

CHAPTER 42

MATSim4UrbanSim

Kai Nagel

42.1 Basic Information

Entry point to documentation:

<http://matsim.org/extensions> → matsim4urbansim

Invoking the module:

The module is invoked from a live UrbanSim implementation.

Selected publications:

Nicolai et al. (2011); Nicolai and Nagel (2014); Nicolai and Nagel (2015)

42.2 Summary

“MATSim4UrbanSim” is an adapter package for using MATSim as a travel model plug-in to UrbanSim, a well-known land use simulation (e.g., Waddell et al., 2003, see <http://www.urbansim.org>). UrbanSim has, for example, submodels for residential location choice, commercial location choice, or development and building construction, thus creating synthetic potential urban or regional development scenarios under various conditions and constraints. Traffic infrastructure plays a significant role in such developments; for example, very accessible areas are more attractive as residences and for commercial activities. Since accessibility is reduced by congestion, and congestion can only be realistically modeled through a sophisticated model of demand and supply interaction, UrbanSim does not have its own travel model, but delegates that task to external models, such as MATSim.

To use MATSim4UrbanSim, one first needs to have a running UrbanSim installation. From there, one can add MATSim to that installation; see the documentation mentioned above for more

How to cite this book chapter:

Nagel, K. 2016. MATSim4UrbanSim. In: Horni, A, Nagel, K and Axhausen, K W. (eds.) *The Multi-Agent Transport Simulation MATSim*, Pp. 283–284. London: Ubiquity Press. DOI: <http://dx.doi.org/10.5334/baw.42>. License: CC-BY 4.0

information. Basic MATSim parameters are configured from the UrbanSim configuration file by adding an appropriate section; again, see the documentation mentioned above for more information. It is possible to add a standard MATSim config file allowing use of the extended MATSim features, including those added after the adapter package was designed.

The module was applied by Cabrita et al. (2015) and by Zöllig Renner (2014).