

Qualität von on-trip Verkehrsinformationen im Straßenverkehr

Quality of on-trip road traffic information

BAST-Kolloquium 23. und 24.03.2011

Wissenschaftliche Betreuung des Kolloquiums
Scientific concept of the colloquium

Christine Lotz
Malte Luks

**Berichte der
Bundesanstalt für Straßenwesen**

Fahrzeugtechnik Heft F 82

bast

Table of content

Quality first at NDW, J. Cornelissen (NDW)	8
1. To measure is to know	8
2. The data supplier	8
3. Testing by NDW	9
4. Analysis of work process.....	9
5. Quality differentiation	9
6. To conclude.....	10
Requirements for the Organization of the Traffic Information Process Chain	
G. Riegelhuth (HLSV)	11
1. Introduction	11
1.1. Scope	11
1.2. Thematisation	12
1.3. Traffic information value chain	14
1.3.1. Traffic data recording.....	14
1.3.2. Processing traffic data	15
1.3.3. Communications/Data transmission	15
1.3.4. Information presentation.....	16
2. Requirements for the process chain.....	17
2.1. Cluster of topics	17
2.2. Theses for discussion	17
2.3. Cooperation between road operators and radio.....	18
2.3.1. Starting situation.....	18
2.3.2. Cooperation between Traffic Centre Hessen and radio.....	19
3. Conclusion and outlook.....	20
Effort is not enough – and not a standard, T. Kusche (WDR)	21
1. Chinese Whispers for Travellers	21
1.1. A Babel of technical languages.....	21
1.2. Just a BIT of mistake	22
2. Everything's under control. Everything's under control?	23
2.1. Traffic information service is a team play.....	24
2.2. ERTICO and TISA provide a platform for Quality Management.....	24
3. Conclusion	24

TMCplus - Improving the TMC information chain	
B. Rainer, M. Müllner (Asfinag Maut Service GmbH)	25
1. Introduction	25
2. What is TMCplus?.....	26
3. Technical improvements	26
4. Optimization of the broadcasting network	27
5. Regionalization of the TMCplus service	27
6. Improvement of the content.....	28
7. TMCPLUS Conformity Testing	29
8. USER Support.....	30
9. Summary.....	31
Certification as Quality Assurance of Traffic Information Systems	
M. Grzebellus (NavCert GmbH)	32
1. Who we are.....	32
2. Quality aspects.....	32
2.1. Definition of KPI	32
2.2. Measurement of KPIs	33
2.3. Processes	34
3. Certification	35
3.1. Certification process	35
3.2. Certification of traffic information systems	36
4. Summary.....	37
Tests of commercial TMC-equipped navigation systems, I. Petrov (IRT).....	38
1. Objectives	38
2. Test description.....	39
2.1. List of tested devices	39
2.2. Test equipment	39
2.3. Test procedure.....	39
3. Test results.....	40
3.1. Decoding measurement.....	40
3.1.1. Explanation of results	40
3.2. Representation of messages	41
3.2.1. Erroneous content representation	45
4. Conclusions.....	45
How can we determine the quality of traffic information?	
H. Rehborn, B. Kerner (Daimler AG), J. Palmer (IT-Designers GmbH).....	46
1. Introduction	46
2. How can we understand traffic on freeways?.....	47
3. How can we detect and predict congestions?	49
4. How can we define and measure RDS/TMC product quality?	50
4.1. Results for different traffic service product quality	52
5. How can we measure precise traffic information quality (see [8],[9])?	53
6. Conclusions and future proposals	55
7. References.....	55

QBench – Evaluation of Traffic Flow Quality, C. Lux (BMW AG)	56
1. Basic approach Quality Measurements QKZ and QFCD	57
2. QBENCH approach.....	58
2.1. Adaption to cost function.....	58
2.2. Congestion threshold.....	59
2.3. Benefits for Cost Function.....	59
2.4. Tolerances and windowing	59
2.5. Impact factor Phi ϕ	60
2.6. Minimum congestion time and capping.....	61
2.7. Congestion threshold.....	61
3. Utilization	62
3.1. Using drive tracks	62
3.2. Using sampling technology	62
4. Conclusion	63

