A Driver-Adaptive Driver Assistance System for Better Acceptance

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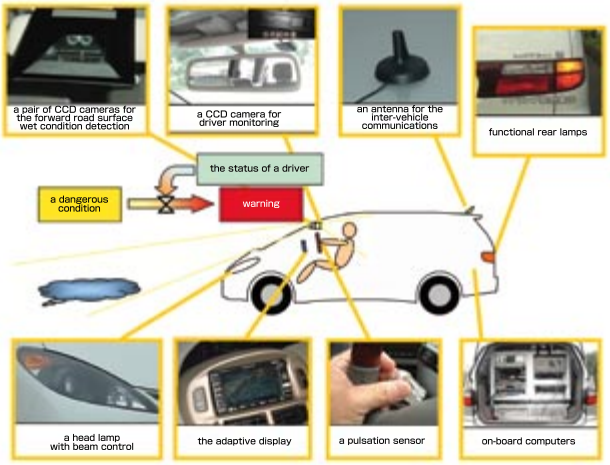
A driver assistance system that helps a driver with safe driving must have better driver acceptance in order that the system may be effective. The system, "Human-centered ITS View Aid System," introduced here provides kind but not annoying assistance on a driver adaptive display. The output timing of the warning and the degree of the contents to be displayed are controlled by the status of a driver and the conditions of the forward road surface and traffic to make the display driver-adaptive. A CCD camera embedded in the rear view mirror captures the driver face to monitor the drowsy and eye casting conditions. A pair of CCD cameras detects the forward road surface wet condition, and a lidar measures the inter-vehicle distance. The conditions can be transmitted to the following vehicles over the inter-vehicle communications, and vehicles without the communication unit receive the information with the functional rear lamps, which show an emergency. In addition, a pulsation sensor for a driver, and head lamps with beam control are also included in the system. The comprehensive experiments were conducted to show the feasibility of the assistance system.



The configuration and functions of the Human-centered ITS View Aid System

Development of Grid PSE (Problem Solving Environment) Builder

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We have developed the "Grid PSE (Problem Solving Environment) Builder", a software toolkit that enables users to easily construct a portal system as an interface to the Grid ASP (Application Service Providers). The Grid PSE Builder consists of several distinct components, including single sign-on, file transfer, and job submission. Using the Grid PSE Builder, we have constructed grid portals for several commercially available software packages including Gaussian, a standard software package for quantum chemistry, and Phoenics, a computational fluid dynamics package.

An example of portal system using Grid PSE Builder