



Experimental vehicles, a driving simulator, posters exhibited

Advanced Mobility Research Center (ITS Center)

次世代モビリティ研究センター(ITSセンター)
<http://www.its.iis.u-tokyo.ac.jp/>

Intelligent Transport Systems

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● **ITS (Intelligent Transport Systems)** is an advanced transport system in which various fields, such as transport engineering, vehicle engineering, information technology, are integrated.

● The Advanced Mobility Research Center promotes research and development of ITS through collaboration of academia, public, and private sectors.

Research Activities

Next-Generation Infrastructure

● Signal control

Drivers' stopping/passing behaviors at yellow time, which may raise the risk of intersection accidents (dilemma zone), analyzed by DS experiment



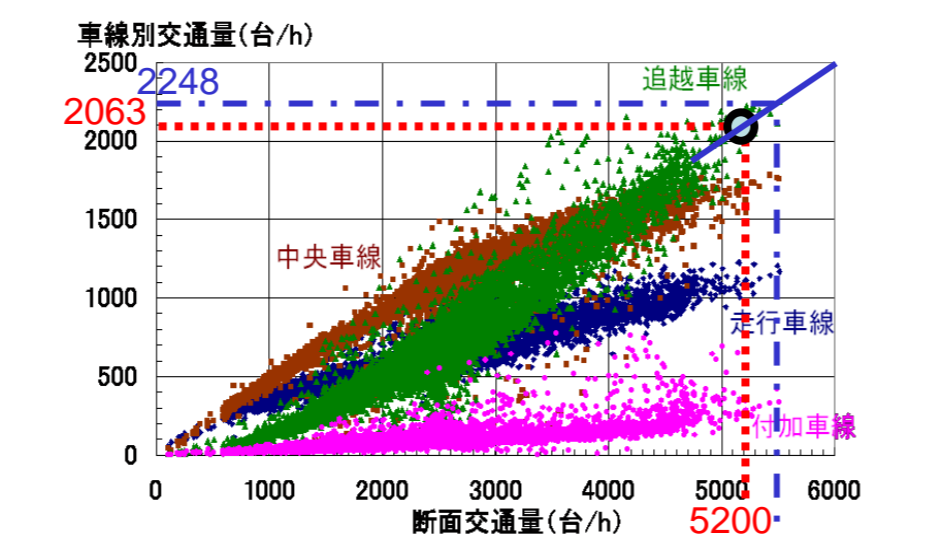
● On-street Parking

Influence of on-street parking on traffic flow and safety evaluated using TS and DS, and a parking space design with little influence on those proposed

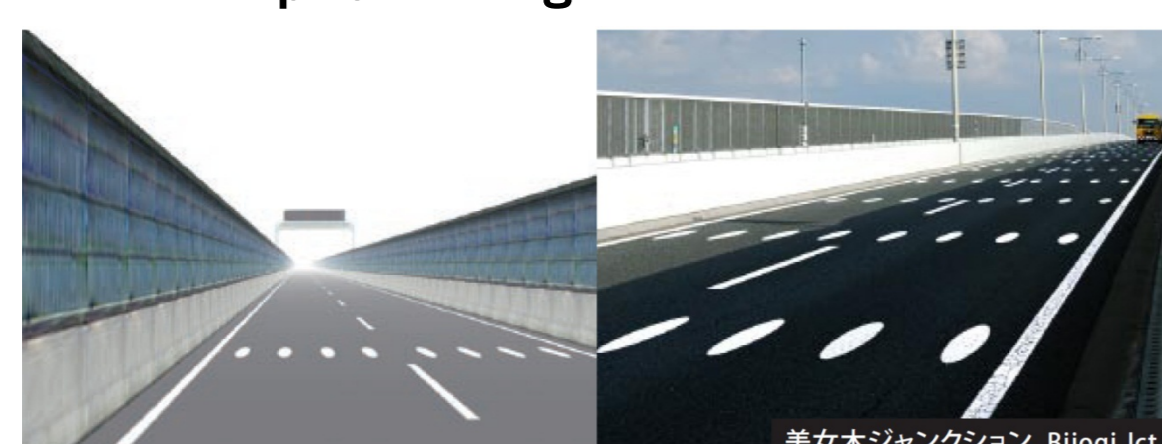


● Dynamic Traffic Operation

Effect of dynamic traffic operation, such as dynamic hard shoulder opening, analyzed and the safety issue evaluated



