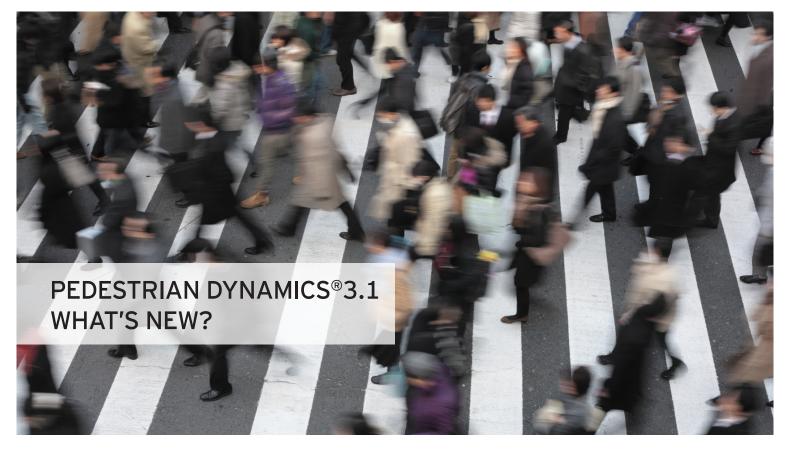


WHAT'S NEW PEDESTRIAN DYNAMICS® 3.1



APPLICATION AREAS

Pedestrian Dynamics® is applicable in a wide scale of domains:

- Railway Stations
- Stadiums & Arenas
- Airports
- Cities
- Malls
- Theme Parks
- Events
- Ships



For all leading architects, engineers and consultants... our crowd simulation software is now more comprehensive than ever!

INTRODUCTION

INCONTROL is proud to announce version 3.1 of Pedestrian Dynamics® crowd simulation software.

In close collaboration with our professional – and academic users we significantly improved our crowd simulation software, Pedestrian Dynamics®.

To meet our customers' needs we focus on increasing the user-friendliness of the software. The new version enables you to:

- Do a more detailed analysis with additional output statistics
- Develop railway station models quicker
- Edit and save agent profiles or use default profiles based on literature
- Simulate agent flow on Meso or Macro level

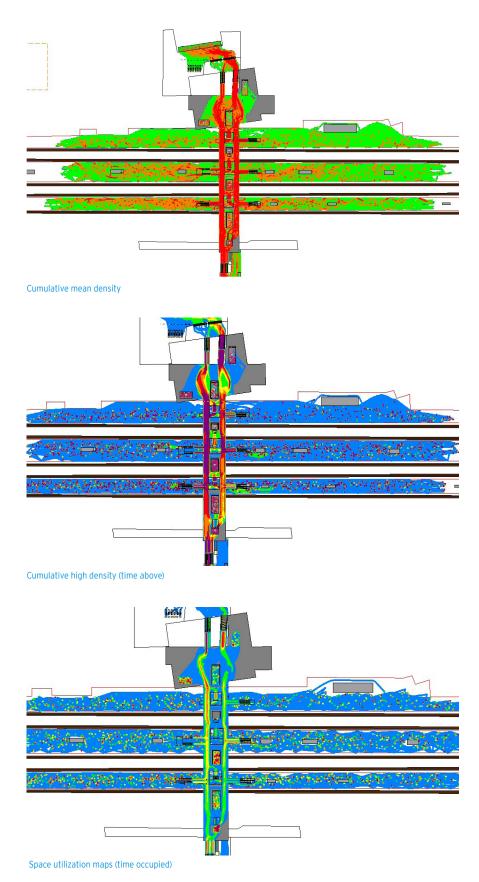
We invite you to continue reading in order to learn more about the new features of Pedestrian Dynamics®:

- New output
- Default and editable agent profiles
- Demand profiles and routing based on origin destination matrices
- Spiral stairs
- Meso and Macro mode

WHAT'S NEW PEDESTRIAN DYNAMICS® 3.1



WHAT'S NEW IN PEDESTRIAN DYNAMICS® 3.1?