Quality of HGV Rest Area Occupation Measurements Along Long Distance Roads, J. Wehnert (urbane ressourcen)	64
1. The Underlying Concept	64
2. Strategies and Technologies for the Gathering of Information	65
2.1. What to Count and How.....	65
2.2. A Brief View on Technologies.....	66
3. Strategies and Technologies for Information Distribution.....	66
3.1. Types of Users.....	66
3.2. Communication Paths.....	67
4. Quality Requirements.....	67
4.1. The Users' Side	67
4.2. Operators' Options and Constraints.....	68
4.3. Third Party Involvement.....	69
5. Conclusions.....	69

From switching and operating states of technical traffic installations to traffic information,

Use of accurate and reliable real-time information in Düsseldorf
T. Finke, P. Stieler (Amt für Verkehrsmanagement Düsseldorf), Adriane Gieß,
(GEVAS software GmbH)

71	71
1. Introduction	71
2. System Architecture	72
3. Sources used for traffic information.....	73
3.1. Calendar of Events	73
3.2. Road works information	74
3.3. Operations of fire brigade and police	75
3.4. Local traffic detectors.....	76
3.5. Conclusion on the described sources for traffic information	76
4. Using switching and operating states as a basis for traffic information	77
4.1. Traffic light systems	77
4.2. Tunnel barrier systems	78
4.3. Permanent lane signalling.....	80
4.4. Traffic lights	81
4.5. Park Control System.....	82
5. Conclusions.....	83

**Quality Assessment of Travel Time Measurements at the Test Site Munich
I. Fiedler, F. Schimandl, M. Spangler, F. Busch (TU München)84**

- 1. Introduction84
- 2. ANPR-based Travel Time System Description.....85
- 3. Test Site Munich86
- 4. Quality Assessment87
 - 4.1. Correctness87
 - 4.1.1. Definitions.....87
 - 4.1.2. Analysis Results87
 - 4.2. Completeness.....88
 - 4.2.1. Comparison with Inductive Loop Detector Data.....89
 - 4.2.2. Time Series Analysis89
 - 4.2.3. Time Interval analysis.....90
 - 4.3. Travel Time Measurement.....90
- 5. Outlook.....91
- 6. Conclusion92
- 7. References.....93

Supervising the quality of published traffic information

J. Peters (Almo Consult GmbH)94

- 1. Introduction94
- 2. Proceedings94
 - 2.1. Data-Warehouse.....95
 - 2.2. Graphical representation.....95
 - 2.2.1. Representing configuration data.....95
 - 2.2.2. Chronological approach.....97
 - 2.3. Continuous monitoring.....98
 - 2.4. Message creation and transmission98
- 3. Conclusion99

Quality of Traffic Messages - The Austrian A12 Example -

K. Bogenberger (Transver), T. Mariacher (Asfinag Maut Service GmbH).....100

- 1. Introduction101
- 2. The QKZ-Method101
 - 2.1. Reconstruction of the real traffic situation (ground truth)101
 - 2.2. Quality Indicators103
- 3. Test Site and Evaluation Results106
- 4. Conclusions.....108
- 5. References.....109

Heterogeneous approaches to quality management for traffic information – do we need them all?, A. Ludwig (PTV AG), A. Schmid (PTV AG).....110

- 1. Practical examples110
 - 1.1. Floating car data validating traffic forecast model in Vienna111
 - 1.2. Quality Map: The Theoretical quality which can be achieved in detected road networks using measurement propagation112
 - 1.3. Bayerninfo.de: Look into a multi layer forecast system114
 - 1.3.1. Example: Assessing current traffic situation computation (ANS Diagram)117
 - 1.3.2. Example: Assessing (short term) forecast119
- 2. Synthesis121
- 3. References122