

Overview

Data Issues

Software Issues

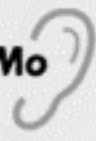
Validation Issues

Work Package 30

Traffic Flow Model

Dr.-Ing. Thomas Benz, PTV AG





Overview

Data Issues

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Validation Issues

- ▶ Data Related Issues
 - Inventory of available Traffic Data

- ▶ Software Related Issues
 - General Model Architecture
 - Specific Driving Behaviour Issues

- ▶ Validation Issues





► Inventory of Available Traffic Data

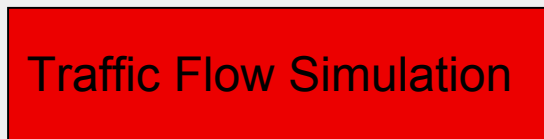
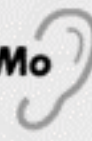
- Questionnaire to ECAG Partners
- Answers from four (

| Questions about Traffic Related Data | | | |
|--------------------------------------|------------------------------------|-----------------|--------------|
| Infrastructure | Availability | Format | Last Updated |
| Street Network | yes | VISUM 7.5 | October 2002 |
| (Approx.) area covered | 8km by 30 km | | |
| <u>Info included:</u> | | | |
| no. of lanes | yes | VISUM 7.5/excel | October 2002 |
| speed limit | yes | VISUM 7.5/excel | October 2002 |
| gradient | yes (only most significant street) | VISUM 7.5/excel | October 2002 |
| junctions | yes | VISUM 7.5/excel | October 2002 |
| Signal Control | yes | SIGMA | |
| Traffic Data | | | |
| OD-Matrix | yes | excel | 2001 |
| Traffic Composition | pc, bus, motorcycles, l-hdv | | |
| Time Resolution | 6,30 - 9,00 | | |
| No. of Zones | 81 | | |
| (approx.) No. of trips | 299892 | | |
| Link Volumes (measured) | yes | ASCII file | |
| Traffic Composition | n.a. | | |
| Time Resolution | 3min - 1 hour | | |
| Part of network covered | 20 % of the main network | | |

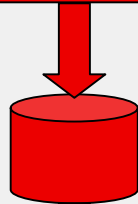
► Results

- Data Availability generally very good
- OD-Data available + Traffic measurements
- Detailed Network Data available
- Signal Control generally available
- Format of Data suitable
- Two-wheeler Behaviour important





Traffic Flow Simulation



Vehicle Data File (fzp file, database export)



Noise Module

Runs under Database



Database Table (~fzp file + „noise columns“)



Evaluation/Visualization

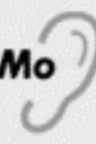
(e.g. via VISUM)

▶ **General RoTraNoMo Architecture agreed (between WP30 and WP40)**

- Data Exchange via db files
- VISSIM must provide database output (no reformatting!)
- Static and dynamic vehicle data defined

