

Off-The-Shelf

Exploring 3D Arrangements of See-Through Masks to Switch between Virtual Environments

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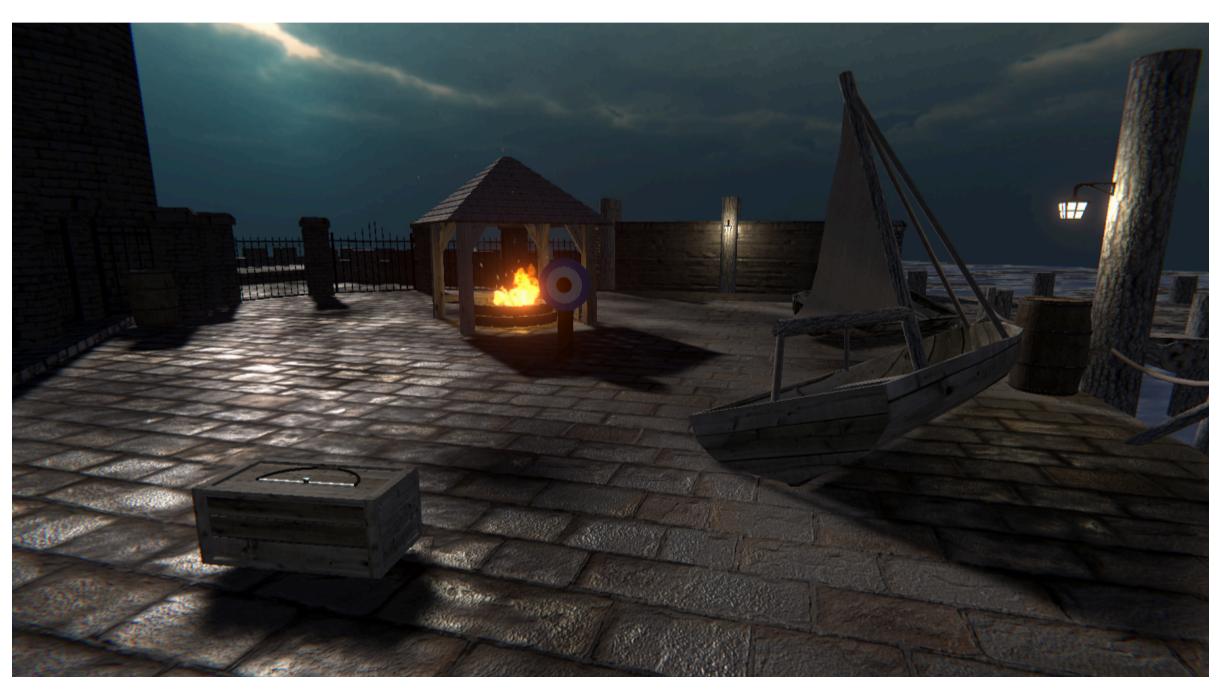
Users often encounter difficulties when transitioning between different virtual spaces and VR applications, disrupting the flow and efficiency of their interactions [1, 2]. This work explores dynamic app launcher menus that display various see-through masks, each representing a different virtual environment (VE), allowing users to easily switch between multiple VEs.

Arrangements



Off-The-Shelf offers immersive see-through masks, inspired by the idea of orbs [3] and virtual headsets [2], and experiments with various menu arrangements. In the default linear arrangement, masks are always displayed in the same order. Other arrangements modify the masks' elevation or distance from the user, while the Scale arrangement adjusts the mask dimensions, revealing more of the environment context for larger masks.

