Design Decisions

Malcolm Williams

Southern New Hampshire University

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Professor Tarik Iles

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**Image Description**

The 2D image that I am representing in three-dimensional space is a minimalistic workspace. It is indoors and depicts a round table with a closed laptop computer resting on top. To the left of the table is a woven basket containing a tall green plant. On the right side of the table is a wooden chair with a soft blue cushion.

**Floor**

The floor in this scene is a simple wooden panel floor. A flat plane mesh is an appropriate shape to draw the floor with. I chose to use a seamless tiling texture to increase the realism of the floor pattern with a repeating texture. The material is not very reflective but is illuminated with ambient and diffuse lighting.

**Wall**

In the original picture, the wall behind the objects of the scene has a wooden finish. A plane works well to draw this flat surface. It only needed to be rotated that that its face was towards the camera. I opted to recreate the scene with a dry wall texture to make the scene my own. The wall lightly reacts to reflective lighting and is mostly lit by ambient and diffuse light.

**Table**

The table in this scene stands on a single cylindrical metal leg. To represent the table leg, I chose a stainless-steel texture that would be used with a reflective material to add realism in the way that metal reflects light. The tabletop has a wooden texture to recreate the finish depicted in the 2D photograph. Atop the table is a metal laptop whose texture is metal and has a shiny material for a metal feel.

**Plant**

To recreate the plant, I use a tapered cylinder to make the woven basket. I used individual box meshes for the leaves rather than planes to give some depth to the plant. Diffuse lighting on the stem and leaves puts an authentic finish to the surface.

**Chair**

The chair has a simple wooden frame design that allowed boxes with wooden textures and matte lighting. A soft blue fabric was chosen for the cushion to give a softer appearance than the wood of the frame.

**Lighting**

To illuminate the scene effectively I needed to add a light to the north, east, south, west, above and below the scene objects. Without any one of these the scene appeared very dark and unnatural. Each light was defined with some amount of ambient, diffuse and specular effect create the most realistic lighting for the room.

References