STORY BEHIND THE PROJECT

Today's computer systems utilize many forms of user interfaces that allow users to seamlessly interact with their electronic devices.

Alternative methods of user input and interfaces are becoming more popular, creating a basis for a new generation of user interfaces for architectural and industrial designing.

OUR VISION

Goal: To improve the efficiency of the interaction between the user and the program via multiple innovative modalities.

The team has used the Unity game engine and Steam VR's virtual reality plugin to develop the program that puts the power of creation in your hands. Literally.

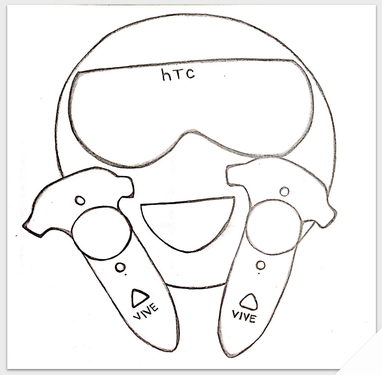
Simply pick up the HTC Vive controllers and headset to bring your imagination to life!

Oregon State University

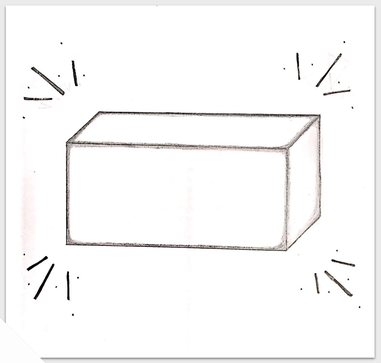
DESIGNING IN VIRTUAL REALITY

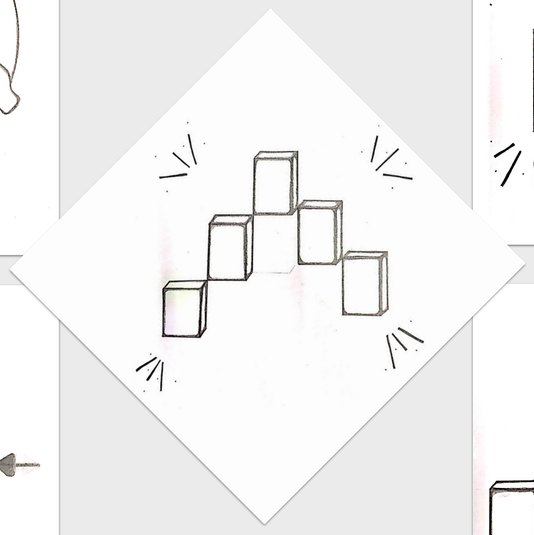
Generative 3D Design in Architecture

1 HTC Vive Headset and Controllers

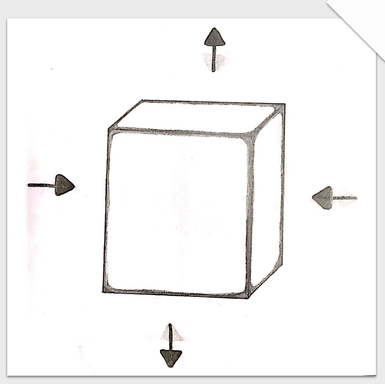


2 Generate 3D Object

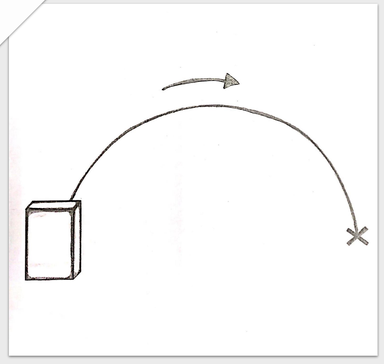




5 Watch Structure Become [Virtual] Reality!



3 Resize 3D Object



4 Draw Trajectory

DESIGNING EXPLANATION

Power of Unity + Experience of VR + C# = An intuitive tool to create complex structures out of simple gestures and ideas

1) 3D objects can be spawned by selecting from the in-game menu via an HTC Vive controller.

2) Objects can be resized, combined, and altered according to the user's whim.

3) Curves can also be drawn mathematically, and then changed into various 3D structures.

4) Save and load objects and environments to come back to or continually cherish creations.

WHAT HAPPENED IN THE END?

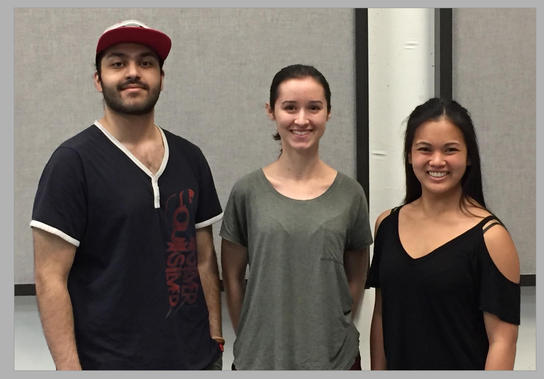
Usable HTC Vive Compatible VR Program!

Successes:

Program meets basic requirements of generating various 3D objects and creation of trajectories with mathematically curves, along with save and load functionalities.

Limitations:

User is unable to free-draw a curve and delete objects within a scene (program restart is needed), but these additions are in the works for the future.



(Pictured from Left to Right)

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