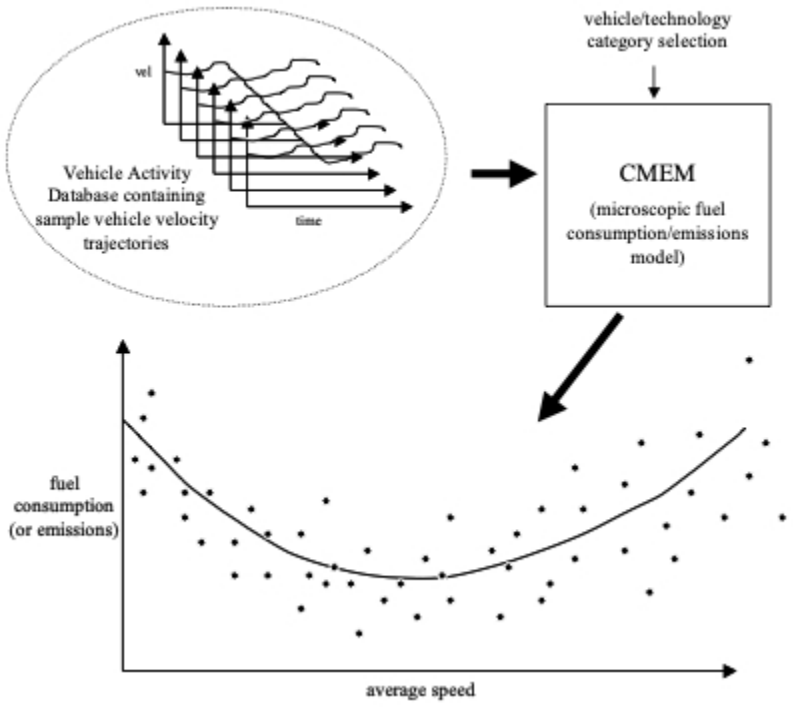
Environmentally Friendly Navigation Techniques

Tech ID: 25293 / UC Case 2009-174-2

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	8,255,152	08/28/2012	2009-174

IMAGES



Link-level fuel consumption modedling methodology

BRIEF DESCRIPTION

Background:

Current navigation systems offer “shortest-distance” or “shortest-time” functions to help avoid traffic congestion but neither of them determine the most fuel efficient route. With rising gas prices and vehicle emissions, a more advanced navigation system with additional functions, such as an environmentally-friendly feature, is needed. This accomplishment can make a huge improvement on increasing fuel costs and air pollution. The in-vehicle navigation system is also expected to competitively penetrate the US market in the next couple years with annual sales quadrupling to $13M.

Brief Description:

UCR researchers have developed an innovative vehicle navigation system (VNS) that will allow users to choose a route that is the most gas efficient and emanates less emissions. The energy- and emissions-minimization function is incorporated on top of distance- and time-minimizing functions that currently exists in

CONTACT

Venkata S. Krishnamurty
venkata.krishnamurty@ucr.edu
tel: .

OTHER INFORMATION

KEYWORDS

environmentally-friendly navigation, fuel conservation, minimal emissions, minimal fuel consumption, navigation systems, navigation techniques, traffic information

CATEGORIZED AS

- **Environment**
  - Other
- **Transportation**
  - Automotive
  - Other
  - Personal

RELATED CASES

2009-174-2

the traditional VNS. This new intelligent transportation system utilizes a state-of-the-art modal emissions model (CMEM) that encompasses real-world vehicle activity patterns, and can calculate the fuel consumption and emission values of each vehicle trajectory.

ADVANTAGES

- Calculate fuel consumption and emissions for a travel route
- Conserve fuel & make travel more cost-efficient and eco-friendly

APPLICATIONS

- System can be employed as an on-board VNS, portable navigation system or installed into cellular phones
- Partnerships with original equipment manufacturer (OEM) companies

University of California, Riverside

Office of Technology Commercialization

200 University Office Building,

Riverside,CA 92521

otc@ucr.edu

https://research.ucr.edu/