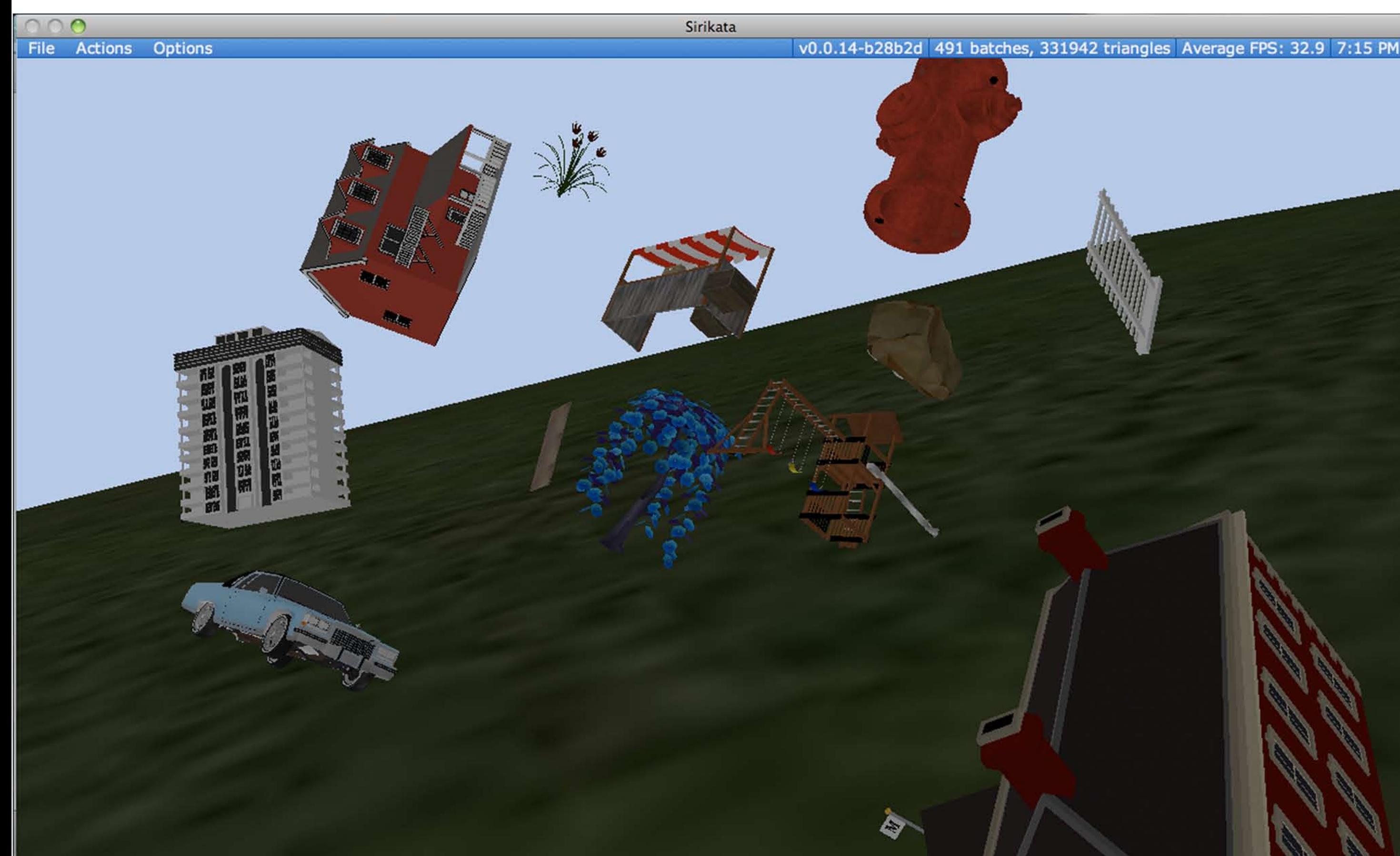


{Building a Village in Sirikata}

by Jiwon Kim

the problem :

Coherent virtual villages form the building blocks of a virtual world; but creating one from scratch in Sirikata is surprisingly difficult.