● Road Space Design



"Optical Dots" developed for safe and comfortable driving, adopted by Tokyo Metropolitan Expressway

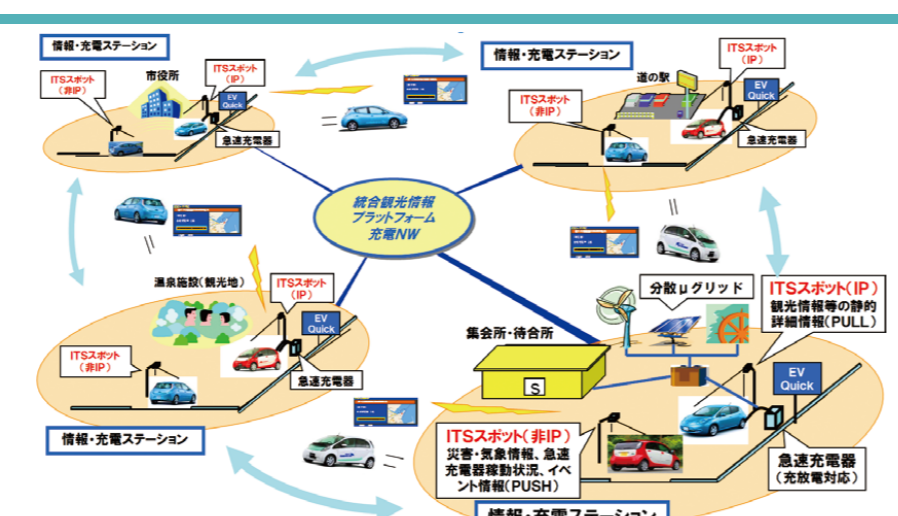
● Public Address System in Tunnels



Public address system developed for the case of emergency evacuation in long tunnels, adopted by Tokyo Metropolitan Expressway

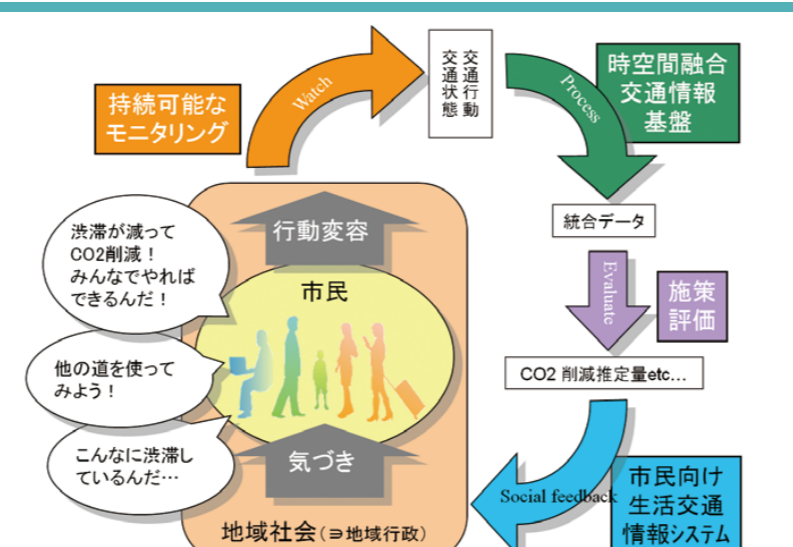
Nagasaki EV & ITS Project

Project for establishing an environment-friendly and future-oriented tourism system using Electric Vehicles (EV) and ITS technologies, launched in Goto Islands, Nagasaki Prefecture



