

## 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

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### CHECKLIST:

- hipnc
- pdf
- jpg beauty
- jpg compare
- mp4 [optional]
- and reference / tex folders

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### 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 2 is on **procedural variation** in a complex scene - you should have visual variation regardless of method. The goal is to create a scene with **complexity** using procedural techniques.

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### Requirements:

Examples of scenes could be a forest with variation (you are **not** required to use L-systems for this assignment, suggest the new tree tool in Houdini). 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 repeated elements with variation. 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.

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### 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 Karma.

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

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## Submissions guidelines:

The project will be submitted as a directory, **S25\_V721\_P2\_LastnameFirstname\_Title/**

This directory should contain the following:

- **S25\_V721\_P2\_LastnameFirstname\_Title.hipnc**
- **S25\_V721\_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.
- **S25\_V721\_P2\_LastnameFirstname\_Title.jpg** (or exr, or png, **NO tifs please!**). This image should be rendered in high resolution (1920 x 1080 pixels). Other aspect ratios accepted.
- **S25\_V721\_P2\_LastnameFirstname\_Compare.jpg**
- [optional but encouraged] **S25\_V721\_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.

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**Grading:** refer to the grading rubric posted on the class website or blackboard.

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