

Simulating Illumination in Mixed Reality- A cross reality application

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Problem:

Many solutions exist already for Virtual Furniture Placement. But simulating how a new light source would interact with the room is a less explored option

Project:

We implemented a prototype application that allows the user to switch between mixed-reality and a virtual replication of the room. Users can change the time of day, place light sources and objects and see the lighting effects simulated in virtual reality.



Portable to any room
via Meta Quest
Room Scan

Conclusion:

The app allows users to perform all the actions we planned, but due to engine limitations it is not quite as realistic as we wished.

Future work:

Real-time light simulation in Unity not as convincing. Maybe a different engine could be more realistic. Extend the app to include: outdoor environments and additional customisation.

Switch from Mixed
to Virtual Reality



Simulate different
times of day



Place Objects
and Lights

