

## Research Trends and Results

# Research on Person-trip Surveys Using the Web

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### 1. Present state of and challenges to person-trip surveys

Person-trip surveys (below, "PT surveys") have been regularly conducted in all parts of Japan since a large-scale PT survey was conducted in the Hiroshima City region in 1967. When PT surveys were first introduced, the surveyors visited the people surveyed, explained the purpose of the survey then gave them questionnaires, but in recent years, they have mainly mailed the questionnaires to survey subjects to lower costs.

But as distribution by mail was done, response rates fell, questionnaires were incorrectly completed and questions not answered, also the samples were biased in many cases, so attention has turned to surveying on the WEB, an approach that will simplify entry and collect samples inexpensively. So the NILIM has proposed and announced new WEB interface use questionnaire survey formats.

### 2. Aim of developing the WEB Interface

Questionnaires using a WEB interface have already been used for some surveys, but in many cases, the configuration of the paper questionnaire is maintained as it is displayed on the screen, and it cannot be claimed that this has ended the complexity of filling them in. The NILIM has, therefore, taken advantage of the strong points of PC entry to develop questionnaires so that even elderly people and other respondents unaccustomed to using PCs can easily enter their answers and recall past behaviour. It has developed two types of questionnaires: (1) Destination Advance Entry Type organized so that it is basically easy to enter answers on an existing questionnaire, and (2) Diary Type that have reset the entry method so that it is easy for the respondents to recall their behaviour on a certain day.

### 3. Outline of the development of the WEB Interface

Both forms of interface were designed so that screens open successively for each entry item. To enter traveling behaviour, first every destination throughout the entire day are entered, followed by entry of information about means of movement etc., but (1) using the Destination Advance Entry Type, in cases where ??? is seen for each entry item, the questionnaire can be filled in the same way as past paper questionnaires, but (2) using the Dairy Type, the respondents first enter daily life activities and time of the activities just as if they are entering their

schedule in a memo pad, and then enter detailed information about their movement between activities (locations means of movement, etc.).

Using both formats, messages pointing out contradictory entered contents and missing entries concerning the context of time, are displayed as needed, reducing the number of invalid questionnaires. And they are devised so that information about places visited can not only be entered as written addresses; but can also be designated on a map so that it is easy for the respondent to visualize the places.

Figure Entry of destination on a map



### 4. Future challenges

This research developed a method of replacing paper questionnaires with a method of answering through a WEB interface, but it has been pointed out that changing to a new survey method will impact response rate for each attribute and the trip numbers that are recalled while responding. In the future, it will be necessary to fully clarify differences in data characteristics caused by differences in survey methods in order to compare PT surveys over time and to compare regions. It will be advisable to pay close attention to the above points with regard to the Diary Type that differs greatly from the conventional questionnaire.

[Sources]

NILIM, Urban Planning Department, Urban Facilities Division web site

<http://www.nilim.go.jp/lab/jcg/index.htm>