Abstract

"Cross-ministerial Strategic Innovation Promotion Program (SIP) Phase 2: Autonomous Driving (System and service expansion)" aims to build an infrastructure for realizing autonomous driving Level 3 on general public roads. Autonomous driving is expected to solve social issues, such as reducing traffic congestion or securing means of transportation for the elderly and the handicapped, and to create new services and businesses related to logistics and transportation. This survey is based on the premise of building 'Information Platform' (IP), which can utilize various types of information such as transportation, logistics, and public facility in a comprehensive and efficient manner. The purpose of this project is to conduct a survey of the IP structure which could realize new services.

In this survey, we first (1) assumed some use cases for services which is effective in solving social issues and creating new businesses. Based on these use cases, (2) the information to be distributed and the distribution conditions were studied, and (3) the required structure and conditions for IP were examined. (4) A scheme for development and evaluation of services utilizing private ideas and resources, based on information from IP, was also examined.

(1) Use Case Assumptions: Use cases were assumed based on residents (child-rearing generations, commuters and the elderly people), tourists (including wheelchair users), government / transportation operators, etc.

(2) Information to be Distributed and the Distribution Conditions: Types of information required to realize services of the use cases are listed. Based on this, interviews were conducted with 17 transportation operators and 3 logistics companies, and the opinions were gathered on the type / form of information, provision method, update frequency, provision conditions, etc.

(3) Required Structure and Conditions for IP: The requirements for, and the ways of utilizing, IP were examined, with the study of distinction between 'collaboration area' (shared base among multiple companies) and 'competition area' (the scope of each company's own efforts) Interviews with route guidance service providers (content providers) were conducted, in order to sort out the possibility of utilizing IP, their needs, and the issues of IP. Up-to-date policies related to IP were also summarized.

(4) Scheme for Development and Evaluation of Services Based on IP: Information on 10 examples of service development / evaluation schemes (e.g. hackathons) was collected and organized. Based on this review, an expected scheme for service development / evaluation, which aims to continue the operation of IP, are proposed. The

scheme is proposed according to the phase of development and evaluation of the services: the event outline and application guidelines, data preparation and disclosure, giving incentives for participants, screening / awards, and continuous support after the contest.