Summary of SIP-adus Project (FY2016)

Name of the project	Development of movement support system for people with mobility constraints
Responsible Organization	National Research Institute of Police Science, UTMS Society of Japan
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Object of the Project

The project will develop sophisticated Pedestrian Information and Communication Systems (PICS) which allow people with mobility constraints to cross the road safely, securely and smoothly, with a view to putting them into operation for the 2020 Tokyo Olympic and Paralympic games and deploying them to other regions afterward.

Project Summary

With the aim of upgrading the current PICS, verification of some functions of the systems whose basic design was developed in fiscal 2015 was carried out at intersections. The results of the field operational test are shown below:

1. Evaluation of the functions of services that use smartphones

(1) Outline of the test

Viability of the services that primarily support people with visual impairment and are provided via smartphones was verified, which include the service that notifies pedestrians of the intersection name and traffic signal status by voice and the service that extends the pedestrian green time.

(2) Test results

Performance evaluation was conducted for five types of smartphones and the operability of the services was confirmed on all types.

2. Field operational test for the securing of green time based on crossing conditions

(1) Outline of the test

Effectiveness of the service which primarily supports pedestrians with slow walking speed and secures the pedestrian green time based on walking conditions was verified.

(2) Test results

A system to detect pedestrians with slow walking speed and extend the pedestrian green flashing time was developed. It was confirmed that the system reduced the number of cases of “starting crossing when the pedestrian green light is flashing (disregard of traffic signal)” and also reduced the number of “pedestrians who cannot complete crossing before the onset of the pedestrian red light,” while at the same time minimizing wasted pedestrian green time.

Future plan

- Evaluation of the system at large-scale intersections and at locations where GPS accuracy is low.
- Establishment of a method for evaluating roadside systems
- Examination of system operation monitoring systems at the traffic control center
- Establishment of a common application platform for smartphones
- Examination of an indication method for safer pedestrian green light flashing