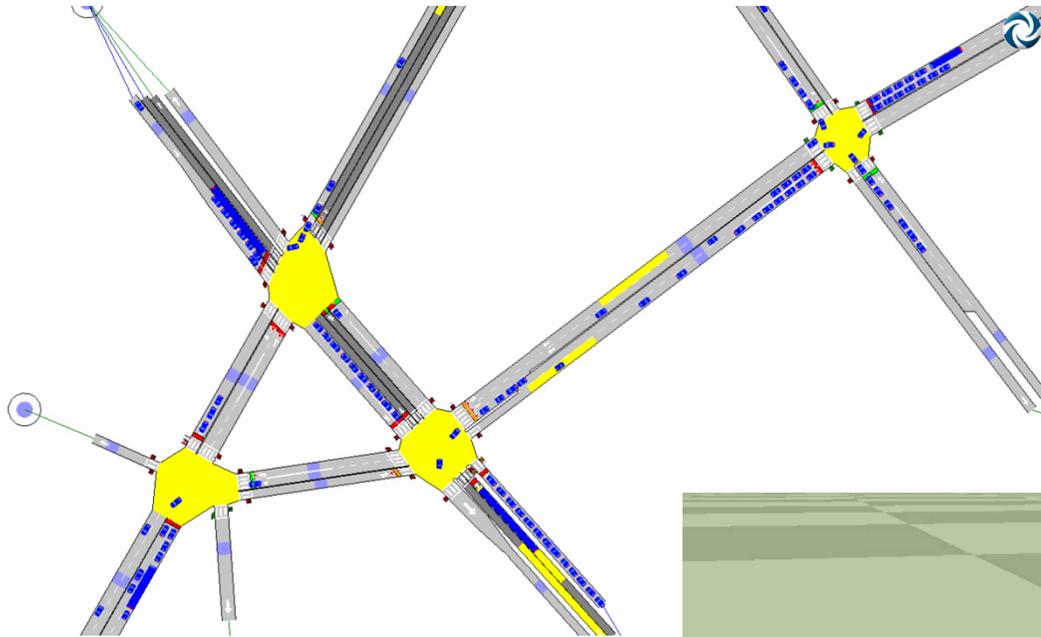


Jiří Apeltauer

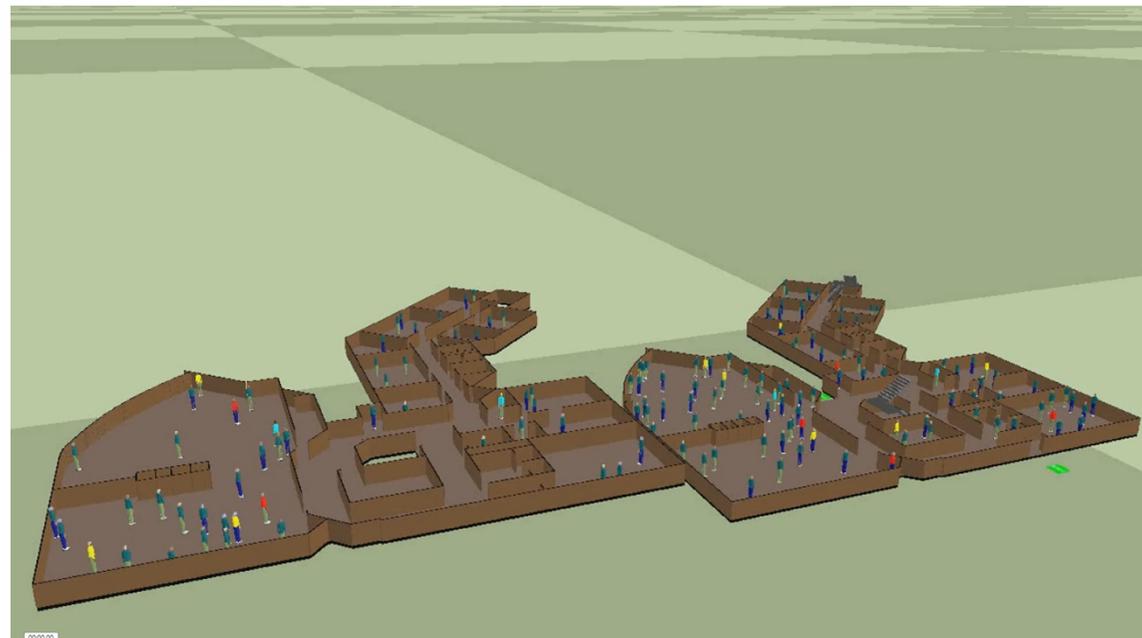
**Microsimulation of traffic flow
and
UAV in traffic engineering**