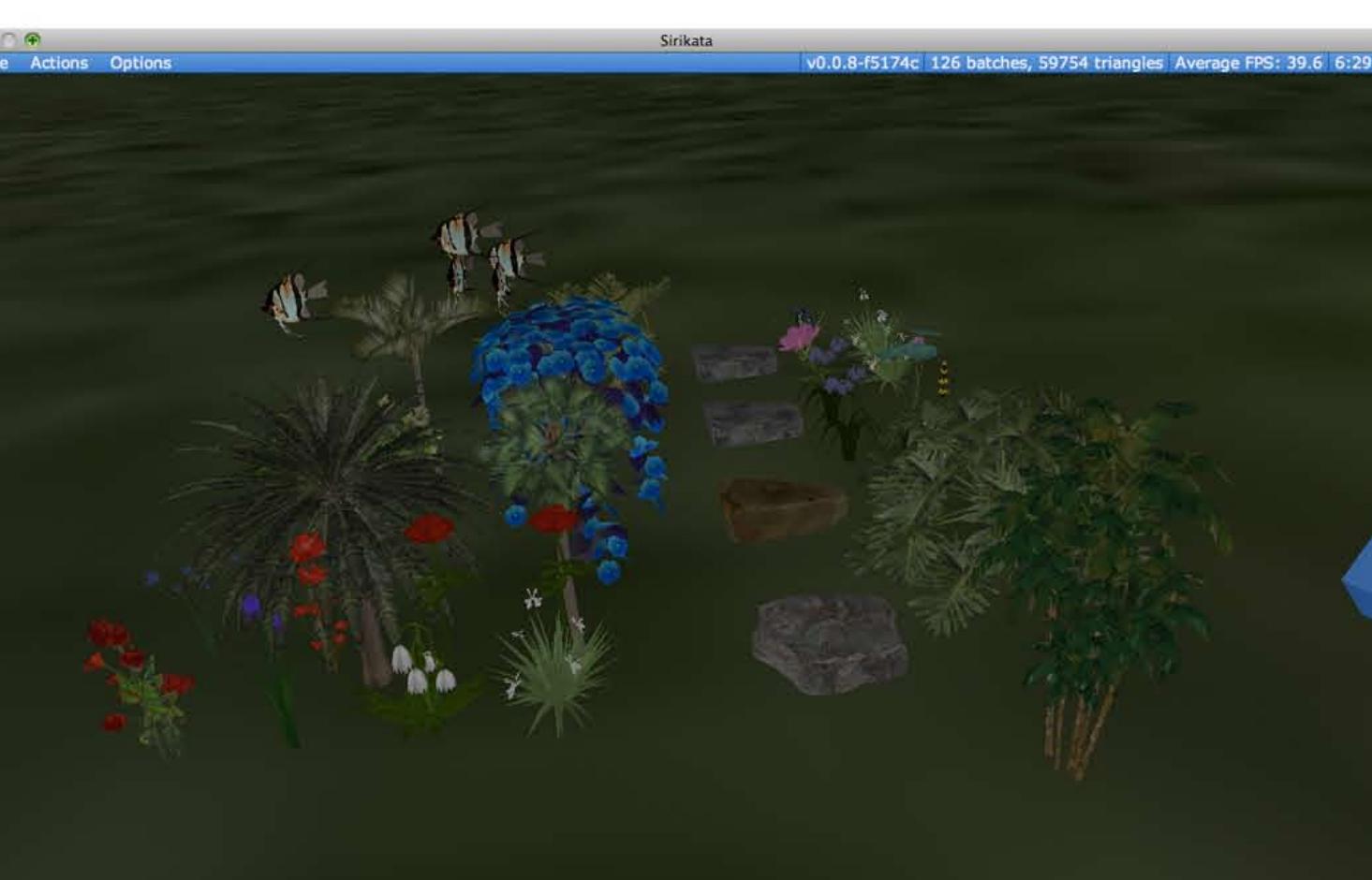
In order to build a city block from scratch you will need to...

