

R&D of Intelligent Sensing Technology Using Visual Images and Microwave Range-profiles

<Program for Fostering Regional Innovation (Global Type) >

Project Team

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Enterprises

Hitachi Chemical Company, Ltd.

Purpose of the Research

Sub-theme 1:

Research and development of image sensing systems based on brain-inspired information processing for intelligent automobiles (Kyushu Institute of Technology)

In order to improve the capability and speed, and lower the cost of intelligent image sensing systems, we are going to establish vision and image perception algorithms acquired from the functions of the brain and a technology for the dedicated LSIs which execute the algorithms, and realize practical systems.

Sub-theme 2:

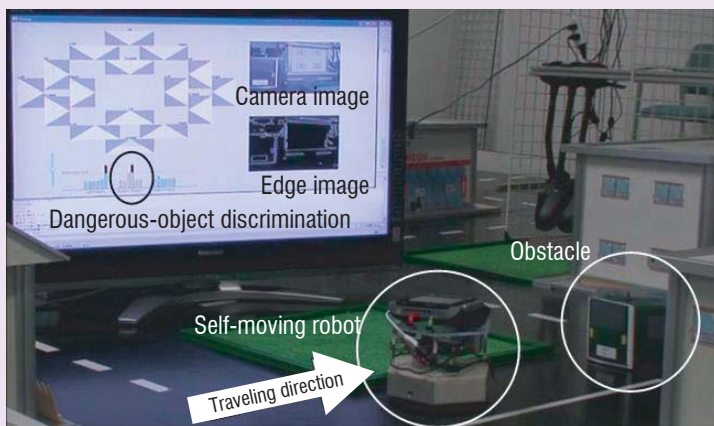
Research and development of the technology of target discrimination capability with high range resolution using microwave/millimeterwave (The University of Kitakyushu)

We are going to establish a technology to detect and discriminate targets inside and outside of the vehicle by employing the microwave/millimeter wave radar which works well in all kinds of weather to realize a safe and comfortable automobile society.

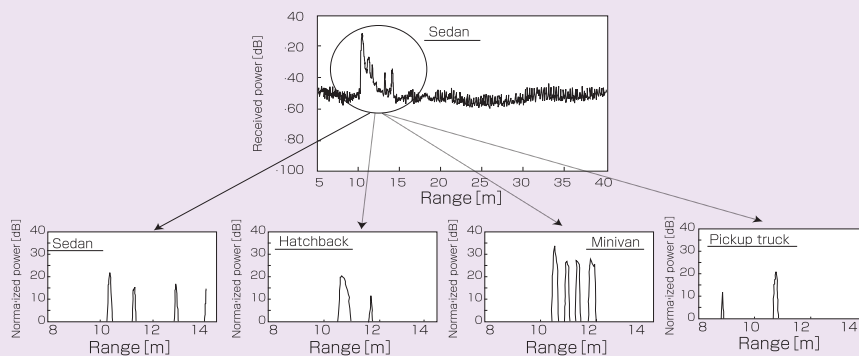
Results of the Research

Approaching-object warning system based on single-camera motion detection

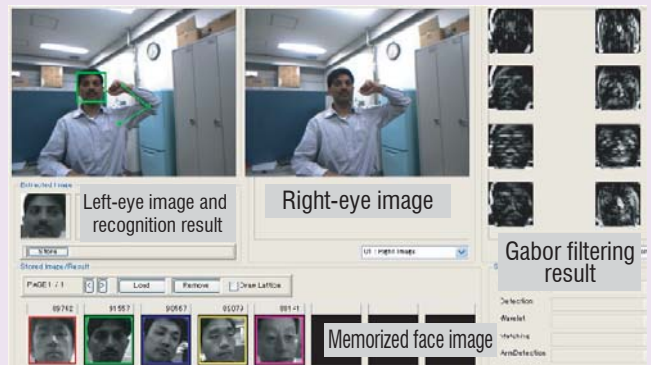
Demonstration experiment using a self-moving miniature robot



Vehicular target detection and discrimination by the microwave/millimeterwave range profile method



Face and gesture recognition system



Shadow elimination technology



Pedestrian detection



Information

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