IAT 336 - Materials in Design

HORIZON CAM

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Cindy Ye - 3D Designer
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Materials

Main

Walnut Wood:
aesthetics, theme

Secondary

Leather Fabric:
soft, bendable, sturdy

Other

3D Print Plastic

Magnetic Tape

Styrene Plastic

Wooden Dowels

Alternative Materials

ABS Plastic

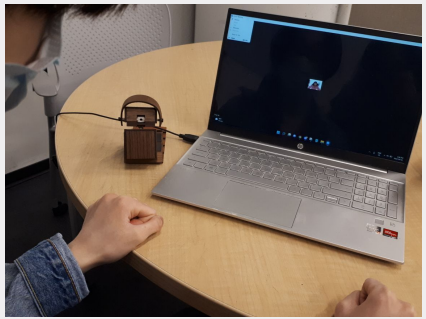
- Easier to manufacture
- Lighter than wood
- Different choices in color
- Long-term durability

Persona: Richie Zoom

Richie is a professor in his 50s teaching in the SIAT program at SFU. He teaches 5 days a week and often uses his webcam at home for teaching online classes and attend meetings. However, the current webcam he has is not very adjustable and too bulky to carry around. Richie also often finds the cords tangled in his bag and is frustrated that he has to keep untangling them before he can actually use it. Richie also enjoys old fashioned themes, and wants a webcam that has this aesthetic.

Persona Context

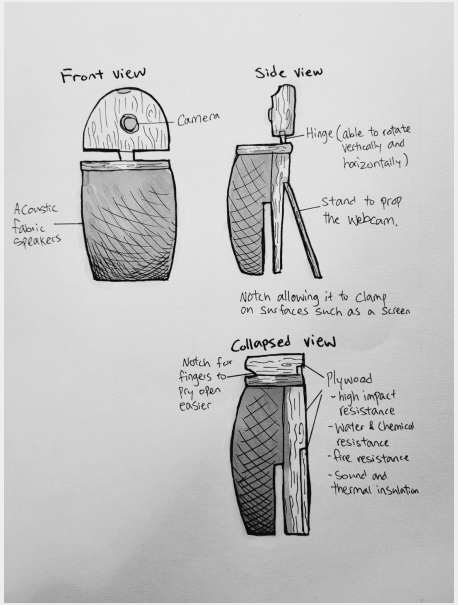
Richie takes the webcam out for his daily classes. The stand is collapsable and the webcam is portable and easy to carry around. By placing it on a stand, Richie can easily position the webcam wherever he want, and adjust the camera lens for his zoom meetings.



Inspiration/Metaphor

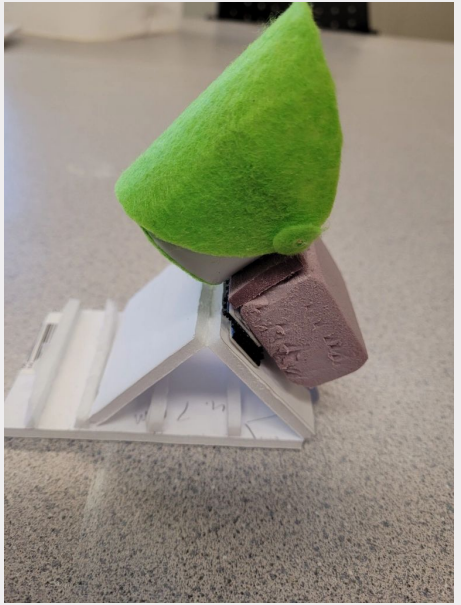
Ideation

Week 1



Week 2

Week 3



Rendering + Views

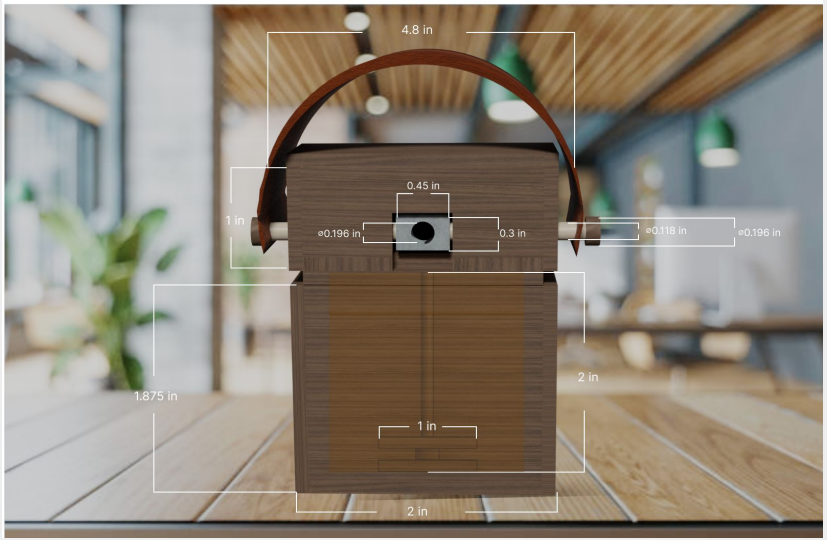
Top view

Front view

Front view (inside)

Back view

Dimensions (Web Cam)



Dimensions (Stand)

Fabrication Techniques

Cutting & Trimming

The wood and leather were laser cut from SolidSpace. We measured and cut magnetic tape using a ruler and exacto knife. The camera piece was 3D printed from SolidSpace.

Fabrication Techniques

Assembly

We used the measurements from our 3D model to make sure the final pieces fit correctly. Super glue was used to attach the parts together. We also measured and cut wooden dowels to make the hinges for the rotatable pieces. We searched for strong magnets to take the weight of the webcam and make the height adjustable.

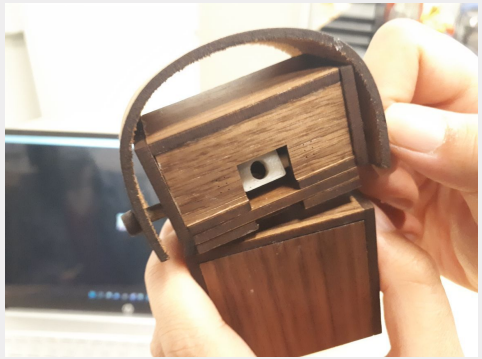
Fabrication Techniques

Finishing

Most of the pieces were assembled using superglue to hold them in place. We replaced a few parts while adjusting the webcam and we were careful to make sure everything aligns properly.

Interaction

- Leather cover can move to cover and show the webcam camera
- Webcam head can extend upwards and downwards and can turn 360 degrees
- Webcam can attach and detach to the stand
- Stand height can be adjusted based on user needs



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