▶ **Data Exchange successfully tested!**

▶ **Import of Noise Data into Planning Tool foreseen for Visualization**



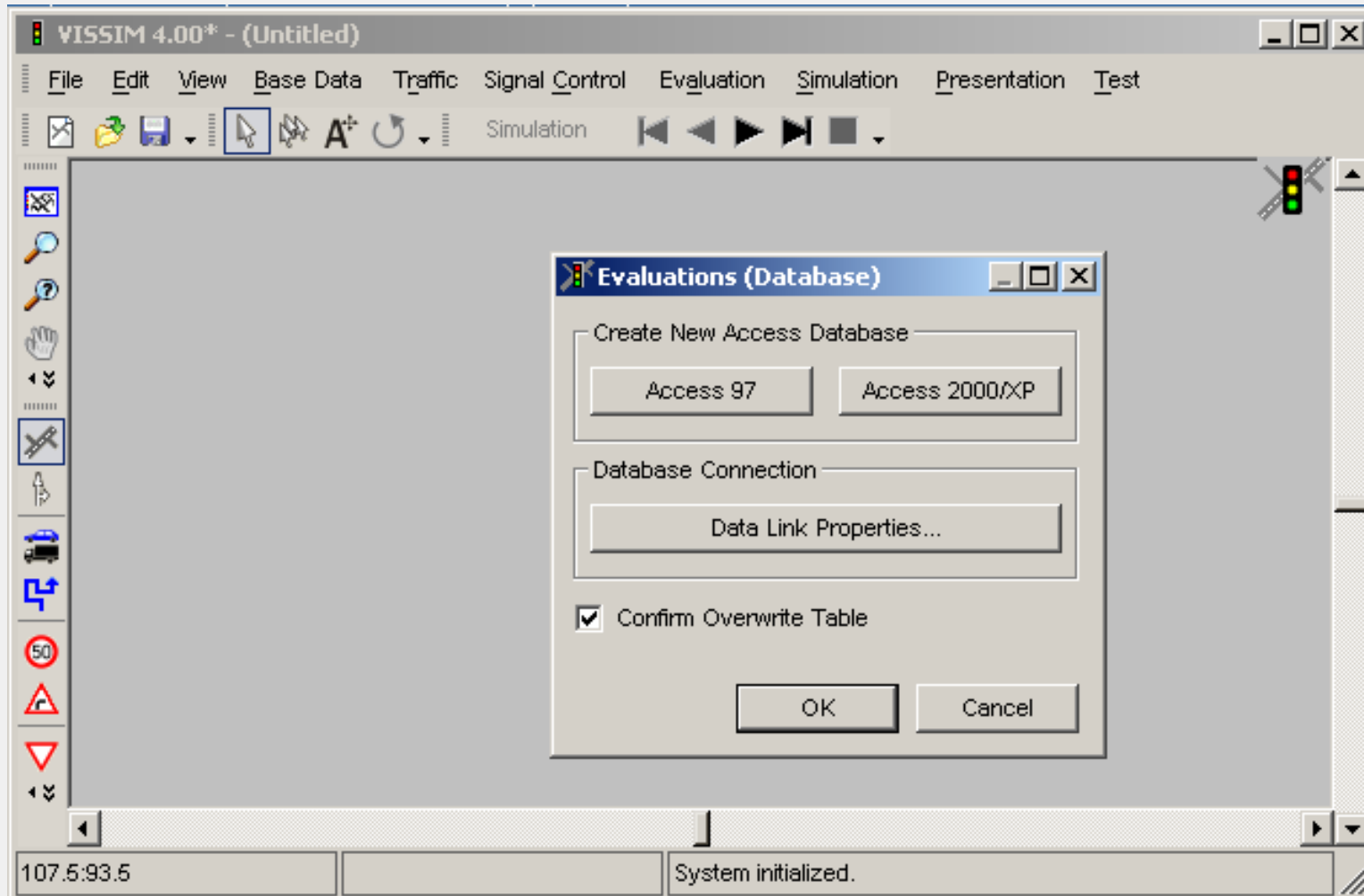
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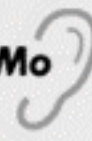
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► Database Output of VISSIM





▶ Two-wheeler Behaviour

- Important, considered major noise source in southern countries!
- Lateral behaviour significantly different: they „squeeze“ between others
- Overtaking on both sides
- Overtaking in one lane!
- Major Software-Implication: drop „vehicle chains“ (as organising principle)