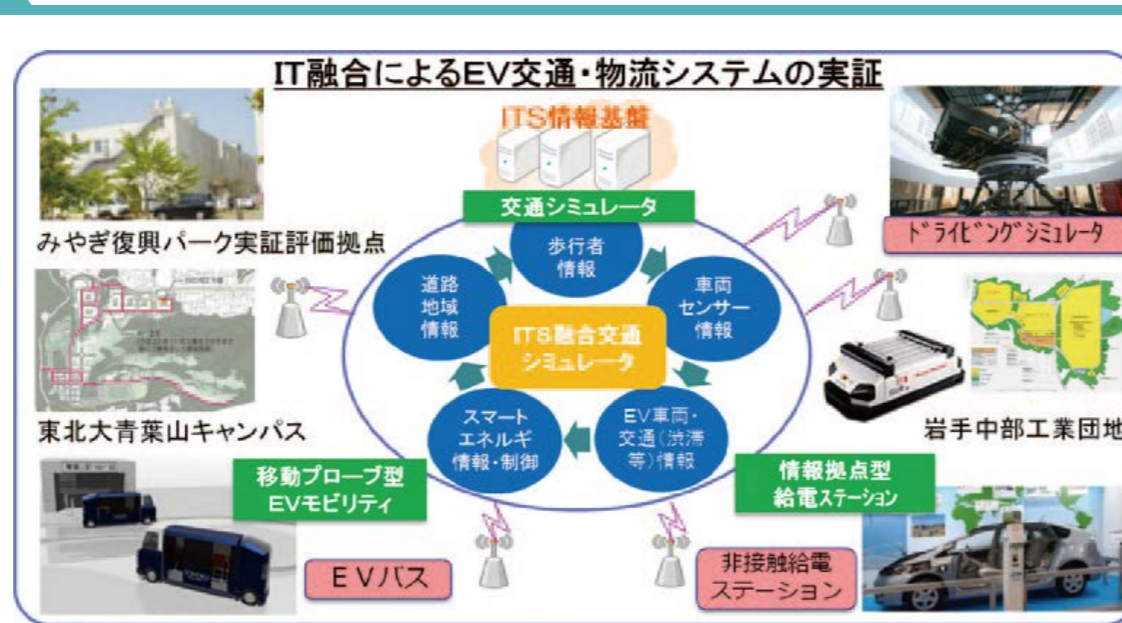
Kashiwa ITS FOT Model City

ITS research activities launched for environment-friendly transport society in kashiwa City, which is designated as one of the ITS FOT model cities by the Cabinet Office of Japan



Tohoku Restoration Project

"R&D center for verification and evaluation of the next generation automobile industry creation by IT fusion" of Tohoku Bureau of Economy, Trade and Industry, has been carried out as a joint research in our center with local businesses centered around the Tohoku University.



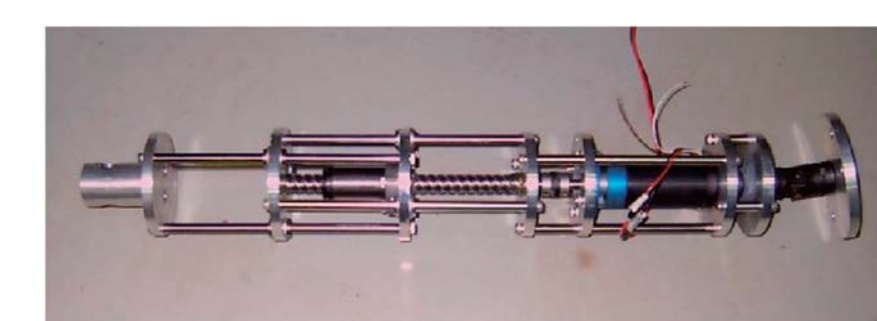
History

- ◆ 2003.4 "Sustainable ITS", a cooperative project among academia, industry, and the government, started in CCR
- ◆ 2005.3 "Collaborative Research Center for Advanced Mobility (ITS Center)" established in IIS (Director: Prof. Dr. Ikeuchi)
- ◆ 2009.4 Upgraded to "Advanced Mobility Research Center (ITS Center)," an university-authorized research center (Director: Prof. Dr. Kuwahara)
- ◆ 2014.4 "Advanced Mobility Research Center (ITS Center)" (Director: Prof. Dr. Suda)

