Summary of SIP-adus Project (FY2016)

Name of the project	Development and substantiation of simulation technology for estimation of traffic accident reduction detailed effects. (Strategic Innovation Promotion Program: Automated driving system)
Responsible Organization	Japan Automobile Research Institute

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Object of the Project

In order to achieve the safest automobile transportation society in the world, realization of early practical use and promotion of the automated driving system have been expected. In this project, the simulation technology of the traffic environment reproduction to figure out the quantitative reduction effect of traffic accidents with such system is developed and contributes to the achievement of the above target.

Project Summary

In this year, several traffic accident scenes and advanced driver assistance systems were implemented to the simulation developed last year and performed. Capability of the simulation to estimate the quantitative accident reduction effect was confirmed. The validation of behaving models of traffic participants and the determination of the direction of this development for the utilization of private sector were carried out.

(1) Evaluation of simulation function
The functions of Autonomous Emergency Brake in the situation of pedestrian crossing and Lane Departure Warning System in the situation of lane departure were developed and performed. Capability of the simulation to estimate the quantitative accident reduction effect was confirmed.

(2) Validation of the accident reduction effect
Based on the five steps necessary for the validation defined last year, the validity of the driver and pedestrian among several models of traffic participants was confirmed as the first step.

(3) For the utilization by private sector
For the purpose of the early practical use and promotion of the automated driving system with utilizing the developed simulation by the private sector, direction of this development and functions of the simulation were clarified by interview investigation of OEM's expectations.

Future plan

- The methodology for developing into the simulation of the traffic environment reproduction by combining traffic accident scenes and its development steps will be clarified and developed.

- Method of selecting model areas (city, rural area, etc.) to be simulated and estimating the nationwide accident reduction effect from the results of each model area will be established.