Open Traffic Analysis

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enviroCar is an open platform for collecting and analyzing car driven tracks (http://envirocar.org). The collected tracks consist of GPS positions enriched with additional sensor information by utilizing the vehicle's internal diagnostic capabilities. Based on the sensor information, fuel consumption and CO_2 emissions are estimated for petrol cars. Users have full control on their collected tracks and can share them in an anonymized fashion via an open API. Various open analysis tools support the exploration of the data, e.g. in map-based views or time-series charts.

In this presentation, we will give an update on the status of the enviroCar project with a focus on open traffic analysis utilizing enviroCar. We will start with a general overview on the enviroCar project and then present different analysis tools that are available for free and are published as open source. We will illustrate the open traffic analysis approach by a project in Mönchengladbach, a mid-size city in Germany, where the city's administration utilized the enviroCar platform to realize an open traffic analysis. Citizens were included in the evaluation process of different traffic light configurations along major traffic axes utilizing the enviroCar platform. More than 150 citizens were actively collecting about 9.500 tracks including about 2.5 million measurements. Because the evaluation results are publicly available as open data, others may prove and reproduce the evaluation results contributing to an objective discussion of traffic planning measures.

In addition, we will demonstrate how raw data as well as results of analysis from enviroCar can be published as offerings in the BIG IoT marketplace, an online marketplace for offerings from IoT platforms (developed in the EC funded BIG IoT project http://big-iot.eu/).