iCreate: Building in VR

Generative 3D Design in Architecture

Introduction and Background

- Today's computer systems utilize many forms of user interfaces that allow users to seamlessly interact with their electronic devices.
- However, computer systems today are also becoming more sophisticated, and as they are being improved, alternative methods of user input and interface. This can potentially form the basis for a new generation of user interfaces that is greatly needed in architectural and industrial design.
- The overall goal of this project is to improve the efficiency of the interaction between the user and the program via multiple innovative modalities. These methods would be required to adapt to the specifications and requirements that are needed for the development of architecture and industrial designs.
- In order to implement this vision, the team has used the Unity game engine and Steam VR's virtual reality plugin to develop the iCreate program that puts the power of creation in your hands. Literally. Simply pick up the controller or use your own hands to bring your imagination to life!

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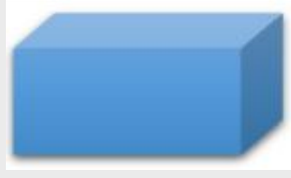
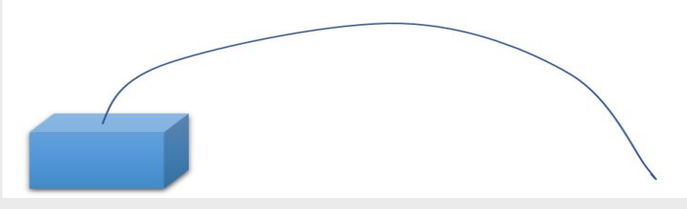
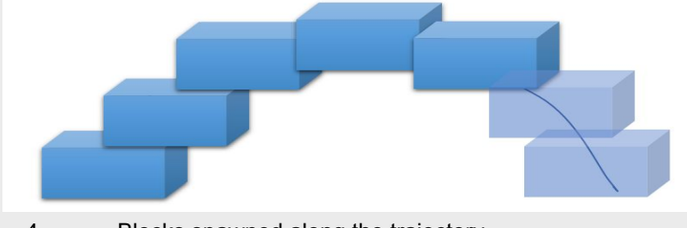
1. Generated cube



2. Resized cube



3. Drawn trajectory for blocks to spawn



4. Blocks spawned along the trajectory

Project Description

The iCreate team has taken the power of Unity and the experience of VR and combined the two into an intuitive tool that allows the user to create complex structures out of simple gestures and sketches.

3D objects can be spawned by selecting the prefered shape from the in-game menu via the HTC Vive controller. These objects can then be resized, combined, and altered according to the user's whim. Curves can also be drawn naturally, and then changed into various 3D structures.

Finally, the user can save and load their objects and environments to cherish their creations, or to come back to add the finishing touches.

Conclusion

[Conclusion Placeholder]

[Team Photo Here] :)

(Pictured from Left to Right)

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