Traffic engineering and telematics



Main topics of my work:

- Microsimulation of traffic flow
- Microsimulation of pedestrian flow



Microsimulation of pedestrian flow

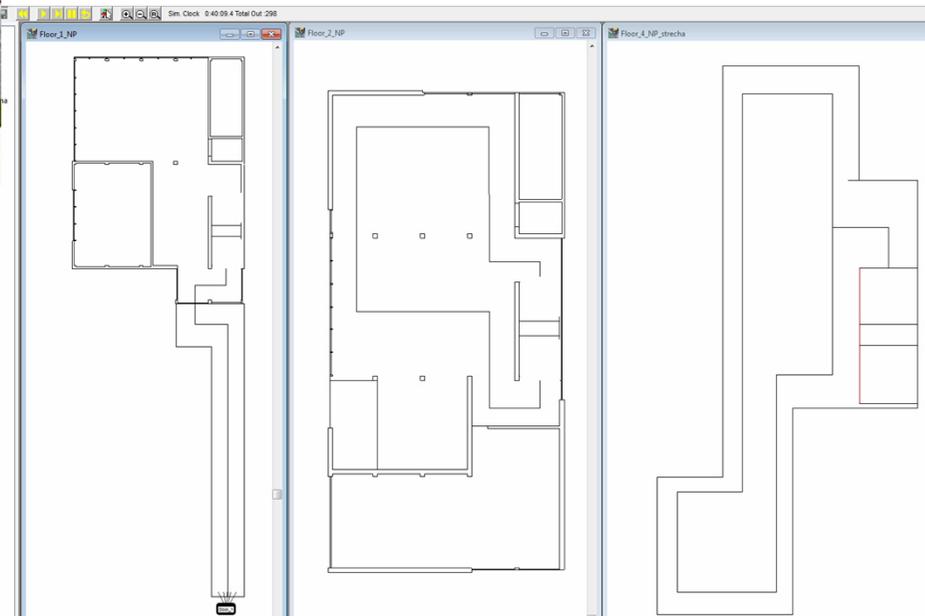
Capacity analysis of Czech EXPO 2015 pavilion



Design:

CHYBIK+KRISTOF
Associated Architects

Fruijn's Level of Service	Average area module		
	Walkway [m ² /ped]	Stairs [m ² /ped]	Queue [m ² /ped]
A	>3.24	>1.85	>1.21
B	3.24-2.32	1.85-1.39	1.21-0.93
C	2.32-1.39	1.39-0.93	0.93-0.65
D	1.39-0.93	0.93-0.65	0.65-0.28
E	0.93-0.46	0.65-0.37	0.28-0.19
F	<0.46	<0.37	<0.19

