Title of Workshop: ITS for Sustainable Transportation System and Choices

Organizers: Department of Civil Engineering, Indian Institute of Science, Bangalore (http://civil.iisc.ernet.in), in association with, Intel Technology India Pvt. Ltd. (www.intel.com), and Transportation Research Group of India (TRG, http://www.trgindia.org).

Sponsored By: Intel Technology India Pvt. Ltd. (www.intel.com),

Venue: Department of Civil Engineering, Indian Institute of Science, Bangalore

Dates: 28th and 29th May 2013

About the Workshop:

The discipline of transportation has seen a gradual evolution over decades from being supply centric to demand centric. This means traditionally the approach was to estimate the requirement of infrastructure provisions based on the estimate of growth in travel demand and keep supplying the infrastructure every time. Due to the present day constraints of energy, environment and other such factors, such supply centric approaches are no longer feasible, especially in a country like India, and there is a growing need to manage the existing infrastructure and regulate demand efficiently and in a sustainable manner (traffic management, demand management etc.). In parallel, the advances in Information Technologies (IT), Electronics and Telecommunication, Internet, wireless, and mobile computing technologies, Geo-informatics, information search, retrieval and visualization, networked sensing, analytics, etc, which are collectively called as (ITS) technologies, have opened a new set of opportunities for developing sustainable transportation systems and influencing the choices of people towards sustainable modes and practices even in developing countries like India.

However, presently the level of introduction of ITS and its use is still in nascent stage in India. Also, many of these technologies have been developed for conditions in Western countries, which are many ways quite different from Indian conditions, and therefore a lot of customization for Indian conditions is required to make ITS technologies effective in Indian conditions. The complexities of Indian traffic system and driver behaviour are much higher as compared to Western countries. Hetrogeneous mix, no lane discipline, exponential growth of vehicles, bad roads, poor geometrics, conflicting movements of pedestrians and vehicles on the road, problems with the driver licensing system, poor traffic law enforcement etc., are factors that add to this complexity. While some of these could be improved by policy interventions and other measures from government and local bodies, the traffic conditions in India today are as such beyond the level of control by simple traffic management measures or human abilities and the use of technology is all the more important to manage traffic in India today. Considering this background, this workshop will try to bring out the concrete agenda for research in this direction.

Agenda of Expert Group Meeting on 1st Day of Workshop*Intelligent Transportation Systems*

The 1stday will have invited expert presentations covering the important and relevant aspects of computing and communication technologies in ITS for Indian cities. The following theme will be covered in the workshop:-

- ITS for traffic dynamics, management, and congestion control
- ITS for road safety.
- ITS for demand management
- ITS data management and analytics
- ITS for user-friendly public transport
- ITS for multi-modal transport
- Any other related topics

Potential Participants: *Participation in the workshop is only by invitation*. Experts on ITS from academia/research, industry, and government from India and abroad would be the potential participants of this workshop.

Agenda of Expert Group Meeting on 2nd Day of Workshop

The 2nd day will consist of structured discussion by experts on a concrete agenda for research on this topic, which will be documented in the form of a workshop report (about 5 pages) and which will help build collaborative projects in this field.

In the process of fulfilling the above objective, the expert group members will try to sequentially addresses the following questions in different break-up sessions on 2nd day of the workshop:-

Session-1

1. What are the fundamental differences that exist with respect to traffic and transport in India and developed countries like, USA, Europe etc.?
2. What are the technical sub-domains of traffic and transport in India that can benefit fromITS interventions?
3. What kind of ITS solutions can be developed to address these sub-domains?

Session-2

4. Are there already available ITS solutions (anywhere in the World) that can be used as is in Indian conditions?

5. Are there already available ITS solutions that can be used after adapting/calibrating them for Indian conditions, and what are the methodological and technological developments required for doing so?

Session-3

6. Which are the sub-domains and specific elements within them that require development of new ITS solutions for Indian conditions?
7. Based on the current scenario and pressing Indian requirements, what is the priority list of developing new or adopted/calibrated ITS solutions for India?