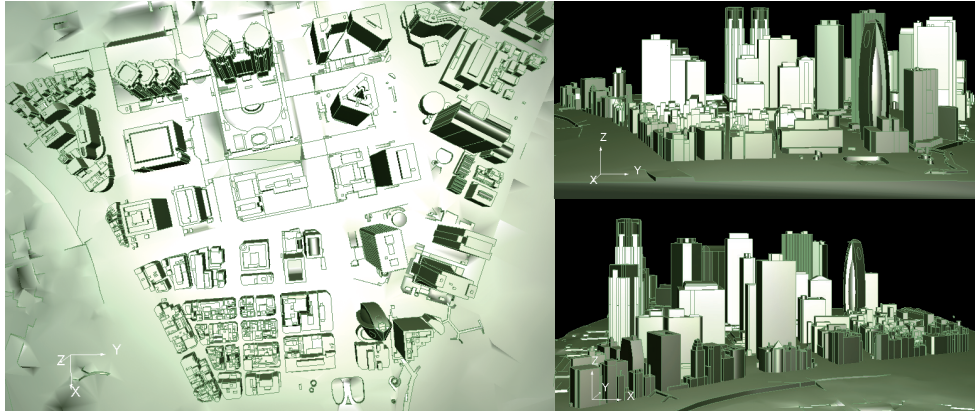


Simulation of Wind Environment

Case Study of scSTREAM

Simulation of wind environment in urban area by scSTREAM

Overall View



Analysis data

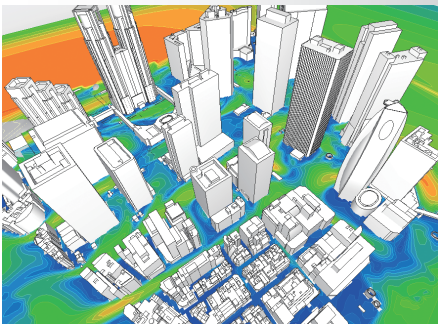
Urban area:
Tokyo, Japan

Size of domain:
900m x 1100m

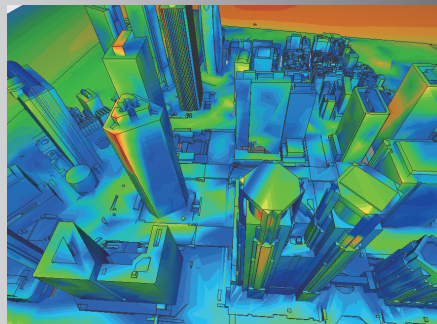
Geometry data provided by
Sora Technology Corporation

Analysis Results

• Velocity Contour

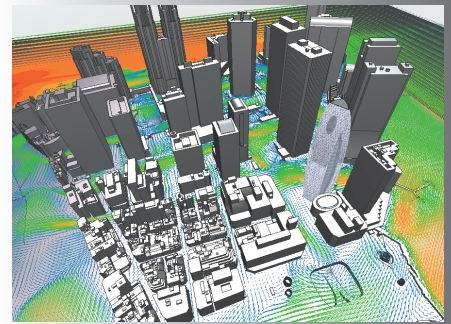


Visualizes wind velocity by color



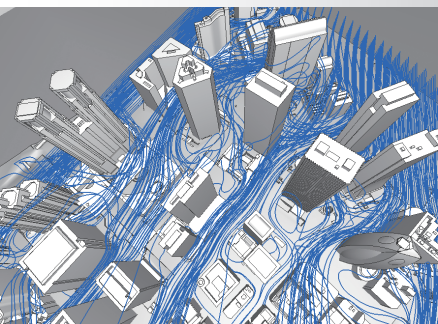
Velocity contour near building

• Velocity Vector

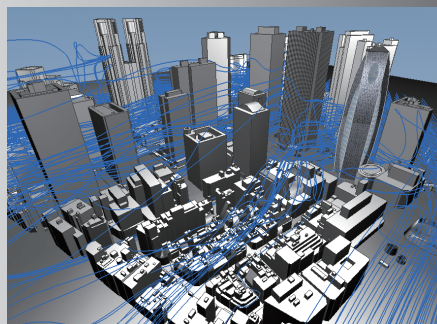


Visualizes wind direction and velocity by arrowhead and color

• Streamline



Visualizes wind direction by streamline



Advantages of CFD

CFD simulation helps predict and assess the wind environment in a short term ahead of construction, while actual measurements require a long-term investigation.

It also saves cost and time for wind-tunnel experiments.

Notes

- CFD simulation helps predict and assess the wind environment around a newly designed building ahead of construction and inform neighborhood residents of the environmental effects of the building.
- Visualizing three-dimensional flow helps investigate possible wind hazards and prevent them by planting windbreak trees, i.e. green space, ahead of time.