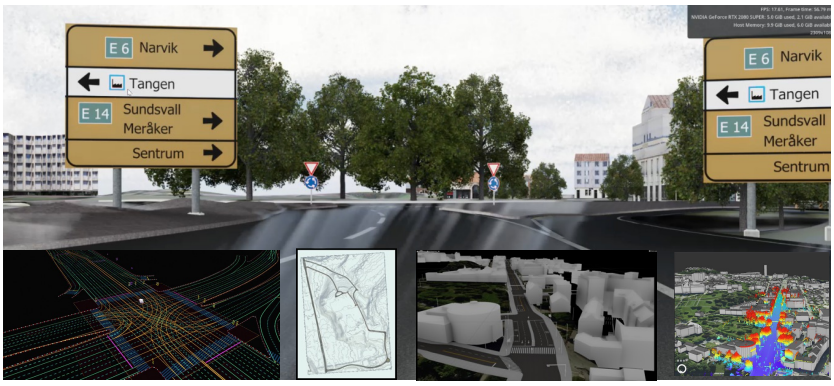
MoST

MoST – Mobilitetslab Stor-Trondheim

PERSEUS PhD project:
«Autonomy and Simulation for Future Mobility Solutions »

Candidate: Florian Wintel, Germany
Duration: 2023-2026



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The aim of the project will be to explore the use of simulated environments of real physical MoST pilot areas to train agents to operate fully autonomously and to simulate various "what-if" scenarios for a sustainable and carbon- neutral mobility future. The PhD project will investigate both modular (mapping and localization, perception and prediction, planning and control) and end-to-end (imitation and reinforcement learning) approaches to autonomous driving in a Nordic environment. Training and validation of autonomous agents (from shuttle busses to last-mile delivery robots) will be done in simulated environments (e.g. CARLA, NVIDIA DRIVE Sim) using a HD-map / Digital Twin representation of the area in question, as well as in the real-world environment using our in-house full-scale research platform for autonomous driving. Agents should learn to co-exist with humans in a real-world mobility setting. Current traffic patterns will be visualized and future "what-if" scenarios will be simulated (e.g. NVIDIA Omniverse) before physically constructing the optimal solution for a given area.

Miljøpakken
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