Date: April 1, 2020

Subject: CGA Development

Set forth this week to dive deeper into CGA development and begin to work on a rule package developed with Unreal in mind that can be applied to imported obj files. See image attached: BuildingUnreal.

It is also a sort of parallel development where I am working to understand how lot-based rules work at a higher level so that that knowledge can be applied later down the road in creating better rule files for mass generation.

Ideally, I see one rpk being the source of all generation of the detailed meshes, with the ability to change façade styles, spacing, etc. Allowing the users to add more options through something like the façade wizard built into City Engine is a possibility, but given how the RPK compressor is built into City Engine, seems hard to implement.

Also have begun creating an obj repository that gets built into the RPK and provides all the refinement geometry like window frames, ledges, and other details, it is something I will continue to build upon to make our life easier.

As we now have Epic developers working closer with us, I have some recommended features that would make the usability of the plugin far easier. Having the ability to make standard static mesh objects into the .obj upon which the RPK would run would allow streamlined importing and refinement. It would allow someone to import building data from something like OSM, and then further refine it within Unreal.

Also, functionality to convert the meshes generated by the PRT into standard Unreal static meshes would allow for further refinement from a visualization perspective, and combined with the above suggestion, would allow for a progression of lot to mass based refinement all within Unreal.

Attachments. **CGA**: building.cga. **Images**: BuildingUnreal, Cornice, Ledge, Window, WindowFrame, WindowTopRound, WindowTopTri

Copy to:
Henry Richardson