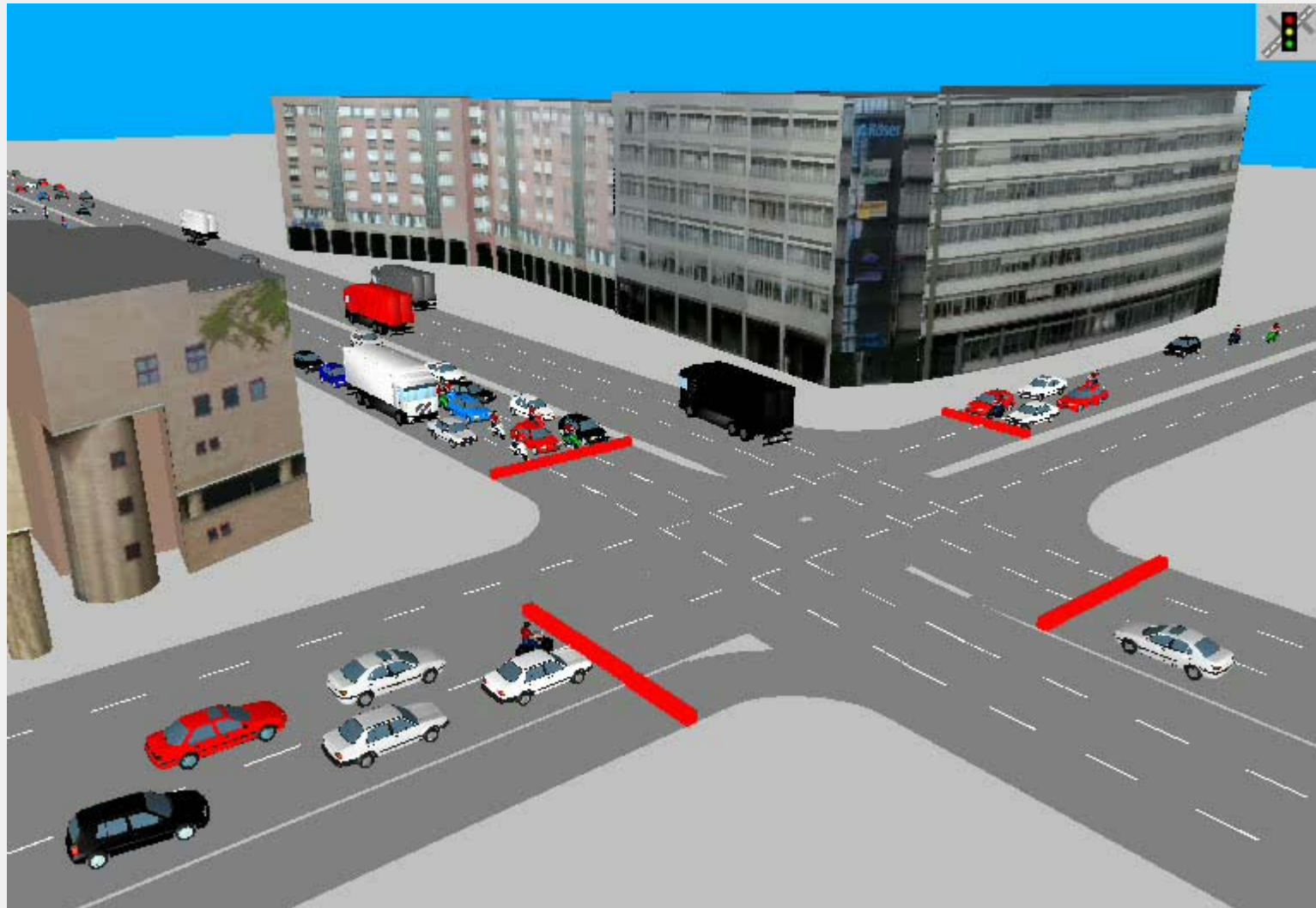


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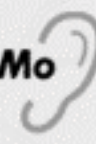
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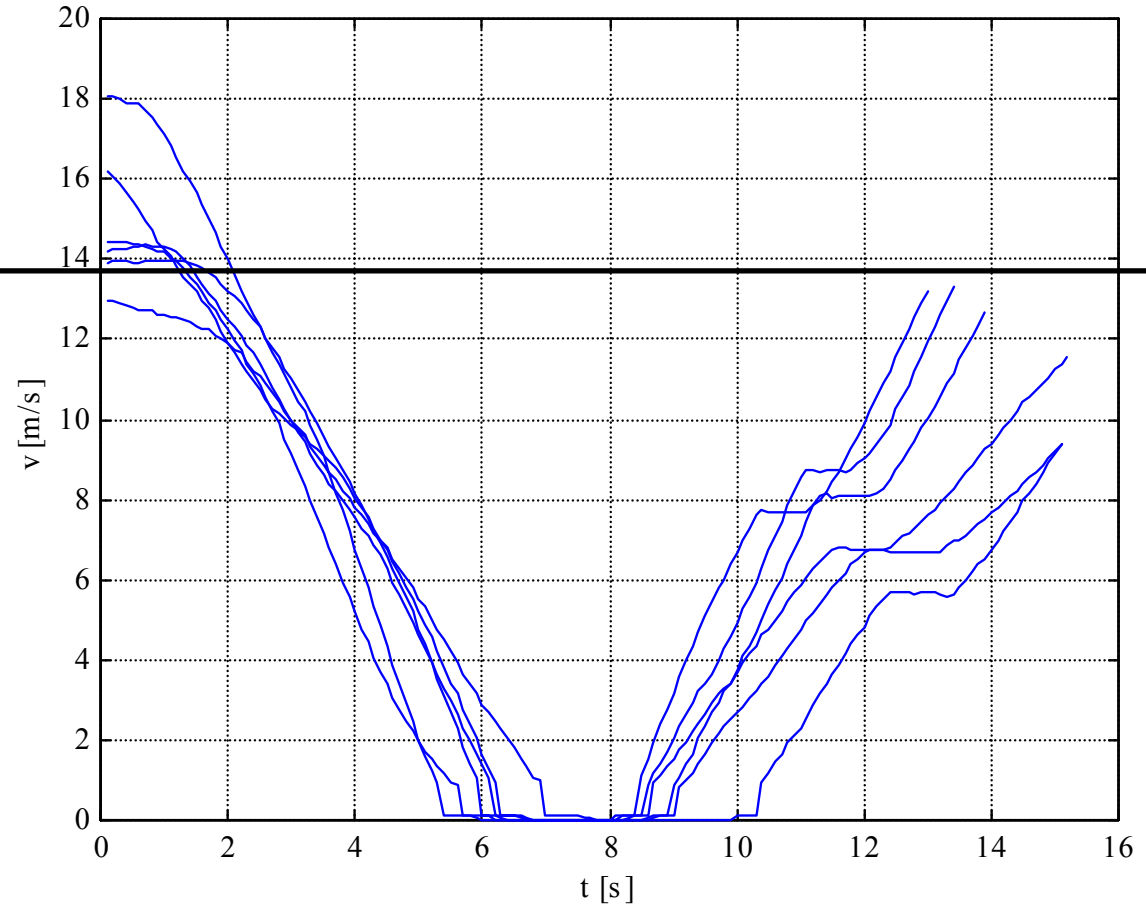
► Validation Case: Stop & Go

