Use of draft technical specifications for the mobility support system

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1. NILIM's role in the mobility support system

By developing ubiquitous information infrastructure using IC tags, etc., the Ministry of Land, Infrastructure, Transport and Tourism is promoting a project for mobility support. The aim of this is to build an environment in which anyone, at any time and in any place, can access information needed in various situations (e.g. transit routes, means of transport, destinations, nearby facilities, etc). Following demonstration trials all over the country since FY2004, a model project has been in progress since FY2009, the ultimate goal being a transition to a permanent service.

To achieve this transition, it will be important to ensure the compatibility of equipment between different districts, and to set rules for uniformly gathering and accumulating the data needed for services. The National Institute for Land and Infrastructure Management (NILIM) is responsible for studying various technical issues in this project, in collaboration with a variety of members including academic and professional experts, private companies, NPOs, the central government and local authorities. In May 2008 NILIM published its findings in the form of "Technical specifications for the mobility support system (draft)".

2. Outline of the mobility support system

The mobility support system consists of equipment fitted with geopositional identification codes and communication functions installed in various places, configured so that users can use mobile terminals to access information managed separately by a server, etc. The system is characterized by the speed with which it updates constantly changing information, since the information is managed separately by a server, etc.

3. Development of pedestrian network data and implementation of monitor survey

From FY2010, we started developing pedestrian network data including information on barriers in pedestrian spaces, an indispensable element of the mobility support system, in the centers of the three big urban spheres (Tokyo, Osaka and Nagoya). Data were developed by the various regional development bureaus in line with technical specifications prescribed for the basic data composition, content, etc.

At the same time, based on user opinions of the data actually produced, we constantly need to update the data content while confirming the usefulness of the data, reflecting user needs in the data content, ranking the information provided in order of priority, and so on.

To this end, we conducted a monitor survey in which we enlisted the help of wheelchair users, visually impaired and other volunteers in the area around Ueno Station, where the development of data was at a more advanced stage. We provided the monitors with network data on the pedestrian area as they actually made their way around it, and asked them to complete a questionnaire during and after their tour.

Based on the results, we identified issues in the draft

technical specifications, while also proposing data content that would allow more useful information for the users to be provided at low cost. We plan to refer to these survey results to produce even more advanced technical specifications in future.

Table: Examples of Data items that should be added, based on the survey results

Level of pedestrian traffic	Taxi stands
Level of obstacles on road	Information boards
Number of dropped kerbs	Time duration of green traffic signals
Structural format of sidewalks	Length of sections with long gradient of 5% or more

(References)
1) NILIM journal 532, Technical specifications for the mobility support system (draft), May 2009
2) Ministry of Land, Infrastructure, Transport and Tourism: Draft specifications for the development of pedestrian network data, Sept. 2010