Next-Generation Vehicle

● Electromagnetic Suspension

Composed of an electric motor and a ball-screw-and-nut, for an active suspension of an automobile



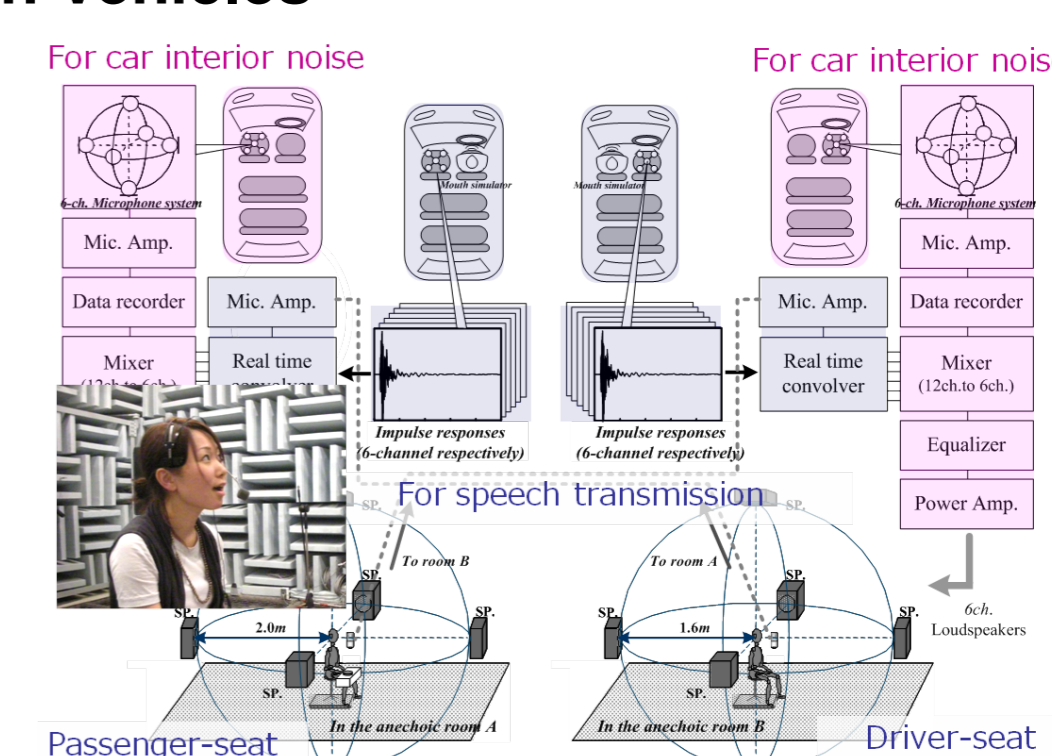
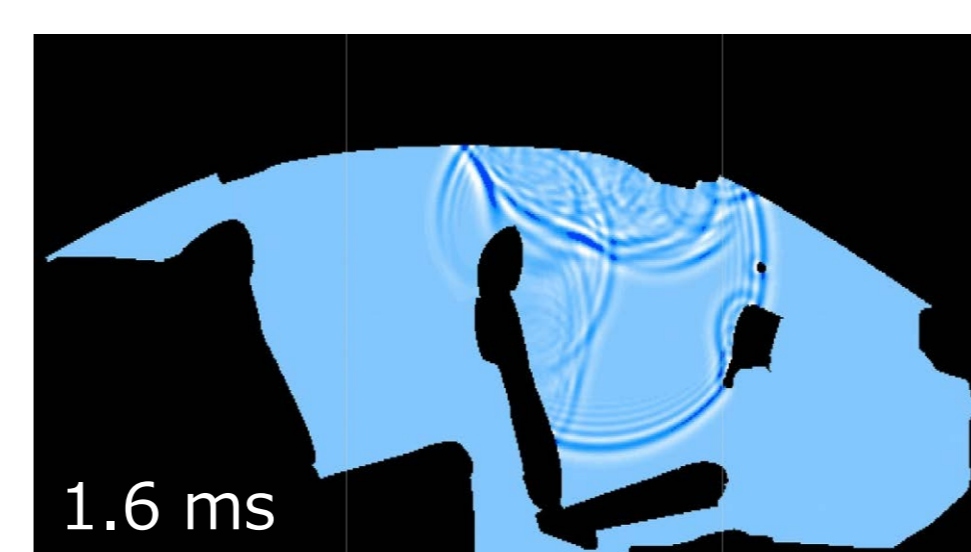
● Analysis on Vehicle's Vibration

