

Tramola and other news from Simunto

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MATSim User Meeting
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Tramola

I announced Tramola at the (online) User Meeting 2021:
The modelling suite for MATSim

- Editing MATSim Scenarios
- Running and Observing MATSim Scenarios
- Analyzing MATSim Runs

At that time, Simunto was only me.

Since then, a lot has happened...

Simunto: Current Team



Marcel



Moritz



Nadine



Christian



Janek



starting 1st July

Tramola

Tramola got finally released in summer 2023

Multi-user Web-Application.

Can be run on-premise inside client's data center for highest data privacy standards.

Or just run it locally for yourself on your laptop.

Simunto was busy with other projects, but we also learned a lot that helped to improve Tramola tremendously.

Next version of Tramola coming very soon!

Major new feature: Detailed route editing for public transport.

Tramola

Demo

- Scenario Editor
- Dashboards

Tramola: Next Steps

- More default configurations / templates, e.g. for Dashboards
- Visualizations

Until now, we did not invest much into Visualization in Tramola because of Via.

But this will change now:

- interactive aggregations and filtering
think kepler.gl for MATSim data
- comparison of multiple runs
Via is mostly limited to 1 scenario
- powerful features even for large scenarios
Select Link Analysis, 3D vehicle visualizations, ...

Simunto: Next Steps

Scenario-Generation is hard

Simunto is developing a **Scenario-generation pipeline** based on worldwide-available open data.

“80%-Model”

But still with advanced features:

- detailed multi-modal road network with extended attributes:
slope, curviness, urban/rural, road-capacities taking turns into account, ...
suitable for bicycle and electric vehicle simulations.
- Population generation based on a wide collection of available open data travel surveys
- Users can upload their own population statistics to further improve accuracy of generated model

More details will be presented (hopefully) at next year's MATSim User Meeting

Do you need a new MATSim model? Contact us for beta-testing the new service!

Simunto: MATSim Work

Simunto has a long standing in improving MATSim's performance:

- SwissRailRaptor, commissioned by SBB
- SpeedyALT, faster network routing, commissioned by SBB
- Memory improvements, commissioned by Volkswagen
reducing the memory footprint of large scenarios by 20% and more
- Turn restrictions
Independent, simpler to use and more efficient than using the lanes-contrib

But there's something else coming...

Distributed MATSim

Making MATSim much faster and support much bigger scenarios by true distributed computing.

Based on the work of Janek Laudan's PhD. But in Java.

Commissioned by Volkswagen.

The goal is to have a distributed MATSim that can run on High-Performance Clusters with thousands of nodes, providing speedups of factor 100 and more.

But the same code should also run on a few EC2 instances while still providing a decent speedup.

The current funding lays the ground work for this major architectural change of MATSim, but we won't be able to adapt all code.

If you're interested in having a Distributed MATSim with your required features, talk to us and join our efforts! Special interest and investment group in the MATSim Association?

Simunto: MATSim Work

Last but not least...

New MATSim Website

We're working on it.

- Visual refresh
- References of industry users
- Separate News and Job announcements



Thank you!

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