



FOT-Net seminar

Experience and good practice on tools gathering data

Oliver Sawade
Fraunhofer Fokus



FOT-Net is a support action co-funded by the European Commission to network FOT activities at European, national and international level.

Specifying measurements

- Talking data – before thinking “how” think about “what” and “where from”
- Implications come from performance indicators (mostly processed data)
- From which sources will you collect RAW data?
- Defining measurements
 - Top-down vs. Bottom-up

Example: DRIVE C2X measurement collection

- Bottom-up approach
- Collection process with web application
- All developers can upload definitions
 - Will receive custom logging bundle in return
- Evaluators can browse measurements to check for availability



Logger Software/Hardware

- Measurement-unit in all necessary stations:
 - Vehicles
 - Roadside
 - Central Infrastructure
 - ...
- Measuring from all necessary components:
 - Data busses
 - HMIs
 - Servers
 - ...
- “Hardware-Logger” vs “Software-Logger”

Monitoring

- Monitoring is the real-time transmission of (parts) of the logdata
- Surveillance for test operators
- System diagnostics / updates

Transferring data

- Central-side and Roadside data is usually transferred over fixed line connections
- What about vehicles?
 - WiFi
 - Cellular connection
 - “Pickup”
- Depending on volume of data and study design!
- Feedback loop to study design -> hard drive capacities, maintenance intervals...

A look into simTD data collection

- (mostly) controlled testing
- One-day test intervals
- Lots of data per vehicle
- → Local pickup of data
 - Using USB Sticks
- Automated transfer on vehicle and in testsite
- Central redundant raw-data storage



Do's and Don'ts

- Make sure you start measurement collection early
 - But don't forget versioning/reverse compatibility of log definitions!
- Think about data transfer and how choosing a method will affect the study design
- Never delete log data on the source before it is safe on the redundant server storage
- If drivers are involved, the logging system has to be bulletproof and dead simple to operate
- Think about adding live monitoring