Monitoring system of vehicle's vibration using ICA, which is a signal processing method to extract characteristics from mixed complicated observing signals, developed



● Sound Field Analysis and Assessment in Vehicles

Sound field prediction and assessment carried out by numerical analysis to create the acoustical comfort in vehicles



● In-vehicle Layout

In-vehicle layout for improving passenger ride comfort adopted by Tokyu 7000 Series



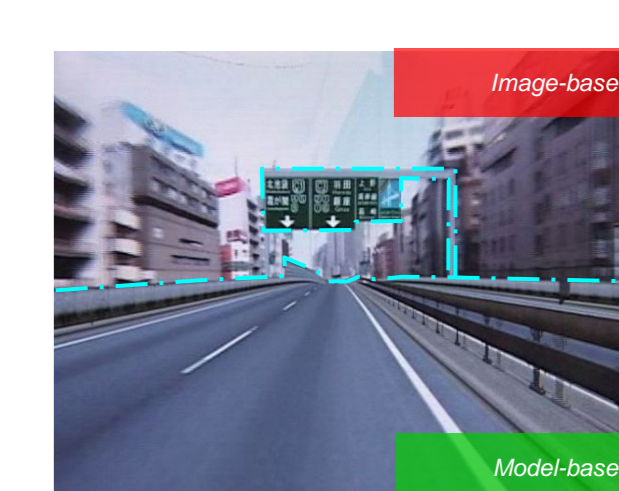
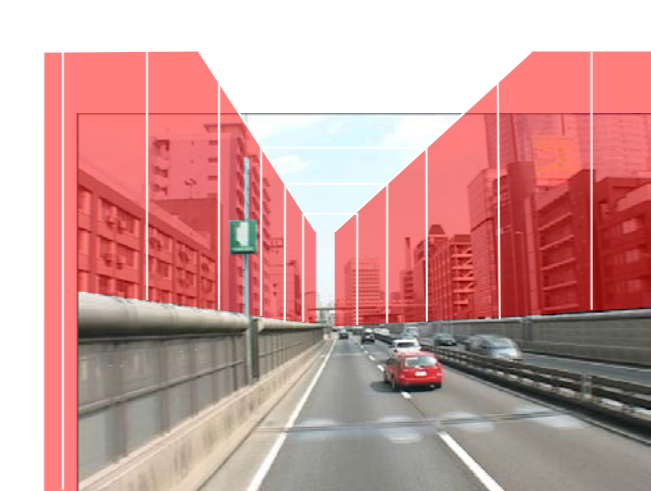
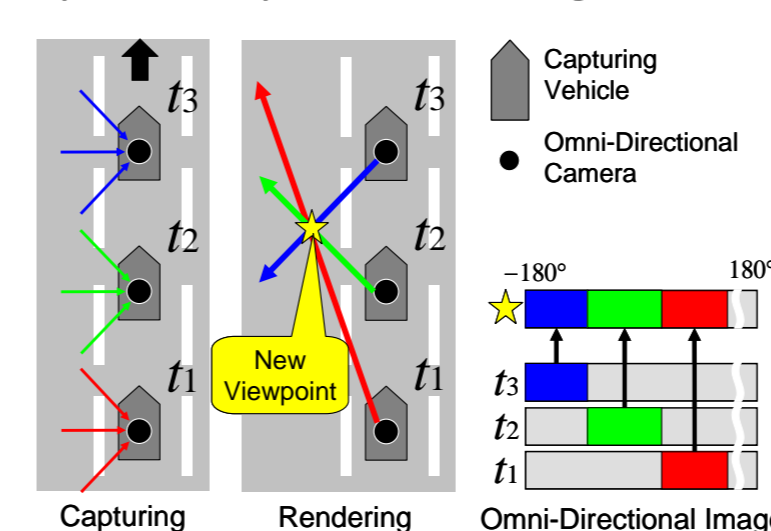
● Personal Mobility Vehicle (PMV)



