



## Pedestrian Simulation for Traffic Management, Evacuation and Urban Planning

### SimWalk PRO - software solution for pedestrian flows and crowd management

The importance of pedestrian safety and comfort in urban spaces, traffic infrastructures and during evacuations and emergencies is growing, unleashed by the ever increasing capacity demands and complexities of the built environment. Airports, sports stadia, large public and commercial buildings, big events as well as shopping centers or crossings in traffic management are typical examples for this problem.

SimWalk PRO, a general-purpose pedestrian simulation software, offers a powerful and yet easy to use solution for analyzing and improving pedestrian flow and crowd management issues. SimWalk PRO detects safety critical congestions, high pedestrian densities, costly and inefficient building designs and provides evacuation times in case of fire or other emergencies.

SimWalk PRO is a microsimulation software where every single pedestrian is modelled individually with specific goals and behaviors. Microsimulation allows flexible and realistic simulation of normal as well as panic behavior of pedestrians in complex environments.

SimWalk PRO is deployed worldwide by transportation engineers and urban planners, by architects, security officials as well as by fire prevention and disaster experts to manage human risk and engineering costs.

### SimWalk PRO Benefits

- Comprehensive simulation and analysis of pedestrian issues regarding safety, comfort and walkability
- Analysis of congestions, bottlenecks and high pedestrian densities in large and complex facilities
- Feasibility studies of urban spaces or building designs to improve walkability and reduce costs
- General-purpose flexibility in different domains (traffic, urban planning, evacuation)
- "State-of-the-art" validated simulation technology
- Seamless integration of CAD plans
- 2D and 3D visualization of simulation results



### Business Issue

Today's ever increasing capacity and security demands in complex urban, traffic or hazard endangered infrastructures put pedestrian safety and comfort at risk.

### Impact

Inaccurate pedestrian flow analysis endangers crowd security and comfort in normal situations and emergencies. In addition, delayed pedestrian planning causes high repair or refurbishment costs.

### Solution

SimWalk PRO provides a comprehensive "state-of-the-art" simulation solution to analyse and optimize all pedestrian related issues in urban planning, traffic management as well as evacuation and disaster simulation.

### Clients

- Jacobs Engineering (UK)
- Parsons Brinckerhoff Asia (Hongkong)
- Beca Engineers, Planners (New Zealand)
- D'Appolonia S.p.A (Italy)
- Railway Procurement Agency (Ireland)
- egisrail (France)
- citec (Italy)
- Tectran (Brasil)
- Conefe (Argentina)



## SimWalk PRO Simulation Solution

To provide a comprehensive simulation solution for pedestrian flow and crowd analysis, SimWalk PRO integrates additional software and services. For example, it includes software for pedestrian counting and analysis that may be applied for data acquisition in traffic, urban planning and evacuation projects.

Based on third party software and services, SimWalk PRO offers a whole product solution covering data acquisition and analysis, simulation and modeling as well as calibration and validation. A "state-of-the art" simulation technology developed in close cooperation with leading experts in the field secures realistic simulation and analysis of pedestrian flows.

## Integrated Pedestrian Database

SimWalk PRO integrates a comprehensive pedestrian database, including all important empirical data of the last 20 years of international pedestrian research, as for example walking speeds or body diameters in different countries. The database supports and simplifies simulation studies and calibration with proven pedestrian data.

Level of Service	Description of the waiting condition	Diagram
A	Standing and free circulation through the queuing area is possible without disturbing others within the queue.	[Diagram showing pedestrians in a queue with space to move]
B	Standing and partially restricted circulation to avoid disturbing others in the queue is possible.	[Diagram showing pedestrians in a queue with some restrictions]
C	Standing and restricted circulation through the queuing area by disturbing others in the queue is possible that depends on the range of personal comfort.	[Diagram showing pedestrians in a queue with significant restrictions]

## 3D visualization

SimWalk PRO allows visualization in 2D as well as 3D for impressive rendering of simulation results. SimWalk PRO 3D module integrates simulation data, virtual worlds built with 3D software as well as pedestrians to a comprehensive virtual pedestrian model. This allows to visually understand crowd dynamics.



## Download your trial version today

Get your SimWalk PRO evaluation copy (engl.) here:

- [www.simwalk.com](http://www.simwalk.com) (english website)
- [www.simwalk.com/fr](http://www.simwalk.com/fr) (french website)
- [www.simwalk.ch](http://www.simwalk.ch) (german website)
- [www.savannah-simulations.com](http://www.savannah-simulations.com) (company website)

## Features of Analysis

- Pedestrian density maps (congestions etc.)
- Pedestrian speeds and delay times
- Transfer times
- Pedestrian counts & flow rates
- Space utilization
- Pedestrian trails and route choice
- Preconfigured Levels of Service (LOS)
- Self-defined areas of analysis
- Object capacities (escalators, stairs etc.)
- (Commercial) footfall analysis
- Queuing time and efficiency

## System Requirements

- Compatible with Windows Vista, XP, 2000
- Recommended hardware: 512 (MB) RAM + Pentium 4 CPUs at speeds of 2.0- 3.06 GHz
- Hard drive: 40 GB with a least 100 MB available space
- Super VGA / 1024 x 768 pixel
- Cable or DSL internet access
- Simulation performance depends on available processing capacity

## SimWalk PRO Services

Savannah Simulations AG provides, in addition to standard software support and upgrades, following services:

- SimWalk PRO Modeling Services include comprehensive project and simulation services for clients
- SimWalk PRO 3D Modeling Services include 3D modeling of urban planning, traffic or evacuation scenarios

## Contact USA / Canada

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