



*Signalbau Huber*

SIGNALBAU HUBER GMBH



SOLUTIONS FOR INTERURBAN CHALLENGES

A Company of the SWARCO Group



# SOLUTIONS FOR INTERURBAN CHALLENGES

## CAPACITY MANAGEMENT

### RAMP METERING

Ramp metering installations reduce the flow of vehicles entering the motorway by breaking up the groups of cars and thus ensuring that the traffic can merge more easily. Approximately 95 SIGNALBAU HUBER ramp metering installations are in operation in North Rhine-Westphalia.

#### BENEFITS:

- Reduction of accidents by up to 40 %
- Reduction of congestions by up to 50 %
- Increase of traveling speed by up to 15 km/h
- Increase of traffic volumes by up to 10 % at peak times

#### REFERENCE PROJECT:

- Ramp Metering Systems in North Rhine-Westphalia



### TEMPORARY USE OF HARD SHOULDER

During busy periods the hard shoulder is used as an additional running lane. The constant monitoring, the special signage and variable speed limit allow for a high safety standard.

With an adequate road design provided, the use of the hard shoulder proves to be a quick (interim) method to increase the capacity and decrease journey times.

#### BENEFITS:

- Increase of traffic volumes from 5500 Kfz/h to 7000 Kfz/h on motorway A99 (ADAC 04/2008)

#### REFERENCE PROJECTS:

- Traffic control installation with temporary use of hard shoulder on A99 Munich Motorway Ring
- Road Control System Motorway A3 Frankfurt-Sued - Seligenstadt



### NETWORK WIDE REROUTING

In areas of high population density motorway congestions are almost inevitable. The network wide management of traffic flows optimally uses the capacity of the whole motorway network. The signs used are highly dynamic and/or programmable, informing about alternative routes and congestions.

#### REFERENCE PROJECTS:

- A5/A6/A81 Leonberg – Walldorf
- Dynamic Traffic Guidance with integrated Congestion Information (“dWiSta”) A3 / A66

### COUNT STATIONS

Count stations collect traffic data in the subordinate road network and thus provide information about the current traffic situation. This information is used e.g. for network wide rerouting and statistical means. In remote locations these count stations are typically solar powered.

#### REFERENCE PROJECT:

- Approx. 300 count stations in Hesse





## SAFETY MEASURES

### TUNNEL

Goals of a tunnel management system are

- Management of the traffic flows and fast emergency closure of the tunnel in case of incidents such as fire, smoke and accidents
- Warning of congestions, construction works
- Early information and safe rerouting of the traffic
- Harmonising the traffic flow in unbalanced traffic situations
- Traffic monitoring



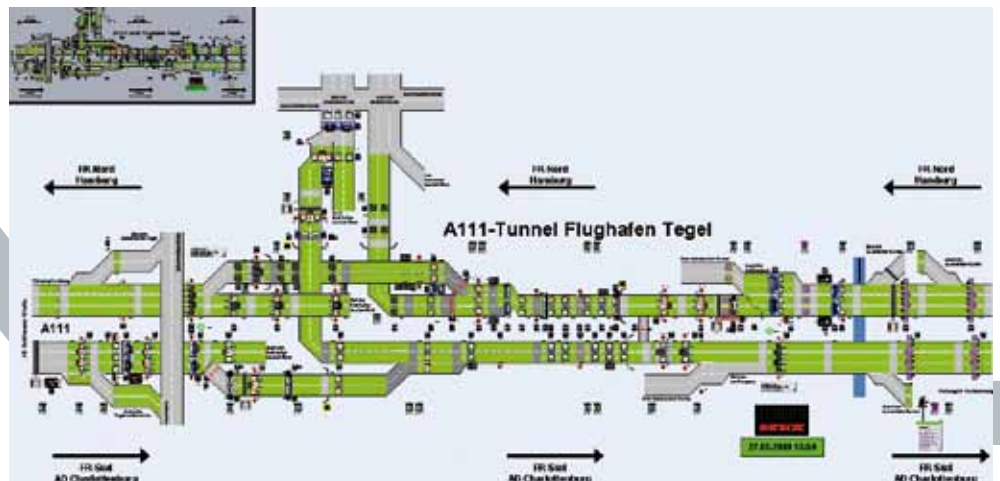
SIGNALBAU HUBER provides turnkey solutions for all traffic technological applications acc. to RABT (Regulations for the equipment and operation of road tunnels) and European DIRECTIVE 2004/54/EC.



Two of our tunnels were among the best in Germany, rated by the ADAC tunnel test „Euro TAP“!

### SELECTED REFERENCE PROJECTS FOR TUNNEL SYSTEMS:

- Tunnel Airport Tegel, Berlin motorway A111 (rated “very good” in 2009)
- Tunnel “Tiergarten Spreebogen”, Berlin Highway B96 (rated Germany’s safest tunnel 2007)
- Tunnel “Ortsteil Britz”, motorway A100 / A113 Berlin
- Tunnel “René Konen”, City of Luxembourg
- “Gotthard” Tunnel, Motorway A2, Switzerland





# Traffic in motion

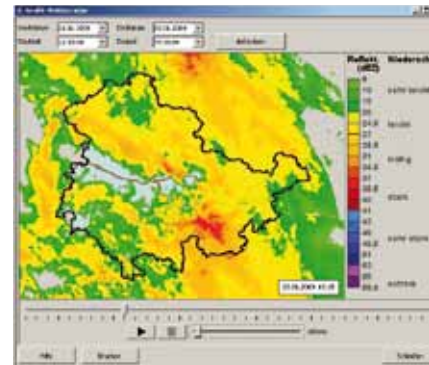
## OPTIMISED WINTER SERVICE

### ROAD CONDITION AND WEATHER INFORMATION SYSTEM

Measurement stations collect a variety of measurement values such as road surface temperature, residual salt, precipitation. The collected data is merged with general weather data from the National Meteorological Service at the local weather centre. The resulting temporally and locally differentiated information on weather and road conditions are evaluated and visualised in a graphical user interface. They are basis for an optimised winter road service adapted to the current weather situation.

