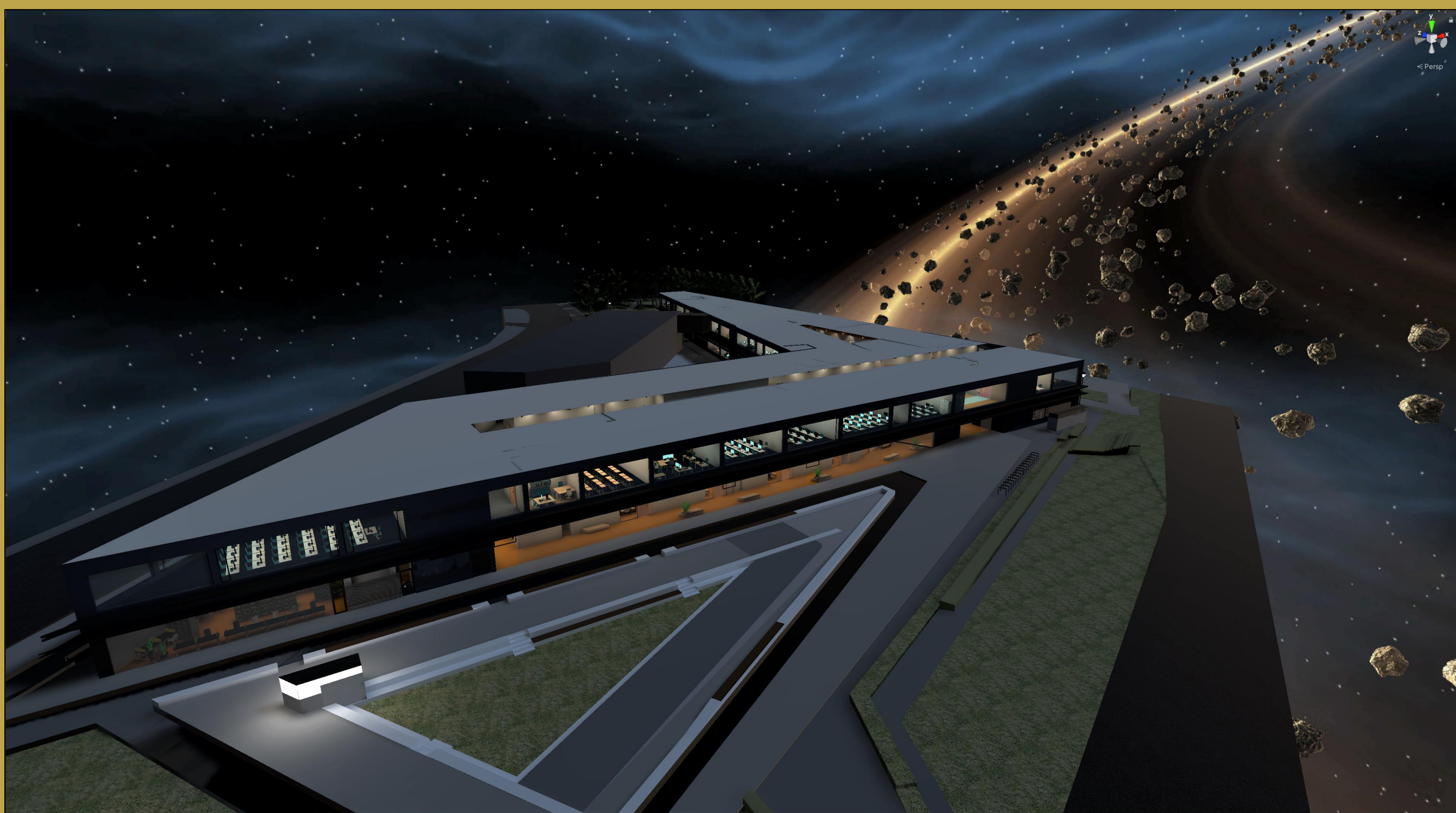# DeltaVR - Multiplayer

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Introduction

DeltaVR is a virtual reality application made by Toomas Tamm in 2021 as a Bachelor's thesis. My addition to this application is adding **multiplayer functionality**, allowing multiple people to experience DeltaVR at the same time in the same space. The work includes creating **visible avatars**, porting the existing functionalities to work with multiplayer and **adding new interactions**.

The Delta Centre model

Multiplayer component

Photon Unity Networking for the Unity game engine allows for **cross-platform** compatible multiplayer experiences. Using the free cloud servers provided by Photon allows **up to 20 concurrent players** to be on the server.

Activities

DeltaVR – Multiplayer lets users explore the building with others. There is **voice chat** functionality for communication. The Delta Centre has scattered **collectibles** that correspond to the CGVR Lab materials tray. You can also try out the **archery range** that was given more multiplayer functionality

A VR and non-VR player

A player using a bow

A player reaching for a collectible

Demo

There is a version of DeltaVR – Mulitplayer running on the Quest 2 to try out.

Conclusion

The results of this thesis are Quest 2, PCVR and non-VR versions of DeltaVR with multiplayer functionality. This could be a good foundation for a **social application for the University of Tartu**.

Code

Builds

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