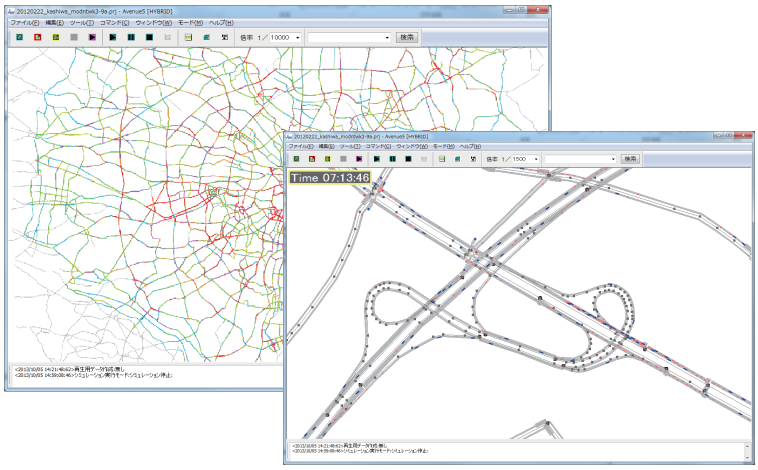
SOUND Ver.5

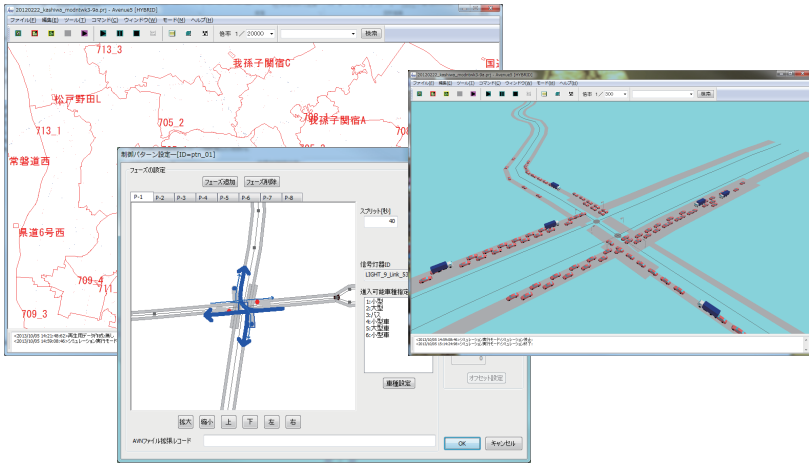
Simulation On Urban road Network with Dynamic route choice

SOUND (Simulation On Urban road Network with Dynamic route choice) is a mesoscopic traffic simulation model which was originally developed in the Institute of Industrial Science, the University of Tokyo, and was commercialized by i-Transport Lab. Co., Ltd., a venture company in Tokyo. It is applicable to the road network of the 1 ~ 100 km scale to evaluate various traffic control & management scheme. The latest version of SOUND is merged with AVENUE, a microscopic traffic simulation, and shares its user-friendly graphic user interface.

Special Features of SOUND

- Applicable to a large urban scale road network.
- A mesoscopic traffic simulation model which deals discrete vehicles with 1 second update interval according to the fundamental diagram of traffic flow.
- Dynamic route choice capability taking account traffic congestion, travel time, toll charge, etc.
- Incident modeling for lane closures and road closures.
- Traffic signal control capability for an intersection with auxiliary lanes and regulations on turning direction.
- Customization on traffic information provision and route guidance service.





Software Capability

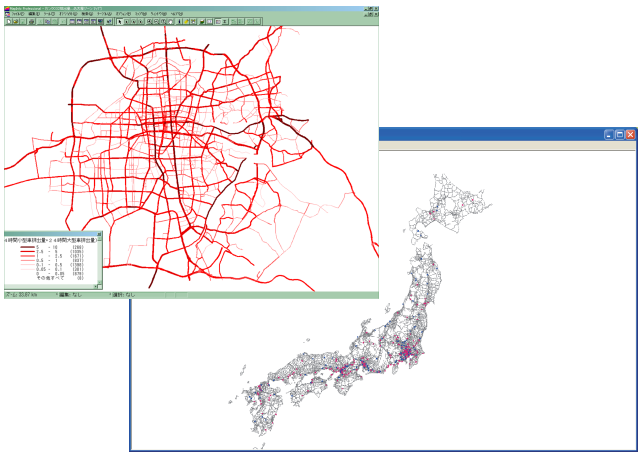
- Interactive data editing through GUI.
- Layered management for flexible data build.
- 2D/3D animation of vehicle motions.
- Recording animation movie.
- Import digital road map and GIS polygons for zones.
- Project administration mode to put related cases in order.
- Batch calculation mode to run multiple cases at once.

Case Studies

- Congestion mitigation by the construction of new by-pass roads.
- Time saving with the route guidance service using probe data.
- CO2 reduction through the penetration of eco-driving assistance.
- Evacuation planning using vehicles at large-scale disaster
- Traffic regulation planning for a big event or an incident.
- Toll revision and traffic demand switchover from arterial roads.
- Advanced traffic control such as variable channelization, etc.

Advanced Research Topics

- On-line simulation for short term traffic prediction.
- Japan country-wide traffic simulation with grid computing.
- 'Nowcast' simulation based on probe data assimilation.



Minimum PC requirements

CPU:	32 bit / 2 GHz
RAM:	4 GB
HDD:	5 GB free space
Display:	1024 x 768 (XGA), high color (24 bit)
OS:	Windows® 7 or later
Others:	USB 2.0 port

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