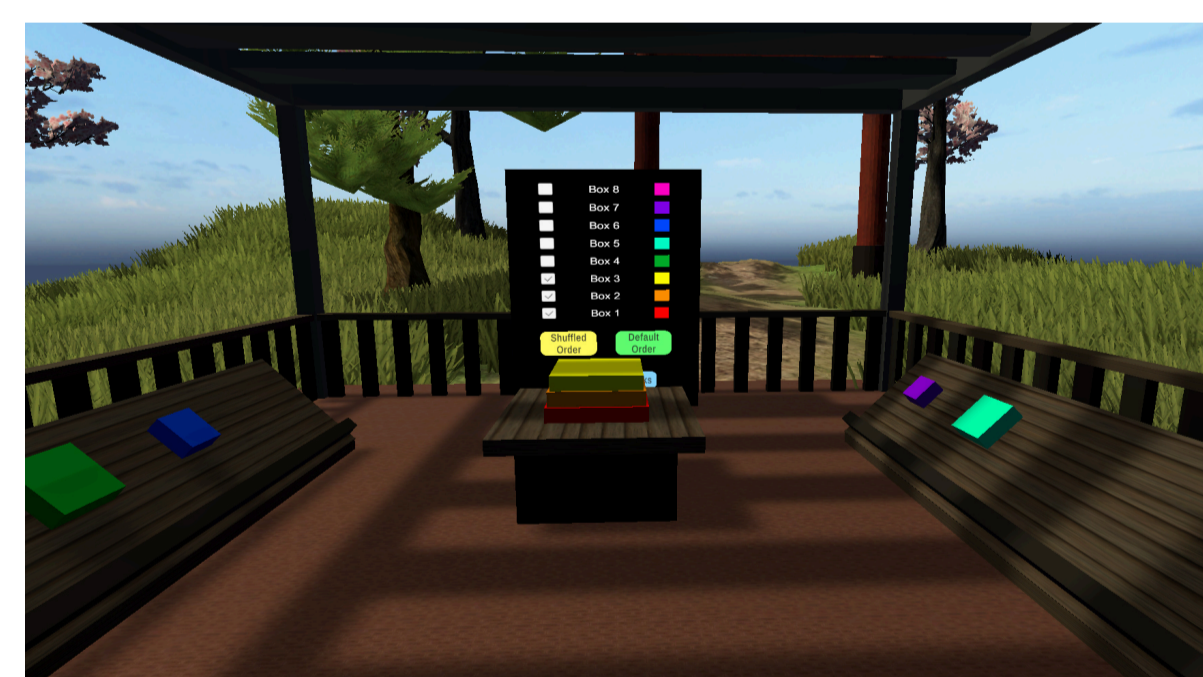
Switch between six Mini Games



Archery:
Use a bow to hit a target as precisely as possible



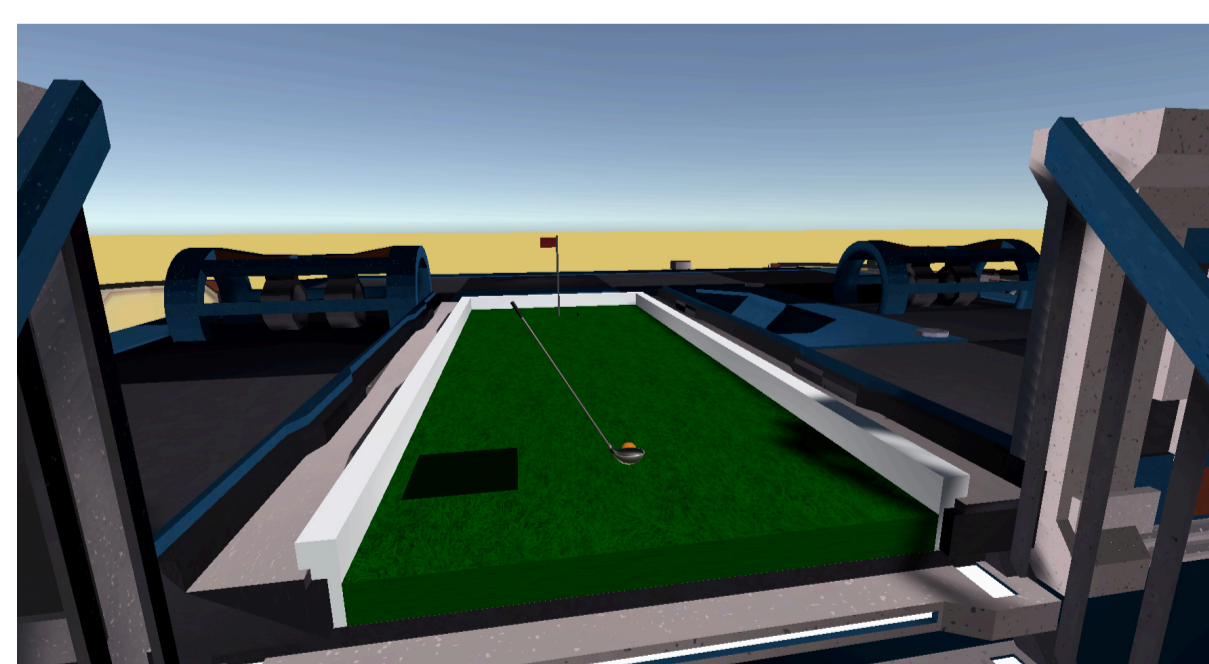
Basketball:
Throw some hoops with the ball from the line



Stacking:
Stack the colored blocks in the correct order



Goalkeeper:
Throw a goal while avoiding the goalkeeper



Minigolf:
Hit the ball with a golf club so it moves in the hole



Maze:
Find and collect all coins hidden in the maze

Future Work

- 1 What are effective techniques for transitioning between Virtual Environments?
- 2 What is the mental load of observing VEs and switching between them?
- 3 How can multitasking in VR be established without the need to switch VEs?

References

- [1] Nico Feld, Pauline Bimberg, Benjamin Weyers, and Daniel Zielasko. 2023. Keep it simple? Evaluation of Transitions in Virtual Reality. In Proc. ACM CHI EA '23.
- [2] Sebastian Oberdörfer, Martin Fischbach, and Marc Erich Latoschik. 2018. Effects of VE Transition Techniques on Presence, Illusion of Virtual Body Ownership, Efficiency, and Naturalness. In Proc. ACM SUI '18.
- [3] Malte Husung and Eike Langbehn. 2019. Of Portals and Orbs: An Evaluation of Scene Transition Techniques for Virtual Reality. In Proc. ACM CHI '19.