Measurements by ika, Aachen

Speed over time

50 km/h

Validation Case: Stop&Go

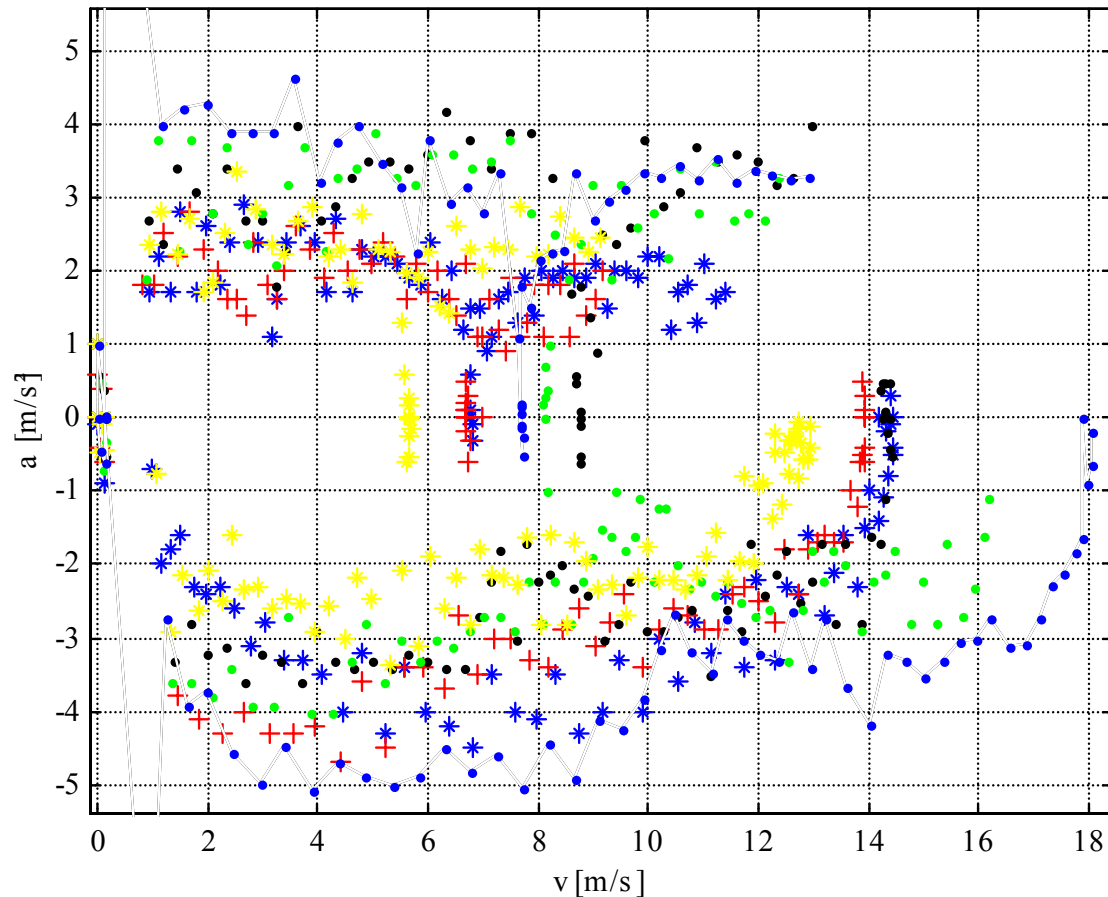


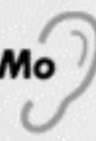


► Validation Case: Stop & Go

Measurements by ika, Aachen
Acceleration over speed

Validation Case: Stop&Go





