

..the world's first transport simulation game exploiting *procedural modeling*



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Game Design



- 1900: Player chooses one community and becomes its transport delegate
- Player constructs buses, trains, ships and aircrafts





"Connect your community to the world!" "Avoid traffic jams and ensure growth!" "Become minister of transport!"

Motivation

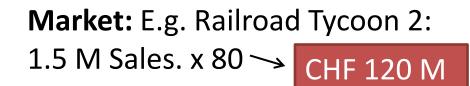


Traffic jams, a major problem of every big city



Transport Tycoon (1994) and its huge fan community

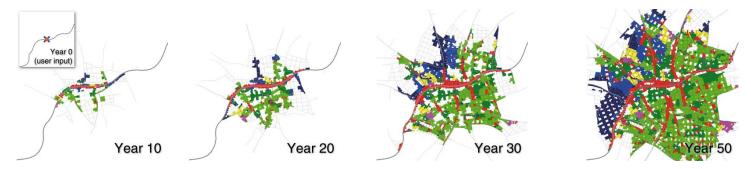




Technology

Interactive Geometric Simulation of 4D Cities

Eurographics 2009, Basil Weber, Pascal Mueller, Peter Wonka and Markus Gross



Procedural Modeling of Buildings

SIGGRAPH 2006, Pascal Mueller, Peter Wonka, Simon Haegler, Andreas Ulmer and Luc Van Gool



Technology Video



Team

Name	Education	Function	
Urban Weber	MSc. ETH	Implementation	2
Basil Weber	MSc. ETH	Implementation	T.
Fabian Graf	BA ZHDK	Game Design	R
Michael Haerdi	Designer FH	Artist	
Manu Oehler	Qantm College	3D Artist	

Supported by



CityEngine 2009

EITH Eidgenössische Technische Hochschule Zürich Swiss Federal Institute of Technology Zurich



Achievements

- Game engine specialized on procedural modeling
 - Run-time shape grammar for buildings
 - Dynamic terrain (adaption of SOAR¹)
 - Model/asset animations (model editor)
 - HDR Lighting, Ambient occlusion (soon)
 - **FEVER** prototype almost finished
 - Realistic city simulation (> 25 cities)
 - Track builder mode including signals
 - Traffic/passenger simulation
 - Basic game-play





1: SOAR: Proceedings of IEEE Visualization 2001, pp. 363-370, 574, Lindstrom and Pascucci

Game-play video

Falsities and pitfalls

Time management

- First prototype release date: September 2008. Why?
 - Naivety (best-case vision vs. deadline)
 - Big tasks are very difficult to pre-plan
 - Avoid uncertainties!

Motivating people to work without salary

- How much commitment can be demanded for free?
 - Concentrate on the most motivated people

Market contact

Rather late in our case

Outlook

Very soon: Prototype ready

- Game-play finalization and balancing
- Improved rendering (ambient occlusion, ..)

2010: Publisher and financing

- Close a publisher contract
- Ensure financing until end of 2011

End of 2011: Release

Goal: At least 50'000 sales

Acknowledgements

- Pascal Mueller, CEO Procedural Inc.
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- Prof. Dr. Markus Gross, ETH Computer Graphics Lab
- IGDA Switzerland founding members

Thank you for your attention!