NEW OUTPUT

New output statistics are added to do an even more detailed crowd flow analysis to evaluate not only the accessibility and safety of planned environments but also to analyze the usability and cost. You can create heat maps that can be either gridor agent based.

Cumulative mean density

Show the average density (in colour) of an area in a certain time interval.

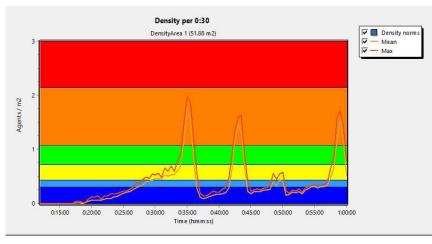
Cumulative high density (time above)

Show the time (in colour) that an area density has exceeded the threshold value.

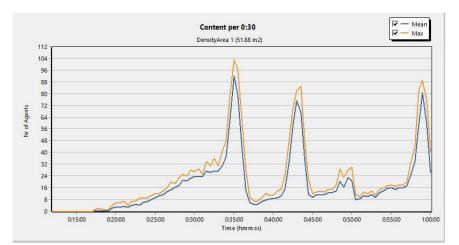
Space utilization maps (time occupied) Showing the use (in colour) of the area as time occupied.

WHAT'S NEW PEDESTRIAN DYNAMICS® 3.1





Density of selected area



Density of selected area

Showing the average and maximum

density in a selected area over time.

Content of selected area Showing the amount of agent in a selected area over time.

Content of selected area

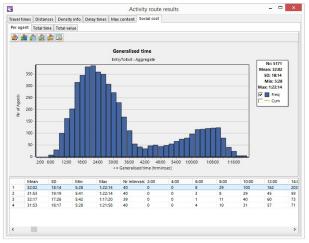
Routes	Settings				
Genera	Social cost				
Social	cost general Social	cost Activities			
Valu	e of time				
Currency: Value per hour:		e			
		8.38			
Den	sity formula settings				
Density factor:		0.6667			
Density min:		0.5			
Density max:		2			
	errain type	Group	Weight	Density weight	
V	Valkable area	Walking	2	0.5	
R	lamp up	Walking	2	0.5	
	lamp down	Walking	2	0.5	
S	tairs up	Stairs up	4	0.5	
	tairs down	Stairs down	2.5	0.5	
	scalator	Escalator	1.5	0	
	loving walk	Escalator	1.5	0	
	scalator up	Stairs up	4	0.5	
	scalator down	Stairs down	2.5	0.5	
	tands	Stands	2	0.5	
	tand stairs up	Stairs up	4	0.5	
S	tand stairs down	Stairs down	2.5	0.5	
De	efault				

Social cost settings

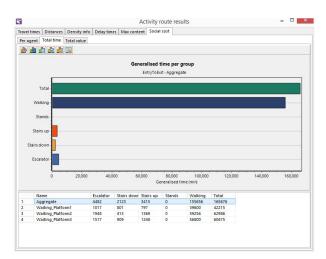
Social cost settings

The user can set the value and weight of the parameters for social cost functions.

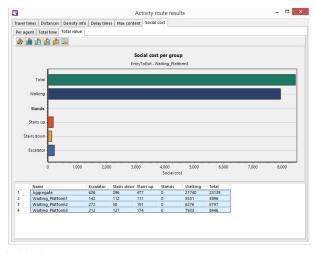




Generalized journey times



Generalized journey times (per groups)



Social costs

Generalized journey times

Shows the histogram of the generalized journey time of agents.

Generalized journey times (per group) Shows the generalized journey time of

agents and a breakdown of different functional groups.

