

4. 付録 (APPENDEX)

4.3 トピック (Recent Topic) : Japan

12th U.S.-Japan ITS Workshop
Probe System in Japan

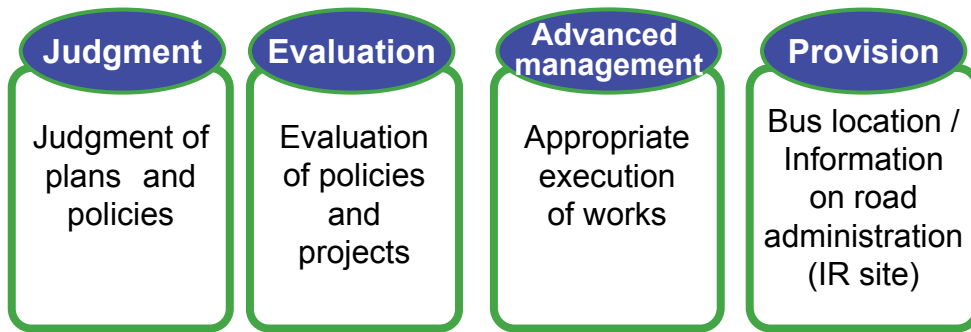
Ministry of Land, Infrastructure and Transport
National Institute for Land and Infrastructure Management

Kazuhide KIYASU

1. Probe Systems of the Ministry of Land, Infrastructure and Transport
2. Probe Systems in the Private Sector
3. Positioning of Probe Systems in the Smartway Project

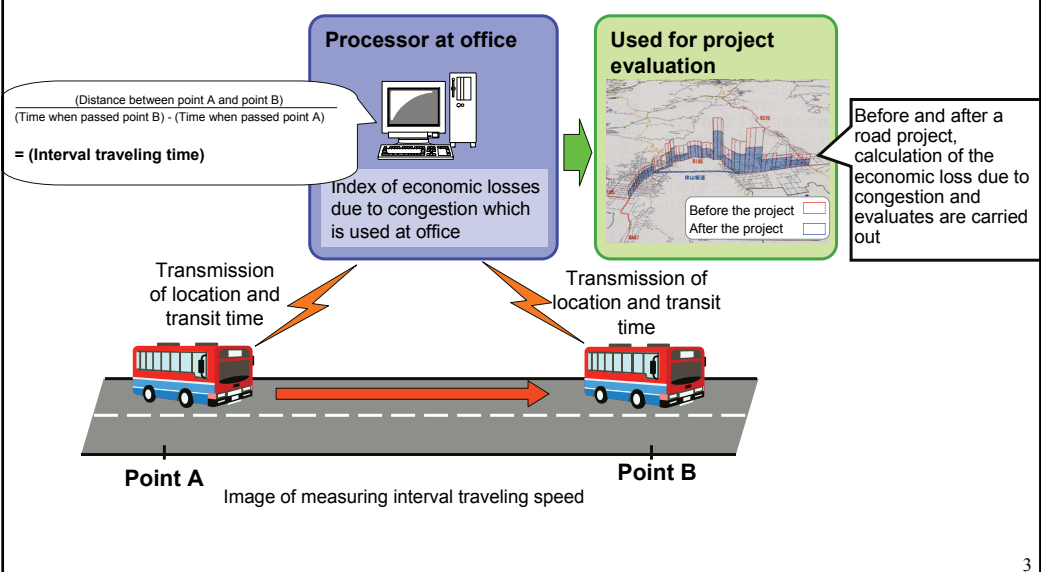
1. Probe Systems of the Ministry of Land, Infrastructure and Transport

