Project 2 - Procedural Modeling – Complex Scene

DATE DUE: Class 13
Optional Redo: Class 15
Reference DUE: Class 7
DATE ASSIGNED: Class 1 Out for Reference / Class 8 Start

CHECKLIST:

- hipnc
- pdf
- jpg beauty
- jpg compare
- mov or mp4 [optional]
- and reference / textures

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/ for-each or instancing (repeated elements with variation). 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/for-each/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, **Redshift or Karma**

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

Submissions guidelines:

The project will be submitted as a directory, **F24_V350_P2_LastnameFirstname_Title/**

This directory should contain the following:

- **F24_V350_P2_LastnameFirstname_Title.hipnc**
- **F24_V350_P2_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. **Cite your sources.**
- **F24_V350_P2_LastnameFirstname_Title.jpg** (or png, **NO tifs please!**). This image should be rendered in high resolution (1920 x 1080 pixels minimum). Other aspect ratios accepted.
- **F24_V350_P2_LastnameFirstname_Compare.jpg**
- [optional] **F24_V350_P2_LastnameFirstname_Title.mp4**
- 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.
    - **tex/**

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 posted on the class website.