

Complex Scene

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/ Render Stats

**Average Render Time: Mantra-
7.8 min/frame (1280x720)**

**Number of lights in scene: 1
environment light with an Hdri**

**Complexity of geometry
(approximate):**

Lotus Flower: 11,701 polygons

Lily Pad: 3,498 polygons

Water: 12,005 polygons



/ About this Project

This project uses attribute paint, scatter, delete, null, attribute wrangle, and instance nodes.

- I used attribute paint to control where the geometry would be placed within the scene; there is one for the foreground, middle ground and background of scene.
- I used a scatter node with a delete node to randomize the point distribution and a null node to take out the point information.
- I used instance nodes with an object merge and attribute random wrangle to randomize the rotation of each geometry.

For compositing, I rendered out the Shaded(Pz) channel in the Mantra render node and composited in Nuke to add a depth of field to the image.

/ File Organization

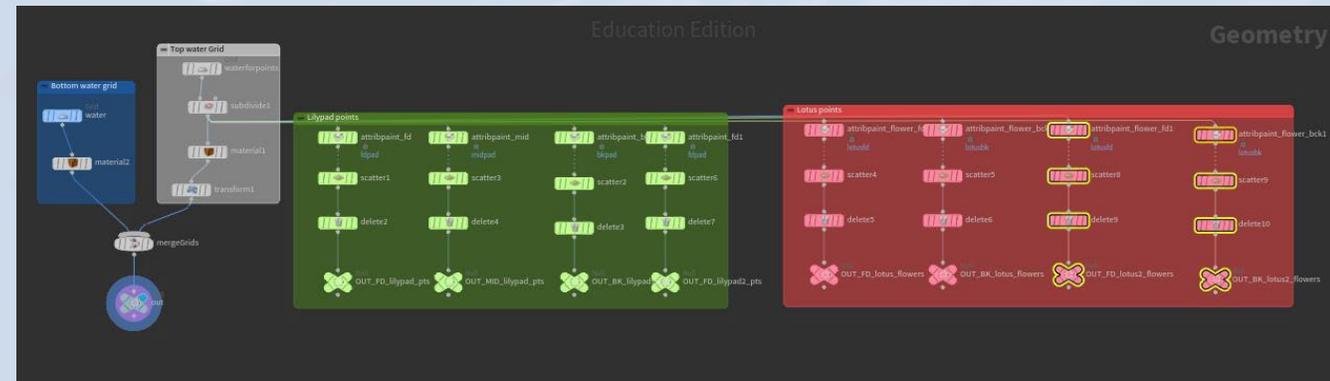
In the top level, there are different color networks.

- The green networks has the lily pad creation and lily pad instance nodes.
- The red networks have the lotus creations and lotus instance nodes.
- The grey network box contains the light, camera and camera guide.
- Within the blue network, there are the water creation, attribute paint, scatter, delete, and null nodes.

Top Level Network



Water Node- Scatter Points



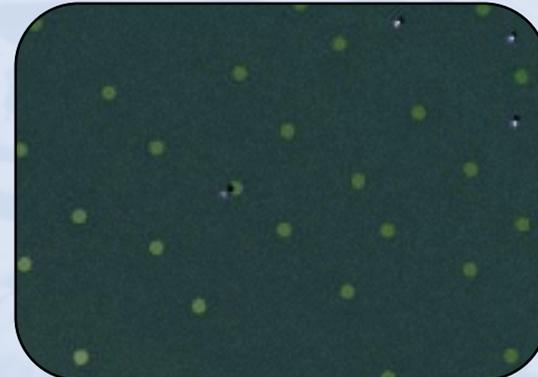
/ Problems and Solutions

Amount of Geometry: The reference photo has a lot of lily pads very close together and to get the proper look, I used an attribute paint to indicate the area of where I wanted the points to scatter on the water, so that they did not scatter all over the grid.

Rotate Random: All the geometry was rotating in the same direction, making it look unrealistic. I added an attribute wrangle node to get a randomized rotation on each geometry copy.

Texture Creation: At first, the textures were looking very flat and nonrealistic, so I looked for new ways to texture the lily pads and flowers and found that a picture of a real plant worked best.

Problem Pictures



Solution Pictures