Social costs

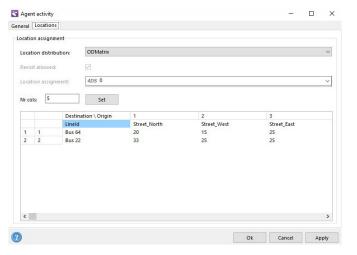
Shows the social cost of agents in a (by the user selected) currency and a breakdown of the result over different functional areas.





files Activities Activity Rout	es Generators								
gent									
gent profiles									
Name	ID	MaxSpeed	MinSpeed	Radius	DensityCostW	DensityPlanD	Repla	nFi \land	Add
Default_Profile	1	Triangular(1.3	0.06	0.239	Uniform(0.5, 1	60	40		
Females younger than 30 ye	2	Uniform(0.93,	0.06	0.239	Uniform(0.5, 1	60	40		Edit
Females 30-50 years old	3	Uniform(0.71,	0.06	0.239	Uniform(0.5, 1	60	40		12552725
Females older than 50 years	4	Uniform(0.56,	0.06	0.239	Uniform(0.5, 1	60	40		Delete
Females older than 50, mobi	5	Uniform(0.43,	0.06	0.239	Uniform(0.5, 1	60	40		Clear all
Females older than 50, mobi	6	Uniform(0.37,	0.06	0.239	Uniform(0.5,	60	40		Clear all
Males younger than 30 year:	7	Uniform(1.11,	0.06	0.239	Uniform(0.5, 1	60	40		Сору
Males 30-50 years old	8	Uniform(0.97,	0.06	0.239	Uniform(0.5, 1	60	40		copy
Males older than 50 years ol	9	Uniform(0.84,	0.06	0.239	Uniform(0.5, 1	60	40		
Males older than 50, mobilit	10	Uniform(0.64,	0.06	0.239	Uniform(0.5, 1	60	40		
Males older than 50, mobilit	11	Uniform(0.55,	0.06	0.239	Uniform(0.5, 1	60	40		
Crew Females	12	Uniform(0.93,	0.06	0.239	Uniform(0.5, 1	60	40		Load
Crew Males	13	Uniform(1.11,	0.06	0.239	Uniform(0.5, 1	60	40	~	
<								>	Save
?)						Ok	C	ancel	Apply

Default agent profiles



Agent activity settings used OD Matrix option

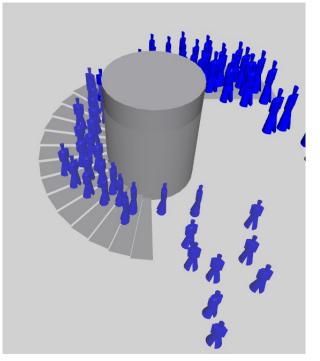
DEFAULT AND EDITABLE AGENT PROFILES

Default sets of predefined profiles based on well–known academic research papers (e.g. Fruin, Daamen, IMO) can now be loaded and edited by the user. Using agent profiles you can define the walking behaviour of groups such as, tourist, persons of restricted mobility and commuters. It is now possible to save profiles created by the user and load them in another model or to share them with other users.

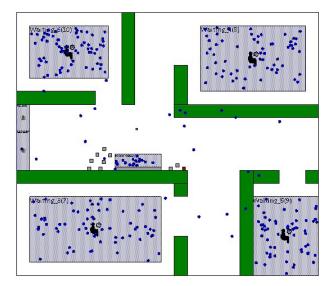
DEMAND PROFILES AND ROUTING BASED ON ORIGIN DESTINATION MATRICES

Next to the activity based routing agents can now also be routed based on origin destination matrices. The origin destination Matrix (OD Matrix) is entered as table in an agent activity. Beside street entries and exits also specific bus lines or trains defined in the transportation input can used as origin or destination. More functionality is introduced in the agent generator to easily create demand profiles based on the agent activities. This makes it easy to create demand based on an origin destination matrix.





Spiral stairs



Mesoscopic agent simulation

CONTACT US FOR MORE DETAILED INFORMATION OR A DEMONSTRATION OF PEDESTRIAN DYNAMICS® 3.1:

- www.pedestrian-dynamics.com
- siminfo@incontrolsim.com

SPIRAL STAIRS

The user can now also model a wide range spiral stairs. The user can set the size, inner radius, start- and end-angle and the size of steps.

SIMULATE IN MESO OR MACRO MODE

The option to model at meso level is improved. At meso level agents walk the shortest path to their destination and do not avoid other agents. To do a high level analysis new functionality to model at macro level is introduced. In macro mode agents have no interaction and move in straight lines from one activity location to another.