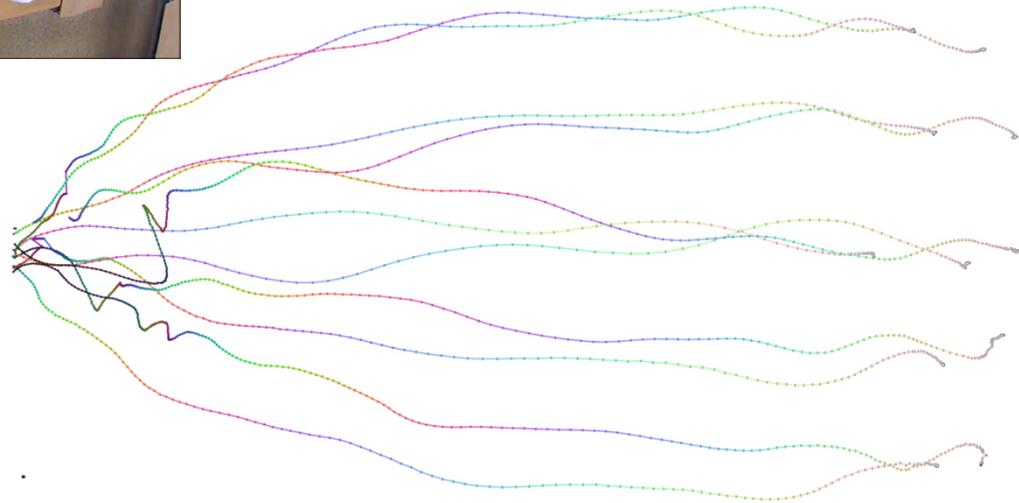


Evacuation



Evacuation experiment - Model scenario

Trajectories captured by camera
(by computer vision) - used for
calibration



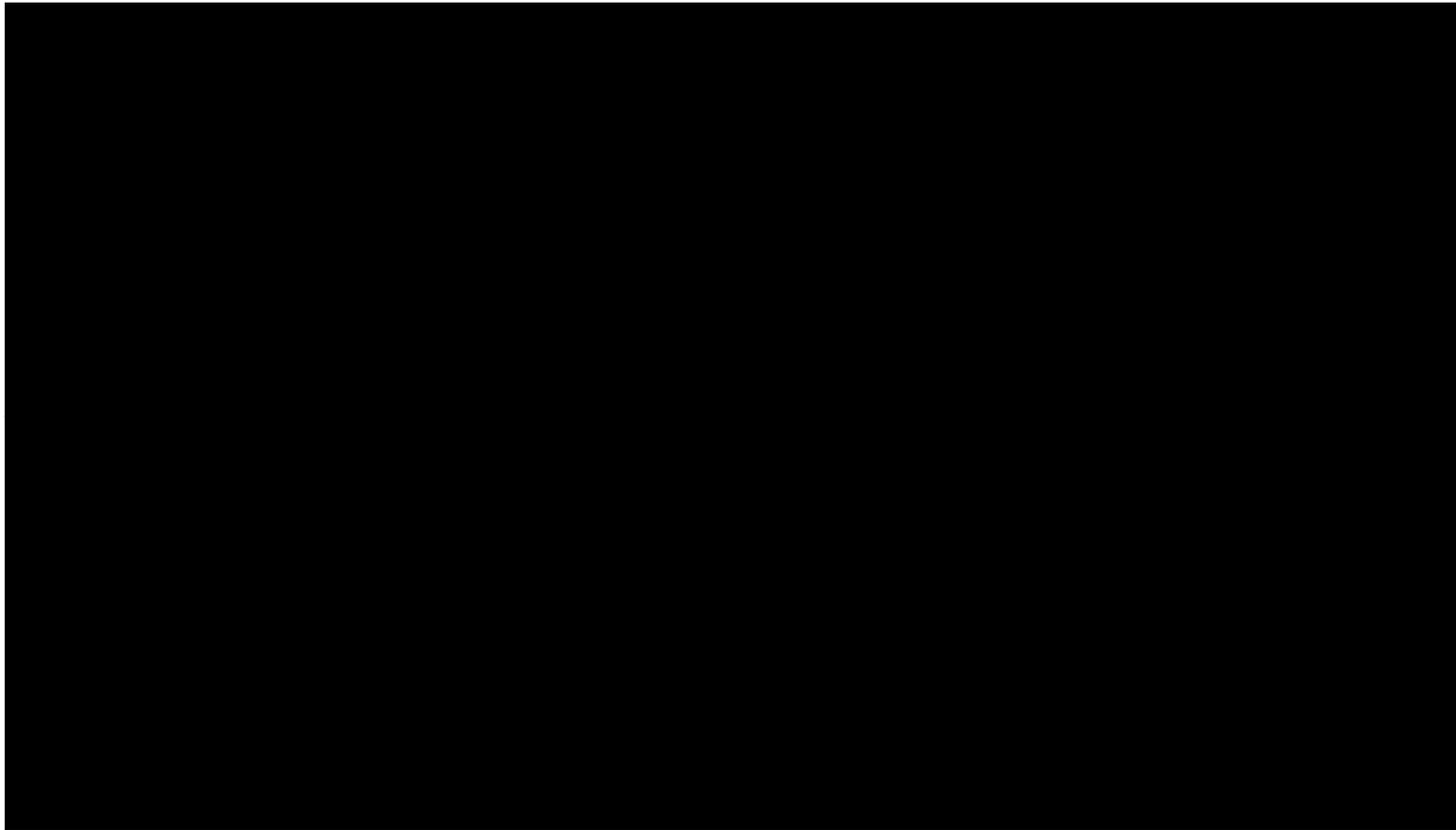
UAV – unmanned aerial vehicle - hardware

HEXACOPTER:

- Engines – 6x MK3638 (max. 25 A, 350 W, thrus 2200 g)
- Sensors– three axis gyroscope, barometric sensor, compass, GPS
- Flight time 20-30min
- Action range 4000 m
- FullHD camera



UAV – unmanned aerial vehicle – computer vision (development version)



Thank you for your attention.