

Research Trends and Results

Joint public-private research for the realization of next-generation C-ITS

Hiroshi Makino, Head

Toshio Ogiso, Senior Researcher

Gaku Ohtake, Researcher

Masaki Hiro, Guest Research Engineer

Intelligent Transport Systems Division, Road Traffic Department

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1. Introduction

A cooperative intelligent transportation system (C-ITS) is a system that integrates vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I), and infrastructure-to-infrastructure (I2I) communication; information is mutually exchanged between vehicles, roadside units, the center, and individual terminals by making communication methods and data formats consistent; and such information is shared in various applications such as for safety, the management of roads and traffic, the management of distribution, environments, and collecting and providing information.

2. Contents of joint public-private research

In this joint public-private research, out of the information that belongs to individual vehicles and road administrators, we are examining information that can be mutually utilized and concrete methods for information exchange. We are also studying and developing a next-generation C-ITS, which can make road management more efficient and less expensive, while simultaneously realizing safe and comfortable automated driving and so on (Figure 1).

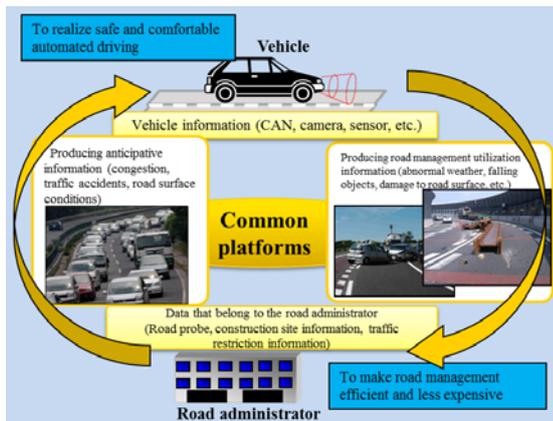


Figure 1 Schematic of next-generation C-ITS

3. Research items and participants

In this joint public-private research, the examination is proceeding with the following three Working Groups with 17 private companies consisting of road

administrators, auto manufacturers, and electrical manufacturers (Figure 2).

1) Working group for advanced road management

We are examining a concrete service that makes road management more efficient and less expensive, by providing various types of sensor information from vehicles to roadside units, and grasping the road traffic situations and road conditions.

2) Working group for safe driving support

We are examining a concrete service to support safe and smooth automated driving and so on, by integrating information collected by roadside units, and providing anticipative information to vehicles.

3) Working Group for C-ITS common platforms

We are working on the development, tests, technical standards, and technical specification for cross-cutting platforms (maps, communication technology, etc.) that are common to a service for sophisticated road management, and a service to support driving.



Figure 2 Participants

4. Schedule

To realize the service as quickly as possible, we plan to conduct a driving experiment on a test course at the NILIM by FY2016. For the required research and development of the service, we are organizing the

technical issues, and will study and develop common fundamental technologies.