

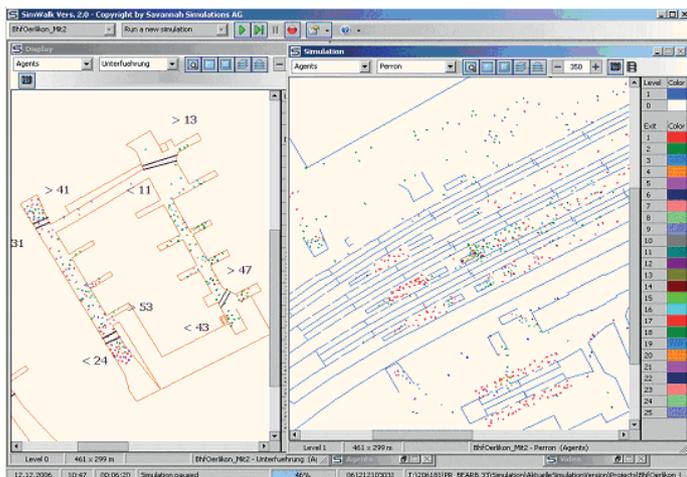
Upgrading a Railway Station Design. Two Scenarios Compared.

Ernst Basler + Partner AG, a Swiss based engineering company, conducted a simulation study of pedestrian and passenger flows at the train station Zürich-Oerlikon (Switzerland), based on several planned upgradings.

The simulation study with SimWalk especially focused on a planned underpass, connecting two different quarters, „Bahnhofplatz Süd“ and a development zone called „Zentrum Zürich Nord“. The analysis provided solutions to the following questions:

- What impact on pedestrian flows would additional stairs have, connecting underpass and platforms?
- How would they influence the route choice behavior of passengers?
- Are there any capacity bottlenecks in the system what regards platform boarding and alighting?

The simulation study compared two different train station upgrading scenarios: one called „underpass with platform connection“, the other „underpass without platform connection“.



Software requirements for this case entailed pedestrians choosing routes depending on available capacities, densities (bottlenecks) and number of pedestrians in the system. Additionally, the software had to allow modeling of stairs based on actual capacity.

The simulation study with SimWalk showed the displacement of pedestrian flows, depending on the different upgrading scenarios of Oerlikon train station.

Summary

Ernst Basler + Partner AG, Switzerland, conducted a simulation study to evaluate the consequences of a train station's planned additional underpass. It revealed potential bottlenecks in various scenarios that had to be taken into account in the further planning process.



Further simulation results were, firstly, the discovery of capacity bottlenecks of platform stairs leading down to the underpass. Secondly, additional bottlenecks were discovered at the entrance stairs to the underpass, connecting train station forecourt and underpass.

Contact

Savannah Simulations AG
 Alte Dorfstrasse 24
 CH-8704 Herrliberg
 Switzerland
 Phone: +41 (0)44 790 17 14
 sales@simwalk.com
 www.simwalk.com