

Traffic management by information: Ten years of Berlin Traffic Information Centre (TIC) – from the operator's point of view –

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VMZ Berlin Betriebsgesellschaft mbH

Copenhagen, 6th March 2012

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Traffic management by information: Berlin TIC – from the operator's point of view –

Berlin TIC


Berlin TIC
Business model
Database
Data distribution
Advanced
Applications
Conclusions

Topics

1. Berlin Traffic Management Centre
2. Business model and division of tasks
 - > from public-private partnership to service contract
 - > from Traffic Management Centre to Traffic Information Centre
3. Database: stationary traffic detection and much more
4. Data distribution: information services
5. Advanced Applications based on Berlin TIC infrastructure
6. Conclusions


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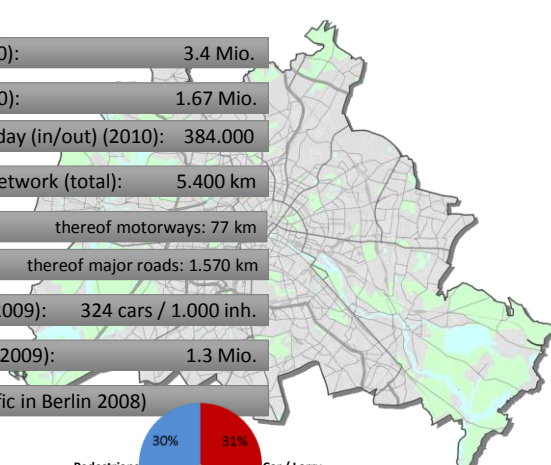
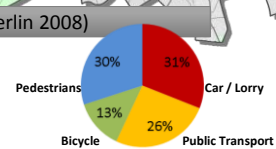


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Brief statistics of Berlin Traffic

Inhabitants (2010):	3.4 Mio.
Employees (2010):	1.67 Mio.
Commuters per day (in/out) (2010):	384.000
Length of road network (total):	5.400 km
thereof motorways:	77 km
thereof major roads:	1.570 km
Car ownership (2009):	324 cars / 1.000 inh.
Number of cars (2009):	1.3 Mio.
Modal Split (traffic in Berlin 2008)	

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Map of Berlin and the surrounding area (State of Brandenburg)

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First contract 2001-2010: public-private partnership (ppp)

Contracting authority and owner

State of Berlin
Senate Department of Urban Development

construction: 1999 – 2004

Consortium
DaimlerChrysler Services AG /
Siemens AG

- content platform public transport
- service platform
- services
- content platform individual transport
- detection
- information panels

operation: 2001 – 2010

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- system operation
- B2A
- B2B

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Business model of the ppp period

– initial public-private partnership contract:

Infrastructure / Equipment	Operating company
<p>The VMZ-Betreibergesellschaft is responsible for</p> <ul style="list-style-type: none"> concept, set up and content Maintenance, replacement, investment and technical improvement of the systems <p>State of Berlin</p> <ul style="list-style-type: none"> to finance the infrastructure of VMZ owner of infrastructure / equipment 	<p>The VMZ-Betreibergesellschaft</p> <ul style="list-style-type: none"> runs the VMZ Berlin on own risk and own costs provides collective traffic information free of charge supports the State of Berlin with free information <p>State of Berlin</p> <ul style="list-style-type: none"> finances the start-up checks the quality regularly supports the VMZ with data provision

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Division of tasks:

Traffic management and traffic control

common goal:

demand influence and sustainable traffic management

non-sovereign functions

better information and intermodal recommendation

Traffic Management Centre (VMZ)

information:
individual and public transport
traffic situation
traffic forecast
services

sovereign functions

optimised monitoring, regulating and control

State of Berlin Traffic Control Centre (VkrZ)

sovereign traffic regulation and control (traffic lights, ...)
protocol traffic
incident information,
special events

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From Traffic Management Centre to Traffic Information Centre (TIC)

History and terms

Non-sovereign functions

operated by VMZ Berlin Betreibergesellschaft mbH

2001

Traffic Management Centre („VMZ“)

realized and operated as a public-private partnership (PPP) by a consortium of DaimlerChrysler Services and Siemens (since 2006: completely by Siemens)

➔

2011

The new TIC („VIZ“)

operated in a service contract on behalf of the State of Berlin

Sovereign functions

2005

The new Traffic Control Centre („VKRZ“)

operated by the State of Berlin and the Police (Senate Department of Urban Development) „Verkehrslenkung Berlin“

