

Exercise 3 – Procedurally Modeling a Building

DATE DUE: Class 10

Proposal DUE: Class 5

DATE ASSIGNED: Class 4

Goals:

This assignment will focus on the student becoming familiar with expressions and procedural modeling.

Requirements:

The following are the minimum requirements for the project:

- The dimensions of the building, both footprint and height, should be changeable through high-level parameters. (**width, depth and height**)
- The building should have windows, the number of which is tied to the size of the building.
- There should be at least one entrance.
- There should be a roof structure that is distinct from the main body of the building.
- The building should have multiple material assignments. You may incorporate file-based textures, but they are not required.
- Rendering should be production quality.
- The scene file should be well organized and documented with network boxes, sticky notes, informative node names and comments.
- Everything must be done in Houdini except compositing/creating mov

REFERENCE, REFERENCE, REFERENCE

You will work from reference for this project. Please find or photograph a building as reference. You may use found images of existing, proposed or imagined buildings. If instead, you would like to design your own building, you should submit concept artwork. While you are not required to replicate all of the detail of your reference building, the basic forms should be recognizable and be proportional when the building is in its base configuration. Do not include details in the model which should be addressed via texturing, such as brickwork.

Submissions guidelines:

The project will be submitted to your dropbox in a directory

F17_V350_E3_LastnameFirstname_Title/ containing:

- **F17_V350_E3_LastnameFirstname_Title.hipnc**
- **F17_V350_E3_LastnameFirstname_Title.pdf** – user guide and breakdown – see template
- **F17_V350_E3_LastnameFirstname_Title.mov** – use the following as guidelines
 - approximately 10 seconds of animation, high quality, H264 compression, 1280 x 720 (or 720 x 480 if rendering during high renderfarm usage). Additional animation is allowed at your discretion – practice good time management skills.
 - first 5 seconds should be a **turntable of the base** model, rotating guideline: no more than 10° per second. (If there are no details on the back, no need to use

- the full 360 degrees – use your judgment). HINT: use a null node for rotation parented to the camera – see tips and tricks page. Or rotate your building.
- next 5 seconds should **demonstrate the range of variation** possible when modifying the building's parameters. For this portion of the animation, there should be little or no camera movement and little or no rotation of the building. **THIS IS TO BE RENDERED, NOT SCREEN CAPTURED!**
 - The movie should contain a screen capture of the **custom parameter interface** of your procedural building.
 - Include an **opening title slate** showing your name and “VSFX 350/ Fall 2015/Exercise 3
 - **F17_V350_E3_LastnameFirstname_Title.exr** (or png, tga, **NO tifs!**). This is a “beauty shot” of your building - no larger than 1,500 pixels in either dimension – exact aspect ratio is at our discretion. Note – you should be rendering to exr – you can use mplay to convert your beauty shot. The exact aspect ratio is at your discretion.
 - Additional information required:
 - **reference/** This should contains no more than 10 JPEGs of your reference, no larger than 1,000 by 1,000 pixels. There is no set naming convention for the reference images. A file, **source.pdf**, inside the reference folder, which indicates the location of the building and the source of the submitted reference images, including appropriate URLs. Think of this as the bibliography for your reference images.
 - **textures/** If your project includes file-based textures they should be included here. In your SHOPS/Material specifications, when entering file paths for textures, **be sure that the paths are relative to the \$HIP** global variable (e.g., \$HIP/textures/filename.rat) and NOT absolute paths.

Grading:

Criteria includes: Footprint parameters/windows/entrance/roof/multiple materials/quality render/clean hipnc . Refer to grading rubric.