Citizen Science for Traffic Management and Safety

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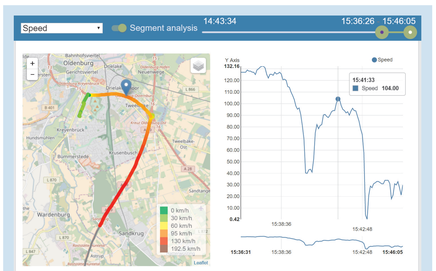
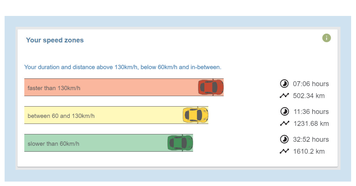
Traffic Management - CITRAM

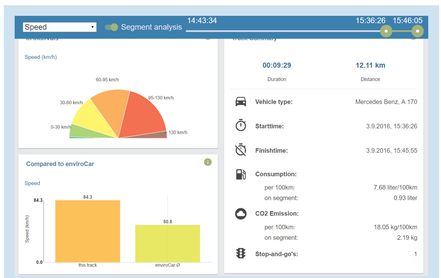
- Improved provision of information for traffic management
- Aid drivers to drive environmentally aware and traffic flow optimized
- Exploiting the potential of collaboration between scientists, traffic engineers and citizens
- Combine XFCD data and traffic management data in near real time
- Analyze trajectories towards
  - Hotspots of energy consumption
  - Traffic flow
  - Commuting times
- Carry out field test in three cities

An open Citizen Science Platform for traffic monitoring and environment - enviroCar

- Collect floating car data
  - GPS recordings via the Android App
  - Your car's sensor data with an optional Bluetooth OBD-II Adapter
- Provide free & open access to tracks for the eC community
  - Upload anonymized tracks
  - Contribute to research and planning
- Analyze tracks
  - The eC Server offers various analysis tools
  - Compare own and community tracks
  - Download data for further indepth analytics

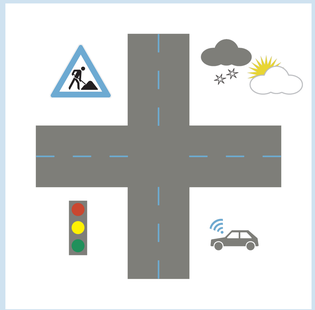






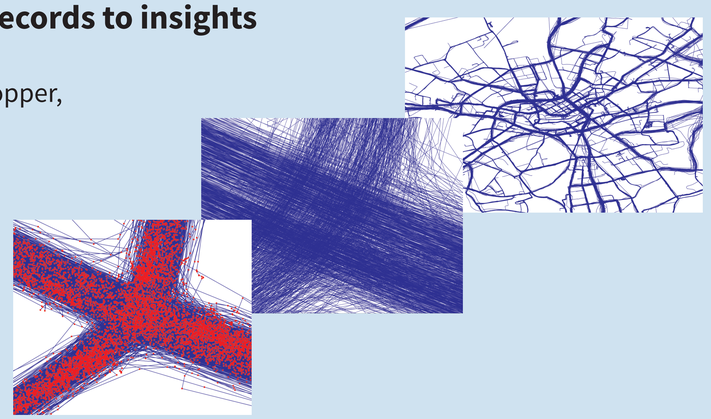
Road traffic safety - PreASiSt

- Currently, an accumulation of severe accidents marks "dangerous traffic spots"
- Floating car data can provide additional information on
  - sudden steering reactions of the driver
  - (near) emergency breaking
  - driver feedback on conditions and situations
- External conditions (weather, events, construction sites) can feed and tune the model
- Aim: predicting dangerous spots before accidents occur



Methodologies - from data records to insights

- Map matching (HMM) via Graphhopper, Barefoot, etc.
- Street segment statisitcs (OSM, special networks)
- Track based analytics
- Hotspot maps (emission/consumption)
- Evaluation of traffic signals



Contact and further information

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52north exploring horizons

Partner in CITRAM: [ui!] the urban institute, TSC Traffic System Consulting Beratende Ingenieure für Verkehrswesen, THD Technische Hochschule Deggendorf, Chemnitz Stadt der Moderne, elephantastisch!, Hamm:, Stadt Krefeld Innovativ – Kreativ – Weltoffen

Partner in PreASiSt: Deutsche Hochschule der Polizei

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Photography encouraged