(1) Purpose of Utilizing Probes

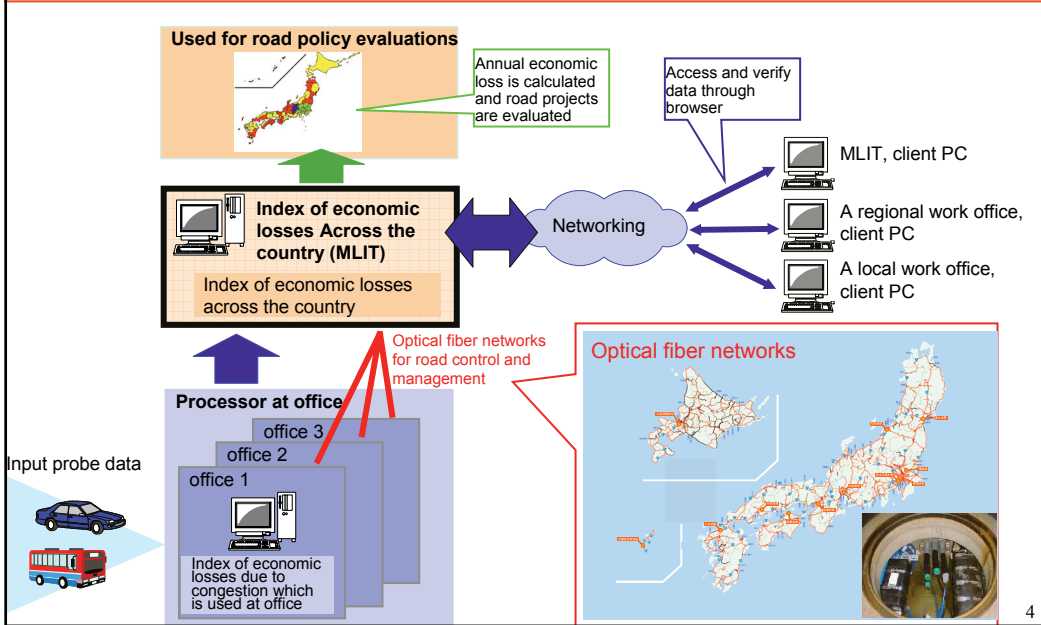


1. Probe Systems of the Ministry of Land, Infrastructure and Transport

(2) Basis Configuration of Probe Information Systems



1. Probe Systems of the Ministry of Land, Infrastructure and Transport (3)Construction of a Nationwide Network



1. Probe Systems of the Ministry of Land, Infrastructure and Transport (4)Example 1

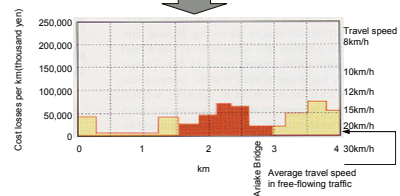
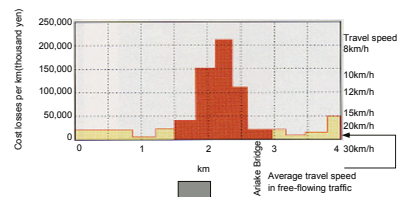


Post evaluation ARIAKE Bridge lane widening project in Niigata prefecture

Before road work



After road work



Entrance to Niigata University National Highway 16 Ariake Bridge National Station

1.Probe Systems of the Ministry of Land, Infrastructure and Transport (4)Example 2



Analysis of time lost due to congestion per kilometer in each prefecture

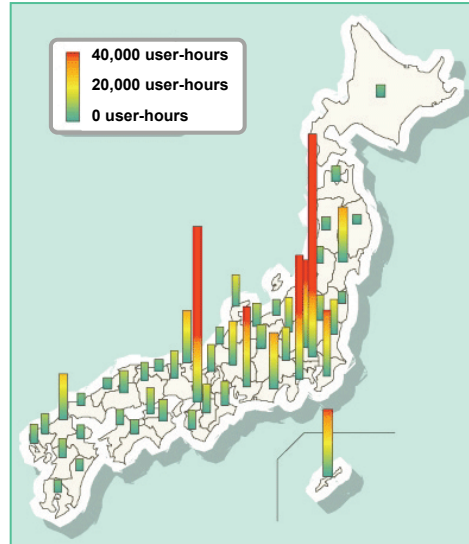


Fig. Analysis of traffic congestion loss time per kilometer in individual prefectures using probe information

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1.Probe Systems of the Ministry of Land, Infrastructure and Transport (4)Example 3



Example 1: Easily understandable display of traffic congestion losses on directly controlled national highways in a government designated city (Sendai city)

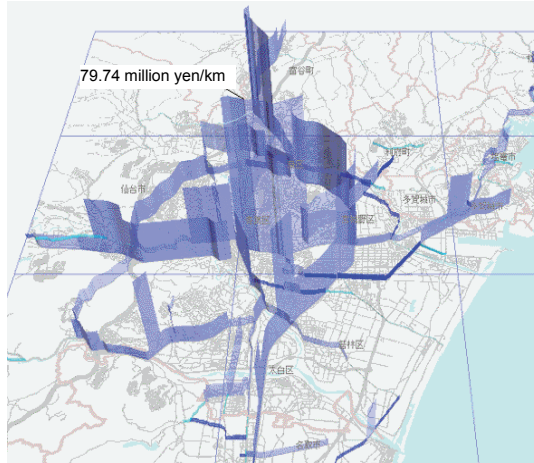


Fig. 3D traffic congestion map in the city of Sendai

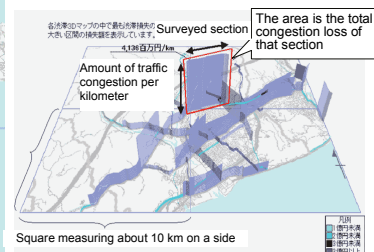


Fig. Interpretation of 3D Traffic Congestion Map

* 3D Traffic Congestion Map: Map in which the amount of traffic congestion per kilometer in each region or city is represented with a bar graph. The higher the bar graph, the greater the amount of traffic congestion.

