civil Engineering, Indian Institute of Technology Madras, Chennai, India. His doctoral research work is in the area of 'Heterogeneous Traffic Flow Modeling'. Mr. Shriniwas S. Arkatkar obtained his undergraduate degree in the area of Civil Engineering in the year 1999 and post graduate degree in the area of Urban Planning in the year 2001 from Visvesvaraya National Institute of Technology, Nagpur, India. He has served as Lecturer in Department of Civil Engineering, Nirma University, Ahmedabad, India for the duration of three and half years.