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**FOT methodologies and Data Handling
- Progress of SKY Project -**

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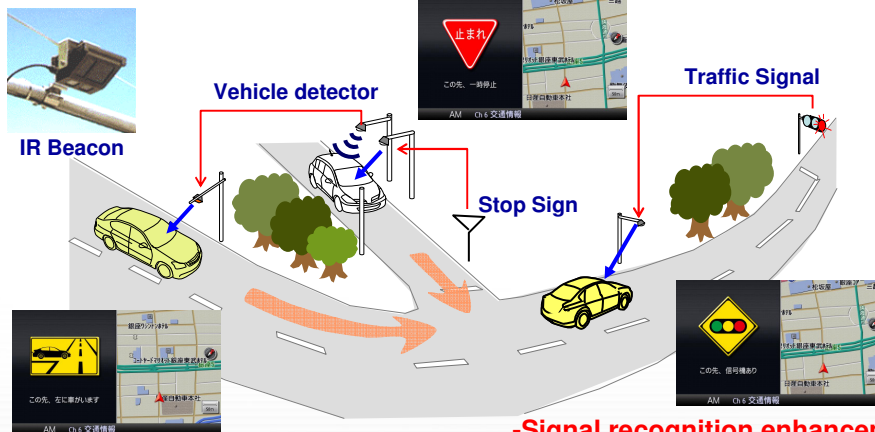
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Intersection Collision Avoidance

SKY PROJECT Start ITS from Kanagawa, Yokohama

-Stop sign recognition enhancement

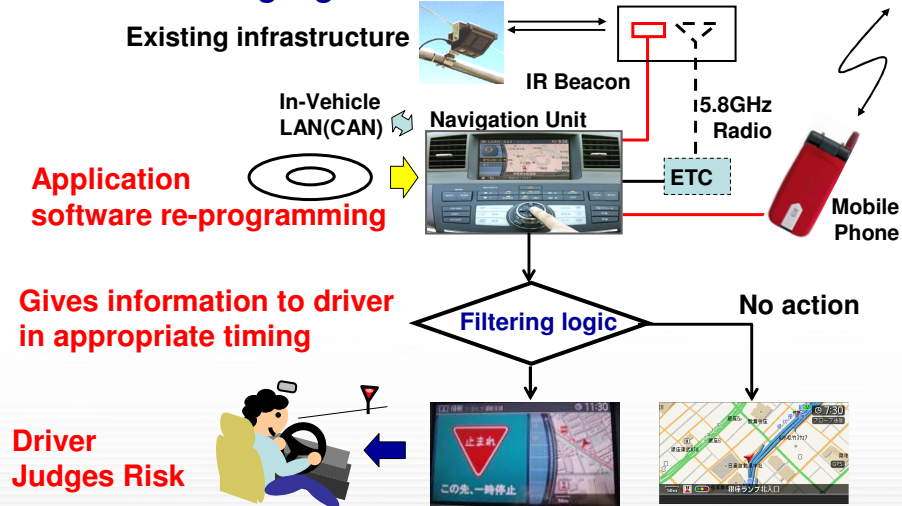


-Crossing collision prevention

**-Signal recognition enhancement
-Rear end collision prevention at end of red signal queue**

SKY FOT On-Board Unit

The system is built on a existing hardware and has filtering logic.



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3

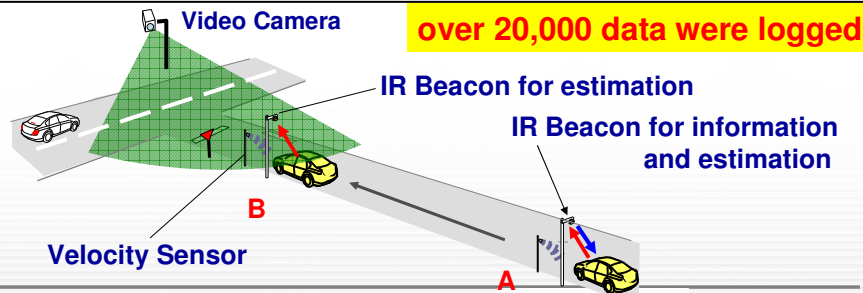
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Verification of Effectiveness

- 2,000 general users will evaluate the system receptivity through their everyday car life without being conscious of the test.
- Monitor the following data from the vehicles passing through the test point to statistically record the change in driver behavior depending on the presence of an alert and onboard unit.

Test vehicles (2,000)	- vehicle velocity, deceleration G, throttle rate, braking condition, etc [A] [B] - result of system decision (Presence of alert) [B] - stopping time at the stop line (stop sign) [Video]
Others	- vehicle velocity [A] [B] - stopping time at the stop line (stop sign) [Video]

