



June 5 2020

Bureau of Science, Technology and Innovation

Cabinet Office

**Launching field operational tests for automated driving in Haneda Airport Area
~ Taking off from Haneda to realize automated driving society ~**

Cabinet office has launched field operational tests (FOTs) for the realization of next-generation public transportation systems using automated driving technology in the Haneda Airport area under the second phase of the Cross-ministerial Strategic Innovation Promotion Program (SIP) Automated Driving for Universal Services project (SIP-adus).

1. Activities taking place under FOTs in the Tokyo waterfront area

SIP-adus is promoting collaborative research and development on common issues (cooperative area) that should be solved jointly by industry, academia, and government for the practical application of automated driving, with the aim of contributing to solve social issues such as reducing of traffic accidents and congestion.

Under the FOTs begun in October 2019 on public roads mainly in the Tokyo waterfront city area, automated vehicles with on-board equipment are being used to verify the effectiveness of information provided by traffic infrastructure, such as the traffic signal information. Beginning in March 2020, FOTs has begun on the Metropolitan Expressway that connects Haneda Airport and the Tokyo waterfront city area to test a cooperative infrastructure system for merging lane assistance.

2. Summary of FOTs in Haneda Airport area

From June 5, 2020, an FOT employing magnetic markers, ITS wireless road side units used for PTPS(Public Transportation Priority Systems) and traffic signals information, and high-precision 3D map, has been started in a real-world environment on a public road connecting Terminal 3 of Haneda Airport and Haneda Innovation City.

The FOT in the Haneda Airport area aims to develop technologies that improve the on-time performance of public buses, realize automated driving using magnetic markers, and develop a next-generation public transportation system with SAE level 4-equivalent automated driving that is user-friendly and comfortable by adopting its gentle acceleration/deceleration system and precise docking controls for arrivals at bus stops.

By developing a next-generation public transportation system based on its results, the FOT will help address social issues such as ensuring mobility for the elderly and vulnerable road users, mitigating driver shortage, and reducing the costs.

3. Future schedule

By analyzing data which obtained from test drives conducted by the 29 organizations participating in FOTs in the Tokyo waterfront area, SIP-adus will pursue efforts to resolve issues related to technology, levels of accuracy, and public acceptance, with the aim of accelerating practical application and dissemination.

In addition, by proactively disseminating these results internationally, SIP-adus will support efforts to lead discussions regarding international standardization as well as enhance initiatives and promote technologies from Japan.

For more information, please contact:

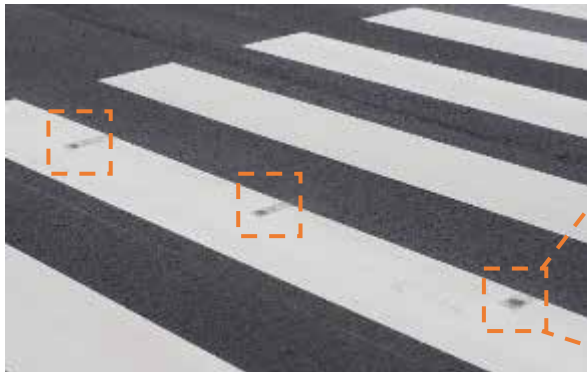
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Website of SIP-adus
<https://en.sip-adus.go.jp/>

Attachment: Photos of infrastructure equipment used in FOTs

1. Magnetic markers

In addition to realizing automated driving that does not require driver intervention, the system improves passenger accessibility by precisely controlling the vehicle's position upon arrival at the bus stop (i.e., vehicle stops parallel to bus stop with no gap between vehicle and curb).



Magnetic markers



Magnetic marker (photo courtesy of Aichi Steel Corporation)

2. Temporary bus stop

Improving accessibility by stopping automated vehicle level with curb.



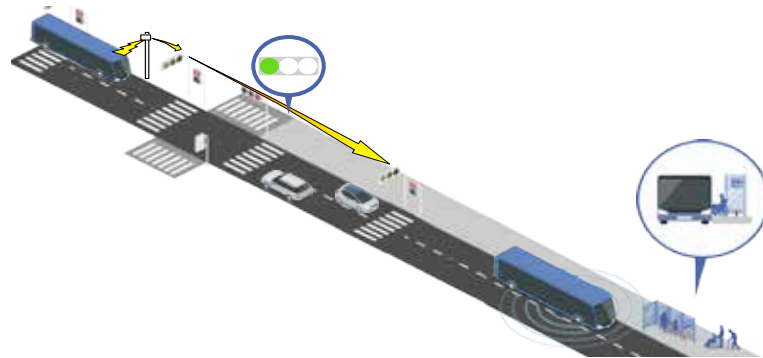
Terminal 3 of Haneda Airport



Haneda Innovation City

3. ITS wireless roadside units

Conducting tests to verify the effectiveness of a system for providing traffic signal information and priority signal controls to public transport vehicles (e.g. buses) via wireless communications.



Public Transportation Priority Systems (PTPS)



ITS wireless roadside units



ITS wireless receiver (equipped on vehicle)

4. Dedicated bus lane

In addition to PTPS, creating a system that gives priority to public transport vehicles will improve their timeliness.



Dedicated bus lane



Traffic sign regarding dedicated bus lane