Editorial

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Biographical notes: N.P. Mahalik awarded ME and a PhD in the year 1993 and 1998, respectively. Completed his Postdoctoral Research during 2002. Worked as invited Faculty in Moscow State Technological University, Russia, Gwangju Institute of Science and Technology (GIST), South Korea during 2001 and 2004, respectively. He has published more than 80 papers and 5 books. Served as Editor Guest editor, Committee members in several journals and conferences. Recipient of National Overseas Scholarship and Brain-Korea fellowships for pursuing research especially in the field of interdisciplinary areas. He is the member of many professional societies.

1 Introduction

Transportation of goods and mobility of people is an essential prerequisite for the socioeconomic developments. Efficient functioning of road infrastructure is indispensable for the optimal economic gains and overall prosperity of any nation. Intelligent Transport Systems (ITS) have emerged as worldwide solutions for handling the transportation problems. Evolutionary changes in information technology and application portfolio are the main driving forces behind the design, development and implementation of ITS in the modern world. This Special Issue is devoted to uncovering emerging connections between technology and management and new practical strategic developments in the context of ITS not only for developed countries but also for developing countries. The feasible scenario as far as implementation of ITS in developing world is quite diverse as observed from the last decade. The aim is to bring together new ideas and directions to advocate for technology and management assets in terms of research, implementation and practice.

Simulation is considered as an effective phase for analysing transportation problems. At the outset the Special Issue begins with simulation justification for large-scale traffic systems. The author has examined the need for distributed simulation from the perspective of computational speed-up and development of large-scale network datasets. Congestion conditions during an emergency evacuation pose a great challenge for any evacuation management system. In the second paper, the authors discuss the new concept of intelligent evacuation system and have claimed that the proposed design scenario would make a major change in evacuation strategies. Control, communication as well as computing technologies have been integrated into their design. The increase in economic prosperity in S. Korea instigates greater mobility and a subsequent exponential increase of vehicular traffic that has far outpaced the infrastructure supply resulting in augmented congestion, chaos, accidents and environmental degradation. A retrospective précis of

planning ITS in this country has been illustrated in the subsequent paper. The evaluation of incident management strategies has been presented in the following paper. The authors have used Rutgers Incident Management System (RIMS) software which is a realistic traffic simulation platform based on the cell transmission model. The developed software can also generate incidents and test various response strategies and technologies. In paper six, the authors have used the Radio Frequency Identification (RFID) system, which is relatively new technology in the transportation domain. Strategic niche management of ITS deployment and development in developing countries has been comprehensively discussed in the next two papers. In particular, the papers suggest the mechanism to create, extend and mange 'the niche' of ITS for the smooth transition and sustainable transformation with societal embedment of the 21st century's technology solution. An Automatic Vehicle Location System (AVLS) is an information system that provides real-time and responsive vehicle movement information. This is considered as traffic monitoring. Automatic traffic monitoring and surveillance has becoming essential for road usage and traffic management. It is suggested that AVLS be designed for user-friendliness to enhance user acceptance. The special issue concludes with a paper that discusses on the usefulness of cellular technology. Cellular network is a wireless network. Cellular probe technology is a method which integrates the wireless location technology of cellular network and probe vehicle technology. Exploring the feasibility of using cellular probe technology to estimate travel speed or travel time for a large-scale roadway network is becoming a research topic. Several suggestions and recommendations for deploying such an application system have been provided.