

Research Trends and Results

Working on the application to transportation planning of a platform of movement of people

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1. Introduction

Transportation planning takes advantage of the results of statistical surveys of human movement information obtained by person-trip survey and road traffic censuses, etc. In recent years, we have been counting on utilizing information that can grasp the state of people and automobile movement (trail data) which has been collected from cell phones, car navigation systems, and so on.

The NILIM researches the potential application of diverse movement of people to transportation planning by providing a platform capable of collection and analysis. This report describes the results of a trial of combinational analysis of diverse movement of people, the state of research on an analysis and visualization platform that can be used to uniformly and efficiently process movement of people, and future prospects.

2. Trial of combinational analysis

Figure 1 shows the results of superposing number of passengers on buses (Tsukubus) and taxis (Tsukutaku) that are public transportation systems in Tsukuba City on a map divided into 500m meshes. From this map, it is possible to grasp that the state of use has complementary relationships between each usage area. Also, detailed

Figure 1 Superposing Tsukubus and Tsukutaku usage areas

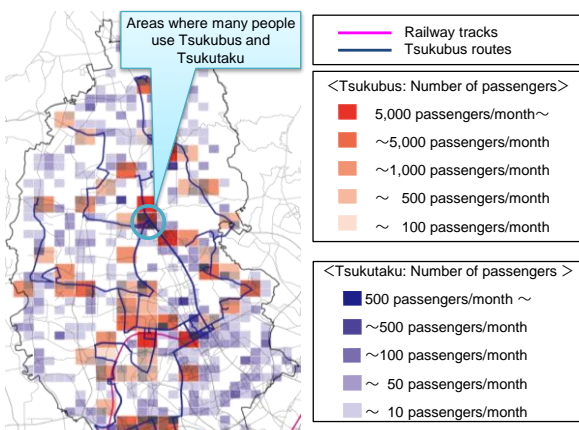
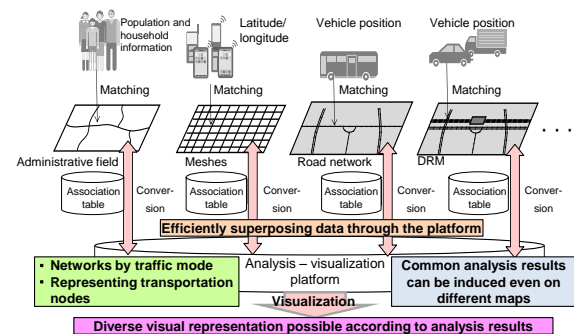


Figure 2 Image of Achievement of the analysis and visualization platform



analysis of departure and arrival points and usage time slots of passengers in overlapping areas of use can be counted on to be used for transportation planning such as abstracting candidate locations of transfer encouragement.

3. Studying the analysis and visualization platform

Considering present conditions, under which it is possible to diversify and increase the quantity and perform combinational analysis of movement of people, it is important to provide a analysis and visualization platform such as that shown in Figure 2, to achieve more efficient information superpositioning, conversion and analysis and to diversify visualization expression. This research considered a data model of analysis and visualization platform. And we confirm the usability by using a private maker's map to trial manufacture the platform and perform information conversion testing²⁾.

4. Future prospects

The achievements of the research were obtained as part of the activities of the Tsukuba Mobility and Traffic Research Committee³⁾, etc.

We will continue to verify analysis methods using diverse movement of people and to conduct case studies using the analysis and visualization platform and apply it to transportation planning in the future.

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