1. Manually search for appropriate meshes in the CDN
2. Individually make calls to create objects with each mesh
3. Adjust the sizes and orientations of each mesh, since meshes are incoherent in those aspects
4. Drag objects around depending on visual cues, which can be demanding and frustrating with a 3d display where you can easily mistake depth for height

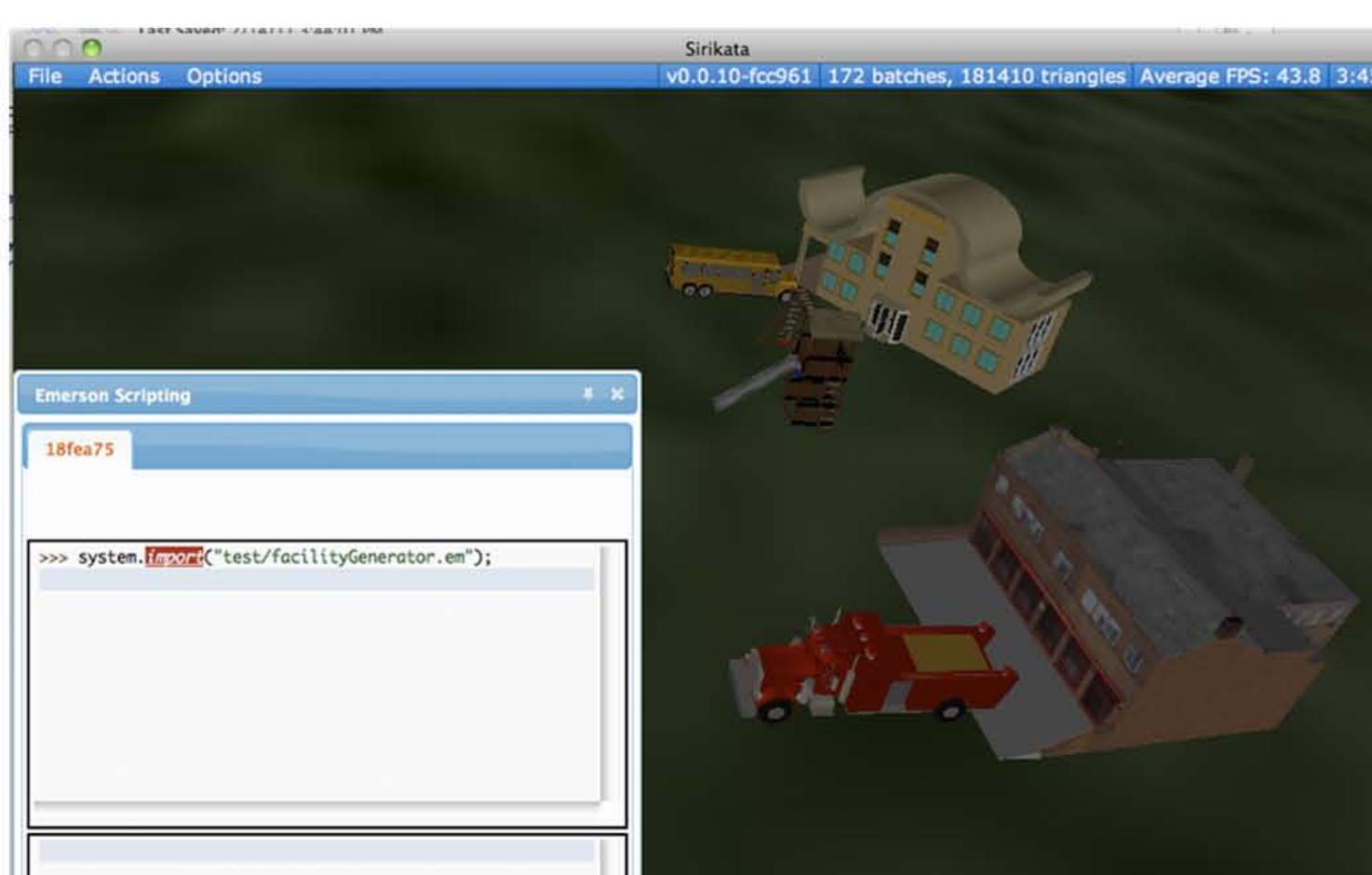
the approach :

