

Project 1 - Procedural Modeling – Complex Scene

DATE DUE: Class 14

Reference DUE: Class 7

DATE ASSIGNED: Class 1

Goals:

To learn how to use and understand procedural approaches when creating objects and scenes. This assignment will focus on the student becoming familiar with Houdini and mastering the use of copy/ copy stamping or using instancing, or for/each. Be aware of the power of packed primitives. The emphasis for Project 1 is on procedural variation in a complex scene - you should have visual variation whether you are using copy stamping/instancing or other methods). The goal is to create a scene with **complexity** using procedural techniques.

Requirements:

Examples of scenes could be a forest with variation (you are **not** required to use L-systems for this assignment). You could create a majestic or enchanting or forbidding or alien forest. A field of corn, lily pads in a pond, groceries or toys on a store shelf, a city street with a variety of buildings, candy on a table, and so on.

- 0) Provide a sketch or reference image for your choice.
- 1) **As with all your class work, you must use Houdini for all aspects of the project.**
- 2) You must use the copy node and copy stamping in the project (or the instance node with variations). There should be visible variation of some kind in the individual copies.
- 3) Animation is not required but is welcome if pre-approved; this is to be a still image.
- 4) **Lighting and composition count.**

These are the minimum requirements.

Considerations:

The scene should be complex enough to serve as a good context for the goals of the assignment. A simple example where the proper technique is used would be better than a very complex example not properly presented.

You should allow time for this assignment to apply lighting, *simple* shaders, and rendering. Be aware that a complex scene can be built very quickly, **make sure that you can render it, do test renders as you are building to avoid any surprises.**

Use PBR (Physically Based Rendering) in Mantra.

You will be required to **present and explain** your work in class on the due date.

Submissions guidelines:

The project will be submitted as a directory, **F17_V350_P1_LastnameFirstname_Title/**

This directory should contain the following:

- **F17_V350_P1_LastnameFirstname_Title.hipnc**
- **F17_V350_P1_LastnameFirstname_Title.pdf** - a breakdown of your project as you would describe it to a fellow houdini user. It is very important to be able to explain your work. See the template in the class notes top table.

- **F17_V350_P1_LastnameFirstname_Title.exr** (or png, or tga, **NO tifs please!**). This image should be rendered in high resolution (1280 X 720 pixels). Other aspect ratios accepted.
- [optional] **F17_V350_P1_LastnameFirstname_Title.mov** (include a title slate)
- Additional information required:
 - **reference/** Reference, Reference, Reference – a directory called reference containing small images in jpeg format and a file named **sources.pdf** (includes appropriate URLs) If you are using your own artwork please scan and place it in the reference folder.
 - **textures/**

Important note: Adherence to these naming and format conventions constitutes 5% of your grade. This is the naming convention that will be used for all projects. Failure to comply will also affect your professionalism grade.

Grading: refer to the grading rubric