

Lecture Notes in Mobility

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Editors

Modeling Mobility with Open Data

2nd SUMO Conference 2014
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Preface

The advance of new data sources for traffic networks, especially freely available mapping sources such as Open Street Map, provides major opportunities to the scientific and the applied traffic modelling community. Together with readily available tools, such as the open source package Simulation of Urban Mobility (SUMO), building a working prototype of a simulation scenario in virtually no time becomes feasible. Adding demand data, which is usually not openly available yet, enables the detailed estimation of the effects of engineering measurements as well as emerging new technologies through the means of individual (microscopic) traffic simulation. This simulation of every single actor allows the integration of behavioral data which can interface with the existing models to gather new insights into the social dynamics of traffic as well.

This volume contains the proceedings of the second SUMO User Conference (SUMO2014), which was held from 15 to 16 May 2014 in Berlin-Adlershof, Germany. SUMO is a well-established microscopic traffic simulation suite which has been available since 2001 and provides a wide range of traffic planning and simulation tools. The conference proceedings give a good overview of the applicability and usefulness of simulation tools like SUMO ranging from the incorporation of mapping data and traffic signals to the simulation of complete cities. Another aspect of the tool suite, its universal extensibility due to the availability of the source code, is reflected in contributions covering parallelization and workflow improvements to govern microscopic traffic simulation results.

Several articles give outlines of detailed aspects of network preparation and demand modeling when setting up a simulation with SUMO as well as an overview of the application of the tool in large-scale scenarios or for emission modeling and for the evaluation of the results. Further contributions include the simulation of emergency vehicles as well as the extension for the implementation of new behavioral models or remote control of the simulation using various programming

environments. The conference series' aim is bringing together the large international user community and exchanging experience in using SUMO, while presenting results or solutions obtained using the software. This collection should inspire you to try your next project with the SUMO suite as well or to find new applications in your existing environment.

Berlin, November 2014

Michael Behrisch
Melanie Weber

SUMO2014 Organization

SUMO2014 was organized by the Institute of Transportations Systems, German Aerospace Center, Berlin.

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