In order to make the experience of building a village in Sirikata manageable as well as personal, there needs to be a balance between autogenerated units that users can take advantage of and customizable parameters that users can specify.

1. auto-generating units



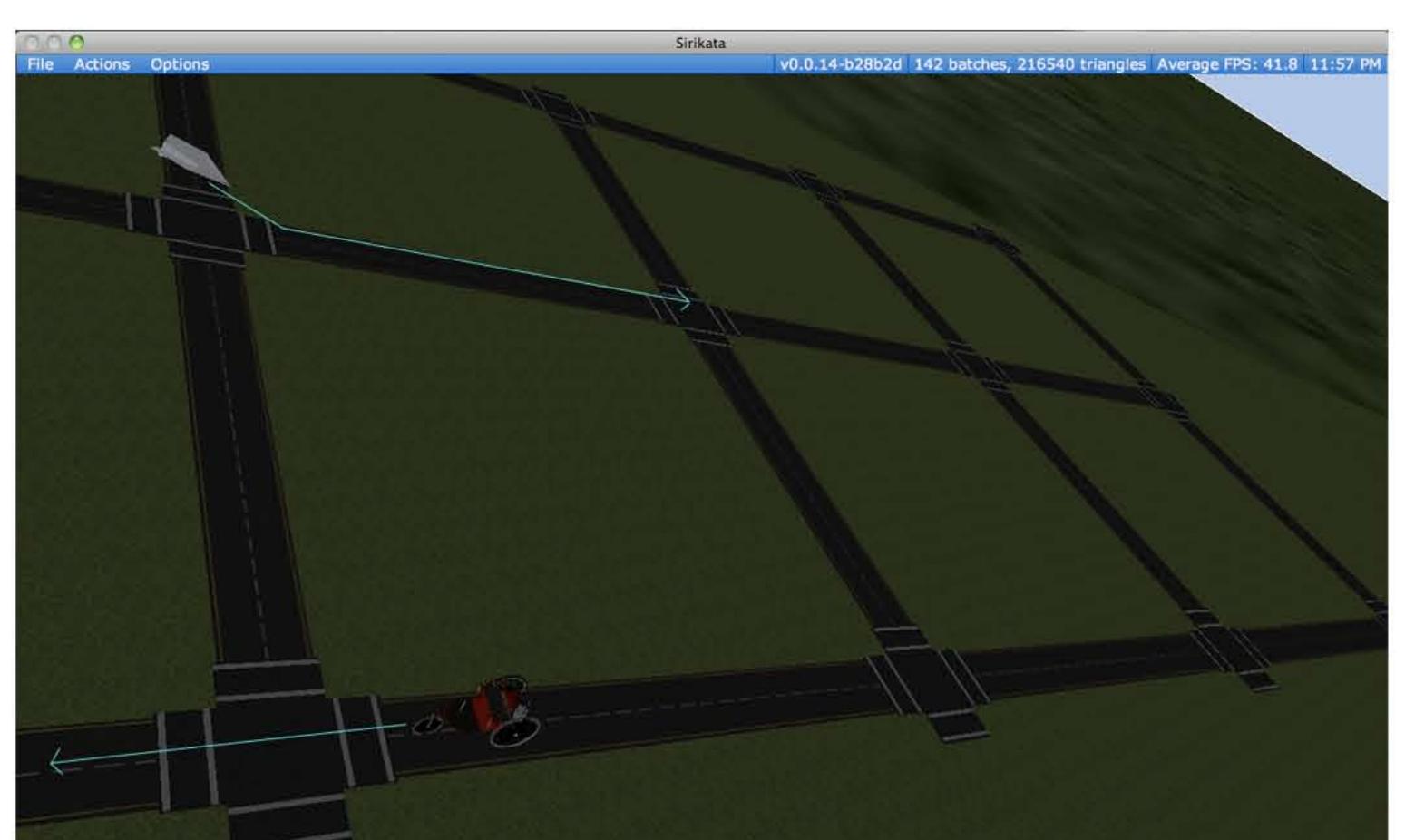
auto-generating forest helps create a forest populated with plants whose meshes display correctly in the world. and scaled appropriately.