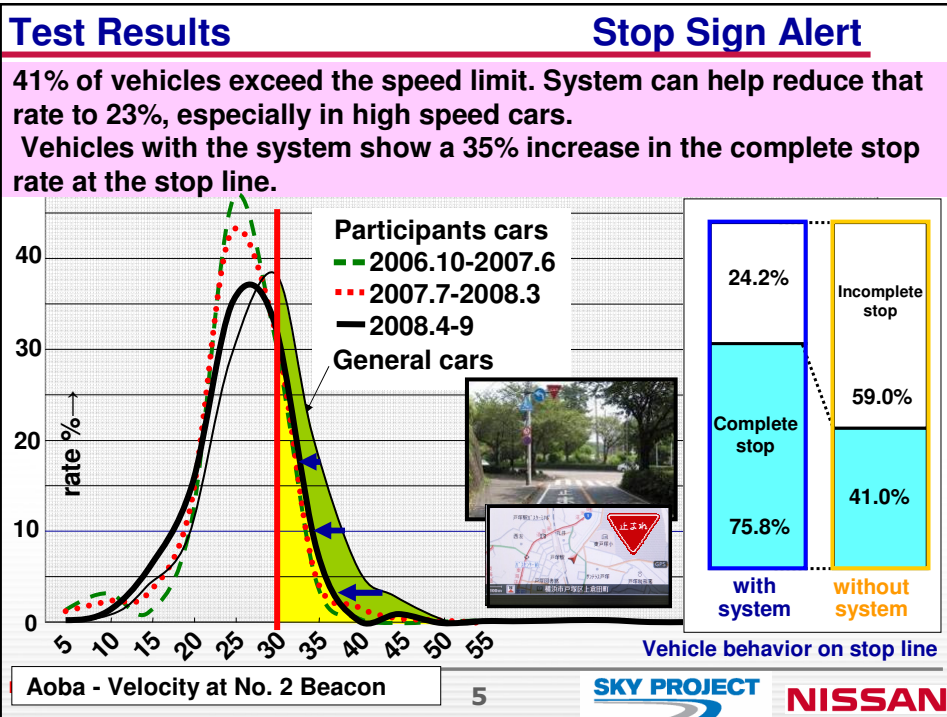


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4

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Test Results Summary Intersection Collision Avoidance

< Change in Driver Behavior >
 Obtained good quantitative results that information support contributes to changing driver behavior to safer driving.

Service		General vehicles	Monitor cars	Change
Stop sign recognition enhancement	Rate of overspeeding vehicles	41%	→ 23%	18Point
Signal recognition enhancement	Rate of overspeeding vehicles	70%	→ 56%	14Point
Crossing collision prevention	Rate of crash unavoidable vehicles	38%	→ 22%	16Point

< Other Changes >

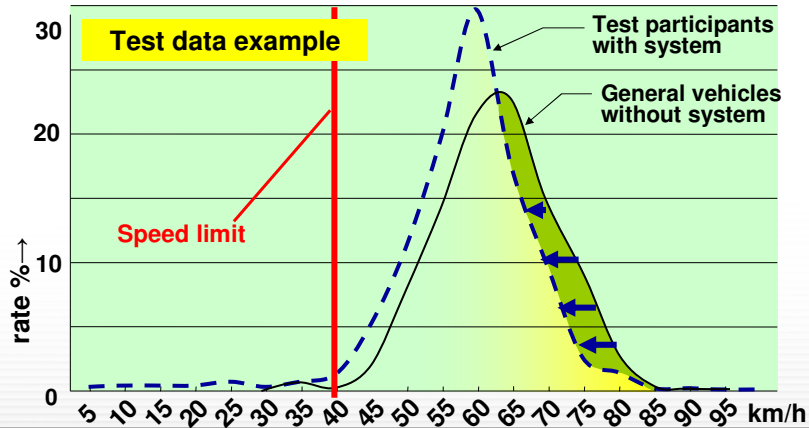
- No influence of drivers' experience with the system is found during 2.5 years of monitoring test.
- No influence of driver's over-trust is found during 2.5 years of monitoring test even if no information is provided at the test site.
 - Drivers who experienced this system slow down before an intersection. (Driver's leaning adaptation)

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Requirement for Participants

Large number of ordinary participants who are not conscious of the test in their everyday car-life

→ This type of data cannot be obtained by project related people.



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7

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Requirement for Participants

Neutral concern about the test contents.

→ SKY FOT participants, ordinary peoples, said “Yes” to the recruitment not because of the test purpose but the incentives.

Free car navigation map database update



Free 3 media VICS beacon antenna



Local traffic info

Pre-paid cards



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8

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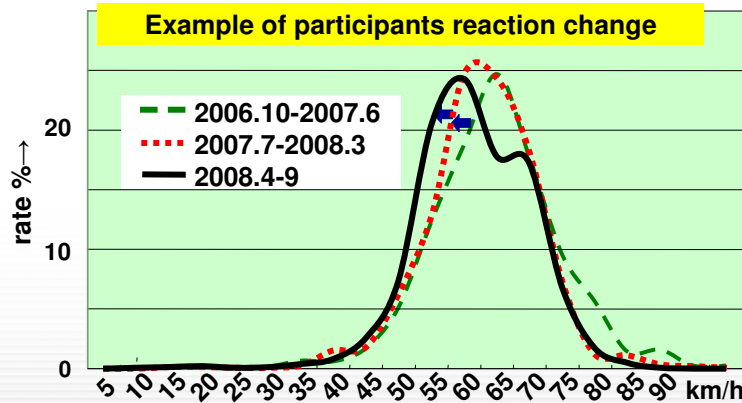
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Requirement for Participants

Long term test

→ Participants reaction might change as time passes.

- The influence of the users' experience with the system.
- The influence of over trust or learned adaptation.



Summary

Large amount of good data and positive results from SKY FOT have been obtained.

Good participants are necessary to conduct a good FOT.

- Large number of ordinary participants who are not conscious of the test in their everyday car-life
- Neutral concern about the test contents.
- Long term test

Thank you for your attention.