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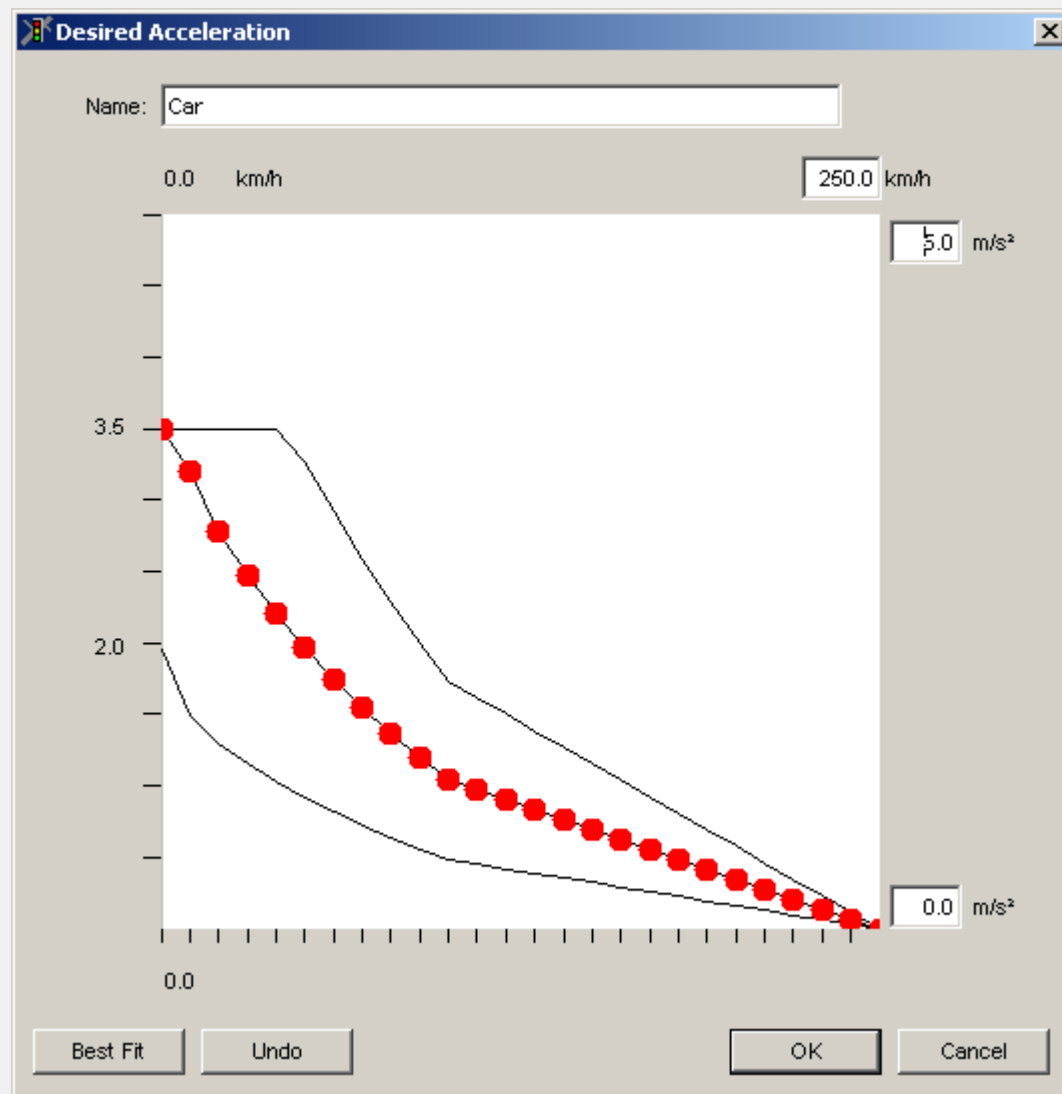
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Validation Issues

► Validation in VISSIM

Input derived from measurement data

► Current Status



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Find more information at

www.rotranomo.com

