

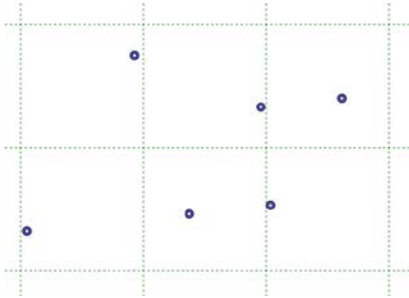


Goal

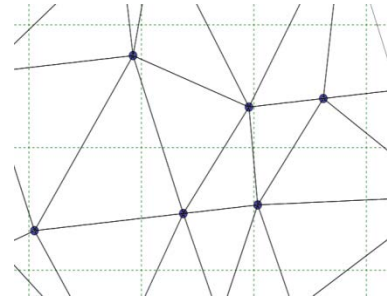
Generate infinite pseudo-random non-periodical cities with arbitrary oriented street network in real time.

Algorithm

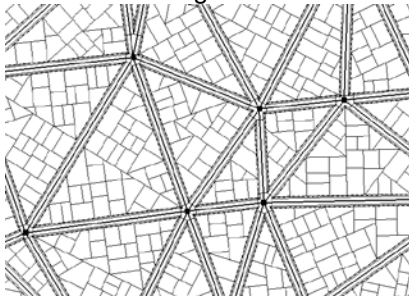
1. Put a single pseudo-random point inside each square of an infinite grid.



2. Construct Delaunay triangulation on these points. Take only that part that is inside the view frustum.



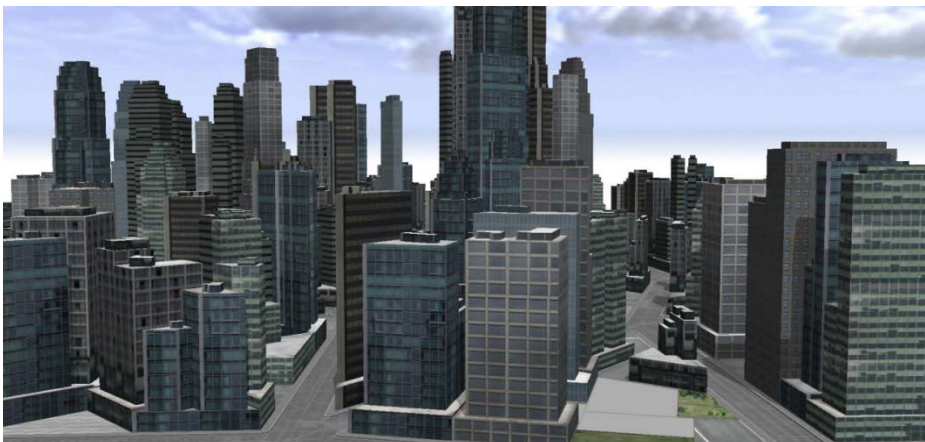
4. Convert edges to streets. Subdivide building lots.



3. Generate building geometry for the lots. We use CityEngine 2010 for this.



Final result



Future work

- 3D terrain generation
- more variability in shapes of building blocks
- layout from existing cities (generation by example)
- building level-of-detail
- on-line city post-processing