Summary of SIP-adus project (FY2015)

Name of the project	Development of V2V,V2I Communication Technology Toward the Automated Driving Systems
Responsible Organization	DENSO CORPORATION, Panasonic Corporation, PIONEER CORPORATION, The University of Electro-Communications

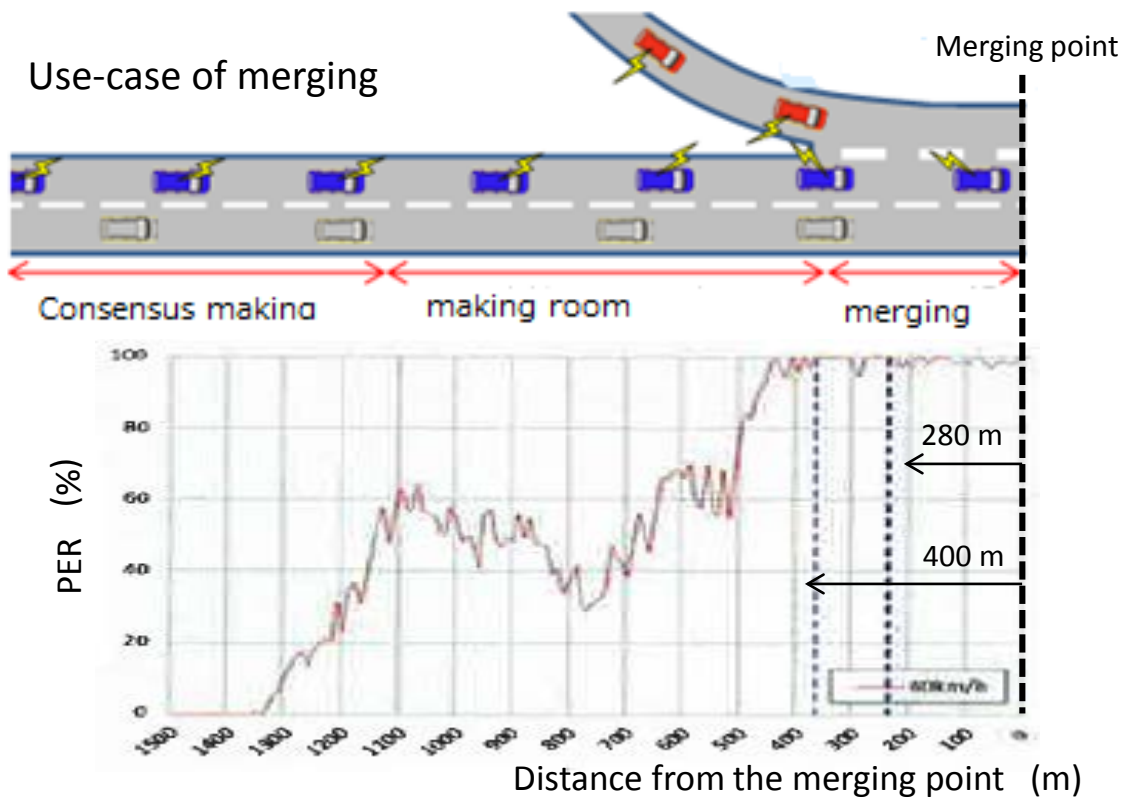
Hideaki NANBA, DENSO CORPORATION

Object of the Project

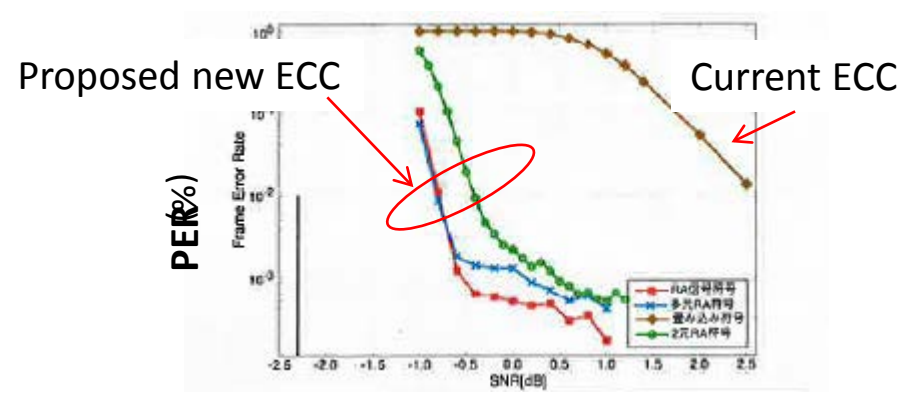
Automated driving and connected cars will be achieved by applying ICT. To achieve this, V2V and V2I technology will be more sophisticated.
Practical developing themes of highly reliable communication (low latency, PER etc.) and utilization of “look-ahead” information.

