Field of Intelligent Infrastructure

Status: June 2021

iRoute 2

Initial Situation / Motivation

In order to assess the traffic situation and detect disturbances (traffic jams etc.), various options were examined on the A9 motorway.

First, there are local detectors (overhead detection and side radar). In addition, the traffic situation can be determined by mobile detectors. Today, these mainly include floating car data (FCD). A third data acquisition technology is the route-related measurement (for example travel time) by Bluetooth scanners.

In addition to the detection technologies mentioned above, data can also be retrieved from Automatic Number Plate Recognition (ANPR) cameras to additionally record vehicle-specific features.

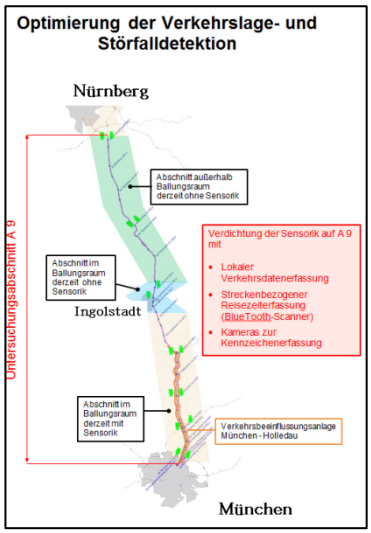
Measure Goal

The three technologies - local, route-related and mobile recording - have been compared and evaluated in the project.

The aim of the measure was the development of an economic traffic situation and incident detection system and the derivation of generally valid results for use on motorways.

Measure Implementation

The following figure shows the iRoute 2 test field on the A9 Nuremberg-Munich motorway, which is approximately 140 km long.



Source: Central traffic management Bavaria

In iRoute 2, the following three route categories are distinguished:

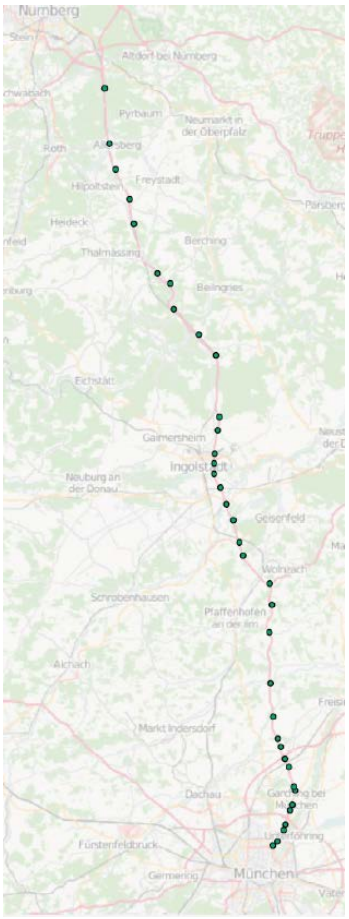
- Agglomerations with traffic data collection
- Agglomerations without traffic data collection
- Areas outside of agglomerations

For the different categories the optimal use of the three detection technologies were determined.

Current Status

The Measure was completed. Around 18 stations for local traffic data acquisition as side radar units and around 38 Bluetooth scanners for travel time measurement were set up on the test field.

In addition, 14 cross sections with ANPR cameras are available as monitoring points for the evaluation. Within the framework of the scientific monitoring, existing data was evaluated and recommendations regarding the equipment for the different route categories were developed.



Source: Bavarian Street Information System (BAYSIS)

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The Digital Motorway Test Bed is operated by the Federal Ministry of Transport and Digital Infrastructure (BMVI), by the Free State of Bavaria, by the German Association of the Automotive Industry (VDA) and by the German Federal Association for Information Technology, Telecommunications and New Media (Bitkom).