Environment-friendly new urban transportation mode for comfort & efficient short-distance trip

Driving-view Display System

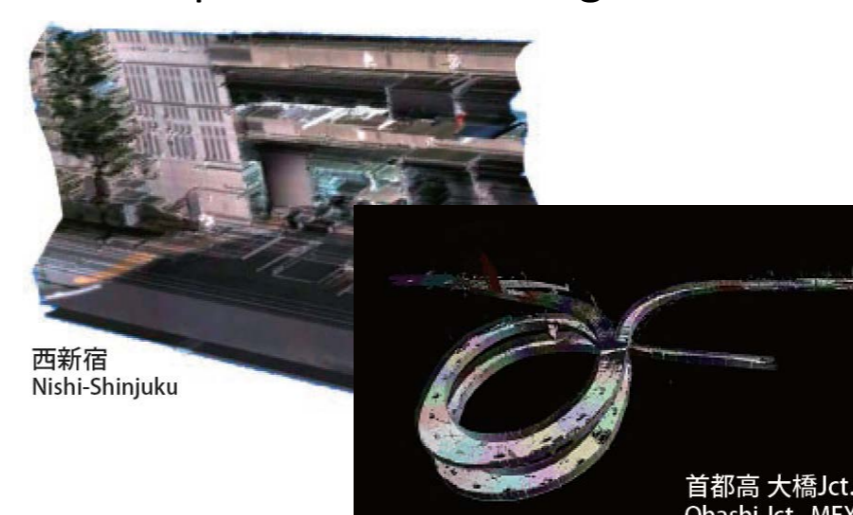
- Expression of urban space with rich reality by processing real-world image data acquired by the sensing vehicles



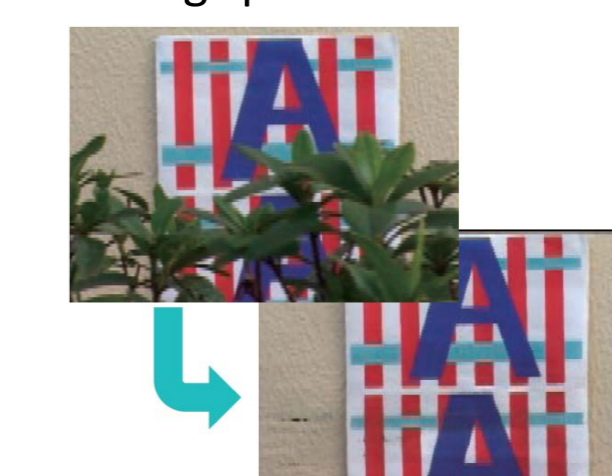
Virtual City Modeling

Constructing virtual city model using on-vehicle sensors

- Example of 3D modeling



- Background separation using spacetime filter



- True color estimation of building surfaces