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Stationary traffic detection: Traffic Eye Universal (TEU)

Detector

Solar panel

Cupboard

- independent of junctions
- no construction works required:
 - > energy supply by solar panel
 - > data communication by mobile radio (cellular modem: GPRS)
- detects quantity and velocity of traffic flow, type of vehicle

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Stationary traffic detection: Traffic Eye Universal (TEU)

Installation examples: new pole vs. existing pole of a street lamp



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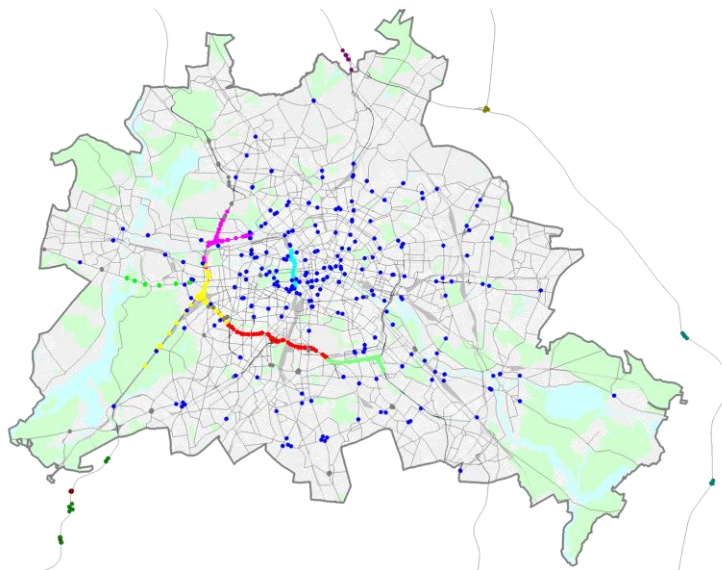
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Stationary traffic detection Map (as of 2008)




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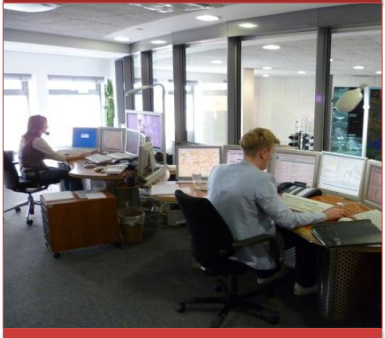
Data integration

The content platform SITRAFFIC CONCERT used by Berlin TIC and TCC

- Detectors on the main roads (Traffic Eyes)
- Detectors on motorways
- Data from modern traffic lights
- Floating Car Data (FCD)
- Traffic messages
- Road works and events
- Public transport data
- Environmental and weather data
- Airport information



Berlin TIC
Traffic Information Centre




TIC Editorial office

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Quality of data and services: Berlin TIC editorial office

- What happens if you put the wrong end timestamp for delayed road works into the traffic forecast?

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- The TIC editorial officers ensure the quality of road works information by daily phone calls to the site managers (beginning and ending sites).

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Information about the current traffic situation

Improvements of 2012:

- extended network coverage
- faster
- better quality

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Data distribution: The Berlin TIC service platform

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Traffic Information Centre

TIC Editorial office

Current traffic situation,
Traffic messages

TIC website:
www.viz-info.de
(Mobility Portal)

Daily Traffic News
(forecast) for media

Roadside Information
Panels

Data about traffic and
related pollution/noise

Support of
Traffic Control Centre

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Information via TIC roadside information panels

Focus on user's benefit

- more useful messages on the roadside information panels, e. g.
 - > current traffic problems ahead
 - > road works or events ahead / nearby
 - > planned road works / events / demonstrations
 - > alternative modes of transport: public transport information



Frankfurter Allee
ab Samariterstraße
nur 1 Spur frei - Rohrbruch

ITB 2011
Parkplatz Olympiastadion
Messe-Shuttle nutzen

Montag 21.00 – 05.00 Uhr
SPERRUNG
A100 Tunnel Britz

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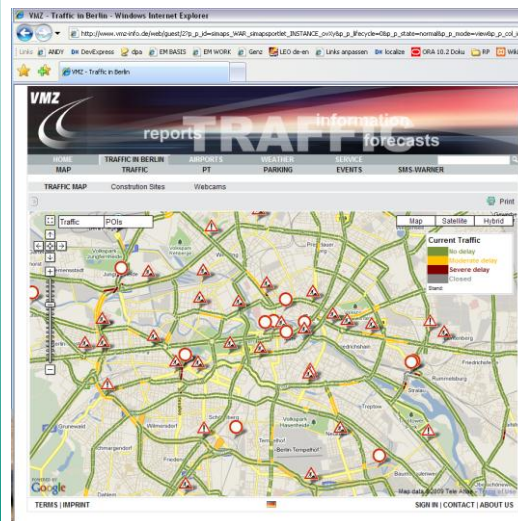