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1. Probe Systems of the Ministry of Land, Infrastructure and Transport (4) Example 4



Example 2: Extraction of locations having large congestion losses on a directly controlled national highway (National Highway No. 16) on the outskirts of Tokyo

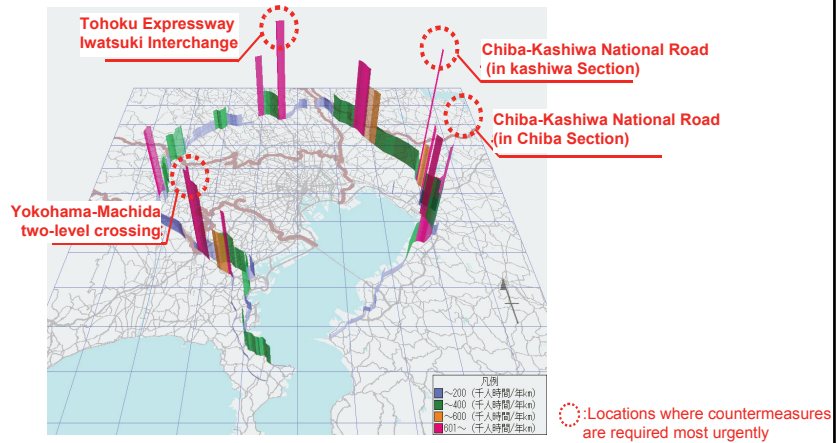


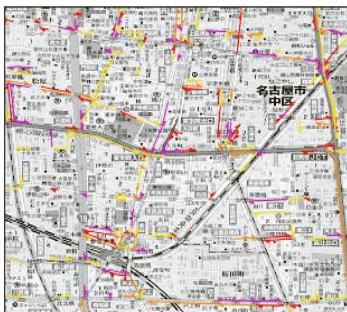
Fig. 3D traffic congestion map near Tokyo (National Highway No. 16)

2. Probes in the Private Sector (1) Internet ITS Experiments

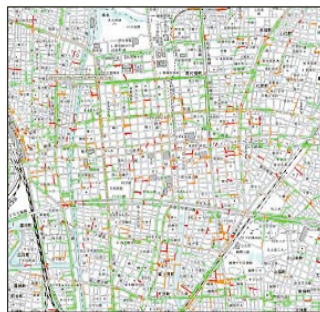


Traffic congestion information (real-time information) **Traffic congestion information (past information)** **Rainfall information using windshield wiper information**

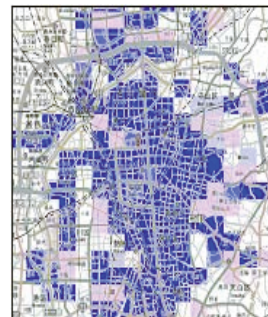
Real-time information can be provided even on roads where detection by infra-sensors is not possible (where sensors are not installed)



Previous traffic congestion information is accumulated and provided for use in predicting traffic congestion, etc.



Providing of detailed weather information for individual areas

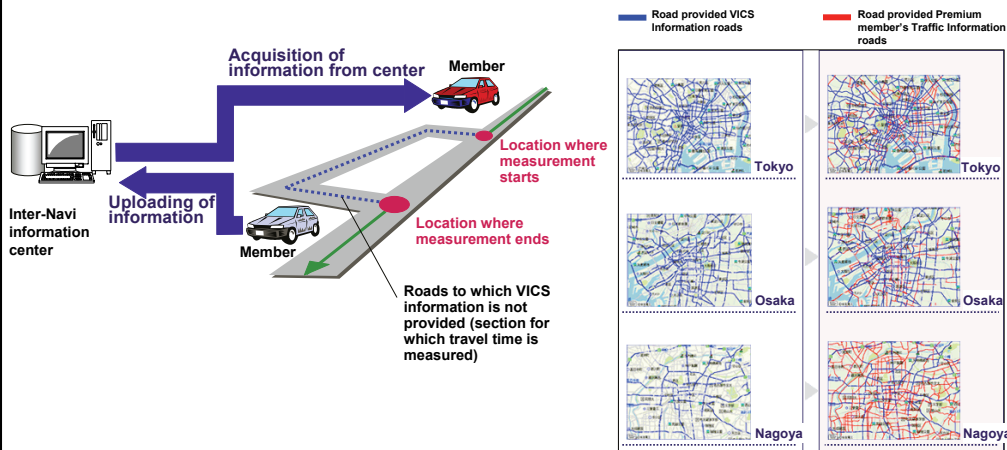


Sources: Internet ITS Consortium, private firms

2. Probes in the Private Sector (2) Example of the Honda Motor Co., Ltd.



- Honda is deploying a service for connecting to an "Internet Premium Club" operated by the firm by providing a two-way communication function in car navigation systems installed in its vehicles.



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3. Positioning of Probe Systems in the Smartway Project