Project Summary

1. Communication performance and utilization of “look-ahead” information were evaluated in a merging scheme on the free-way.

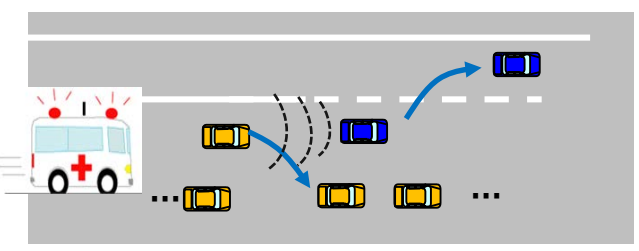


2. New communication technology (Cooperative distributed STBC scheme, Error Correcting codes) researched for use.



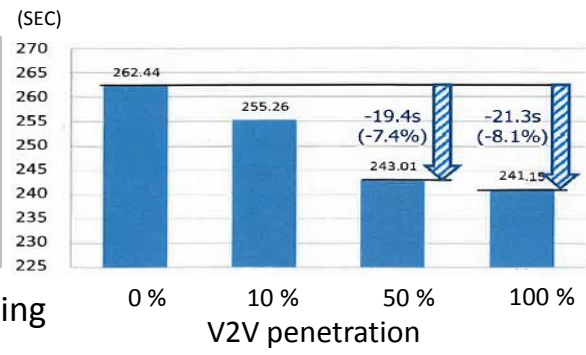
New Error Correcting Code (ECC)

3. The shortening the traveling time of an ambulance using V2V is researched with simulation.

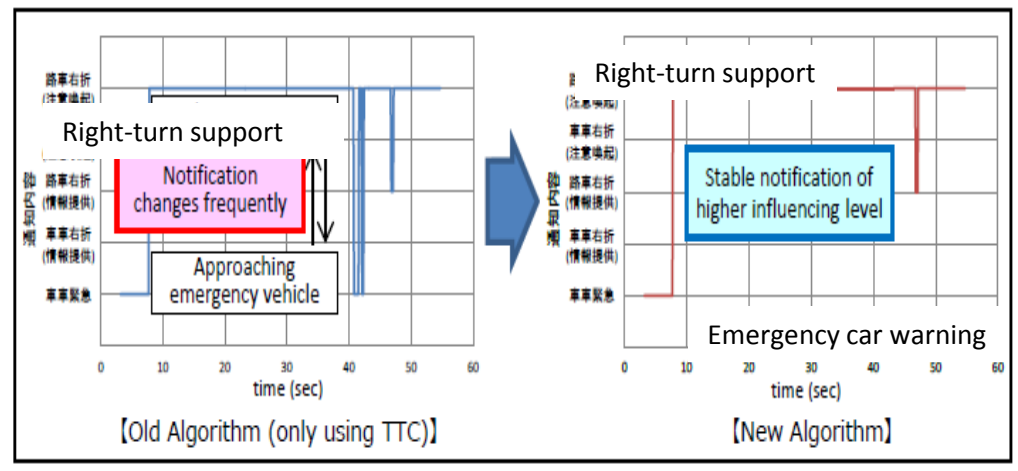


Example of an ambulance car approaching

Simulation result of the ambulance car traveling time



4. The priority handling method proved its efficiency using the numerical value in the confliction overlapped information (Right-turn support and Emergency car warning).



Warning notifications are improved using the priority handling method

Future plan

1. New communication technologies shall be proposed toward automated and connected driving systems.
2. “Look-ahead” information, its production and usage shall be proposed toward automated and connected driving systems.