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Information via TIC website: www.viz-info.de

Most important: Current traffic situation



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Information via TIC website: www.viz-info.de

Service spectrum (selection)

<ul style="list-style-type: none"> City Map To and From Berlin To and From Berlin Routing <ul style="list-style-type: none"> Auto Routes Park & Ride Bike & Ride Public Transport RoutingPT_bike Bicycle On Foot Public Transport Time Tables Route Information Transit Maps Fares & Tickets Passenger Services 	<ul style="list-style-type: none"> Other Means of Travel <ul style="list-style-type: none"> Long Distance Bus Taxi Cabs Lift Car Sharing Rent a Bike Car Rental Sightseeing Ship Round Trip Airplane Round Trip Parking <ul style="list-style-type: none"> Map List Search 	<ul style="list-style-type: none"> Traffic Information <ul style="list-style-type: none"> Traffic Incidents Traffic Maps TrafficForecastMap Traffic Cams Flight Information PVM Weather Information <ul style="list-style-type: none"> Übersicht Three Days Forecast Weekend Forecast Bio Weather Weather Worldwide
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Information via TIC website: www.viz-info.de

Dynamic and multi-modal routing service

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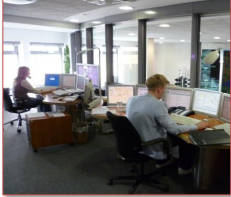
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Information via radio station: Successful cooperation with media

- Traffic news of Radio Berlin 88.8 (public radio station) directly from Traffic Information Centre (since 2003)

TIC
Traffic Information Centre



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- direct link to the drivers / travellers (very good distribution effect)

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Information via media in general: Traffic Preview


- multi-modal traffic preview for the next day as a service for
 - > newspapers
 - > radio stations
 - > television

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Traffic Information centre



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E-Mail



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Advanced Applications based on Berlin TIC infrastructure

Ex. 1: Planning and management instruments based on TIC data

Information about individual and public transport, about air pollution and noise in just one single system: **iQ mobility**



- How to meet the EU-limit values for PM10, NO₂ and noise?
- Quality Management System for major roads in Berlin as a prerequisite for environment oriented Traffic Management
- > Monitoring System for real time traffic information
- > Monitoring System for real time air pollution and noise
- > Situation adapted traffic management strategies for critical situations and hot spots (planned)

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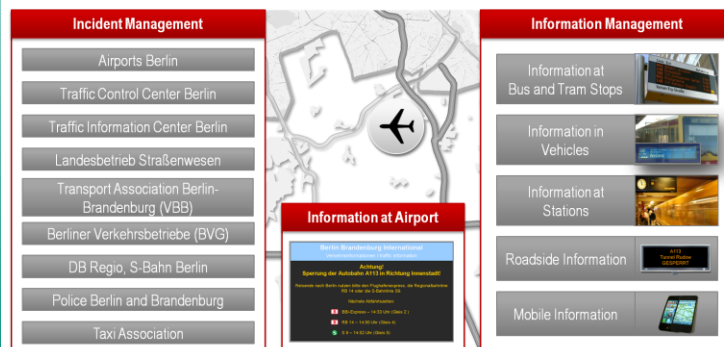
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Advanced Applications based on Berlin TIC infrastructure

Ex. 2: Improved cooperation between centres/institutions

- Airport Berlin-Brandenburg International: Incident and Information Management (**AIRVIS**)
- operation starts in June 2012
- co-operation between existing centres and multi-modal traveller information




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Conclusions

- Berlin traffic information centre is a working example for traffic management by information (“soft traffic management”).
- The basis is the well-known current traffic situation and the information about upcoming road works, events etc.
- The used software systems (e. g. SITRAFFIC CONCERT) integrate data from different sources. The responsibility stays at the source systems. The partners share (only) their data and planned activities (“action plans”).
- Traffic management by information influences the traffic demand. Efficiently. Sustainable.

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Thank you for your attention.

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