auto-generating facilities produces facility blocks whose meshes are oriented

appropriately.

When users want to create a forest, a road system, a school, a residential block, or more, they do not have to place trees, flowers, cars, or streets one by one - they can have something reasonable-looking when and where they want it.

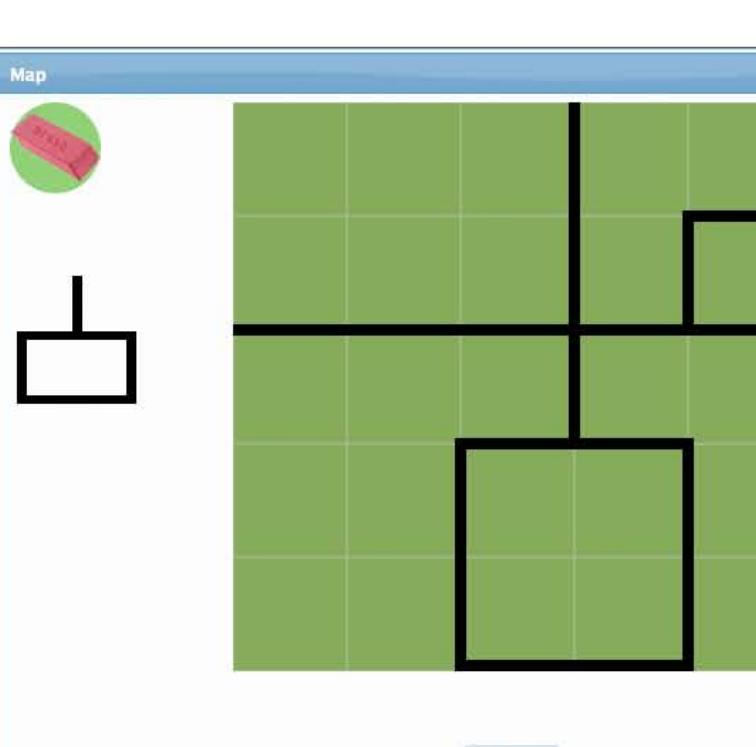


autogenerated streets are graphs; edges represent straight streets and nodes represent intersections. The streets lie flat on the ground and the meshes for streets and intersections are appropriately scaled and oriented.

autogenerated cars stay on and recursively travel streets.

2. customizability

How much is autogenerated needs to be balanced with how much is customized in order for the user to be satisfied with the village being built. The most user-friendly way would be through a 2d user interface where users can specify where and how big the village is, what the streets look like, how many cars are on the streets, and how each block is filled.



the street-drawing ui lets the user click on or drag over the gridlines to draw a street. Templates can be dragged onto the green grid to help the lazy user.



the facility-drawing ui provides the user with an intuitive interface to specify where a facility should be and which direction it is facing.

the future :

- Synchronize the 2d interface with the 3d world so that a change is instant
- Integrate CDN search so that users can pick meshes themselves
- Categorize meshes according to themes for additional personalization

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