#### REFERENCE PROJECT:

- SWIS – Road Condition and Weather Information System in Thuringia



Source:  
Radar weather information  
National German Meteorological Service  
(Deutscher Wetterdienst)

## OPTIMISED INFORMATION

### INFORMATION ABOUT ROAD CONSTRUCTIONS, CONGESTIONS AND TRAVEL TIME

The data collected on roads and motorways can be used to comprehensively inform the road user about road works, congestions, travel and loss times.

Besides dynamic signs on the road itself, the information is used for systems and services such as radio announcements and navigation devices as well as the display of the current traffic situations in the internet.

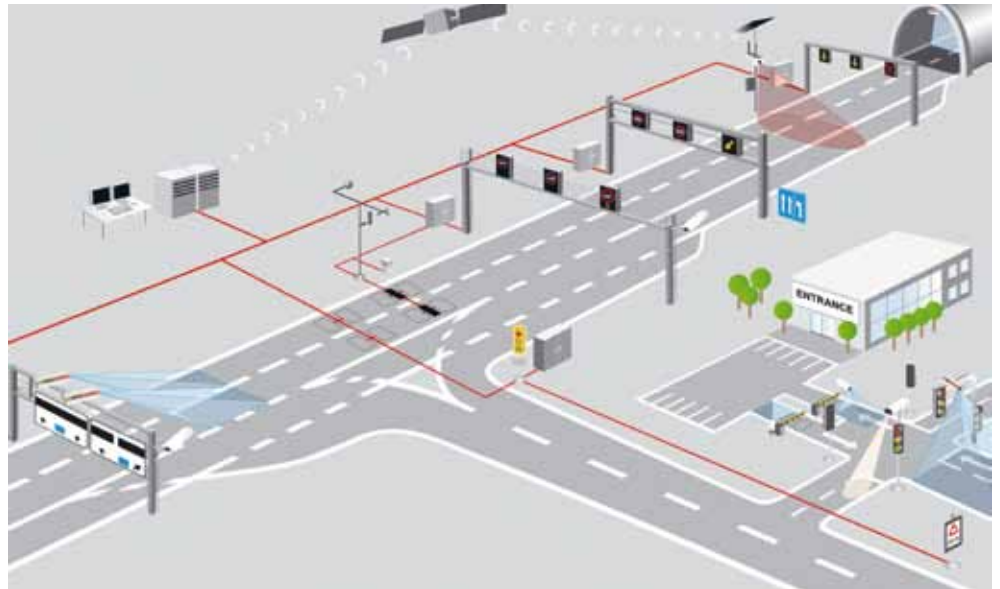
#### REFERENCE PROJECT:

- Motorway A1 Bremen – Current traffic situation in the internet



## SAFETY AND ENVIRONMENT

Modern traffic management installations have become a necessity, due to the increasing density of traffic especially on motorways and in tunnels during the past years. A smooth traffic flow and extensive information increase the road safety while at the same time reducing emissions.



SIGNALBAU HUBER as a general contractor offers turnkey customer-oriented solutions for traffic control systems and visualisation such as

- ▶ Traffic management for motorways and road tunnels
- ▶ Variable message signs and variable direction signs
- ▶ Temporary use of hard shoulder
- ▶ Ramp metering
- ▶ Axle load detection
- ▶ Permanent counting systems
- ▶ Mobile and solar powered systems

to solve customer-specific traffic problems and optimise traffic flow and safety.

Our systems are based on high-quality products and solutions developed by our partner DAMBACH-WERKE GMBH.

Our project management comprises the whole range of know-how including technical coordination, project engineering and delta development as well as project procurement, quality assurance and documentation. During the complete implementation phase, our technical service staff is involved, finally bringing the project into operation. This is the basis for the optimal maintenance of the completed system afterwards. SIGNALBAU HUBER is your competent partner for interurban projects.

A considerable number of SIGNALBAU HUBER and DAMBACH-WERKE employees are actively involved in important boards of the German Road and Transportation Research Association (FGSV) as well as to the research groups of the Road and Transportation Research Association (BAST), contributing important impulses to the development of directives and bulletins for technology and applications.



## SWARCO | FIRST IN TRAFFIC SOLUTIONS.

In order to assure the smooth flow of traffic and driving safety on the motorway, we have developed traffic management systems that stabilise traffic flow and contribute to enhanced safety and performance at high traffic volumes. Features include congestion warnings, opening or closing lanes or regulating driving speeds at intersections and junctions. Our future-proof, innovative systems and comprehensive, integrated solutions guide drivers all the way from their home, along the motorway and to their destination, ensuring that everyone arrives safely.

As a new member of the SWARCO Group, the world-leading supplier of road marking systems, signage, traffic signals and traffic management systems, we are now stronger and more effectively positioned than ever before. From custom solutions to optimised, integrated systems, we cover a wide range of traffic management needs and offer services that assure maximum system availability. Our customers also benefit from the comprehensive know-how of a strong international group with every order they now place with us.

As a member of SWARCO, SIGNALBAU HUBER GMBH has one goal: Becoming the leading provider of traffic management systems and solutions.



### SIGNALBAU HUBER GMBH

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