



NDIA 2018 AUGMENTED REALITY WORKSHOP

Remote Collaboration with Mixed Reality

Raven Zachary, Object Theory

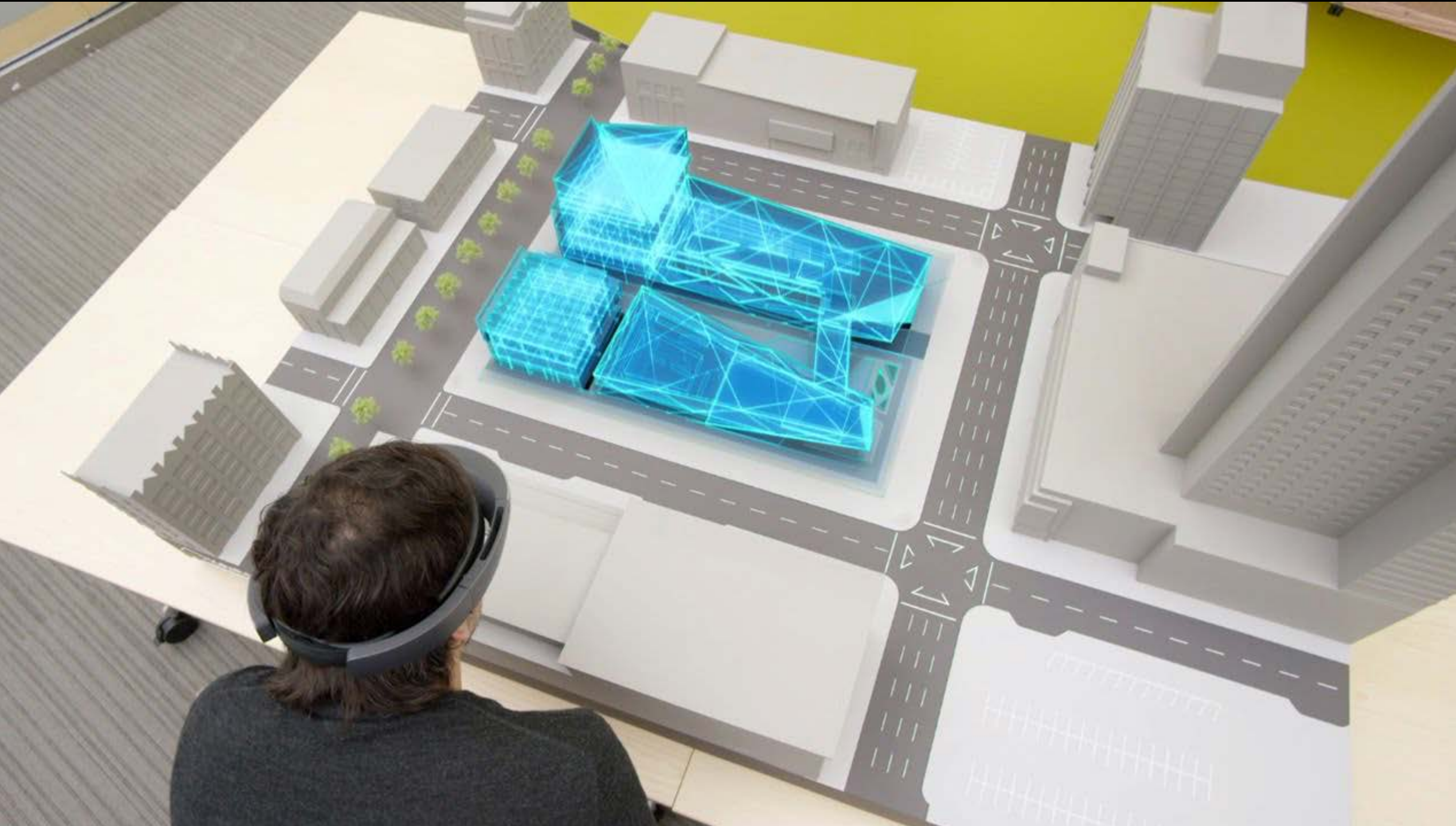
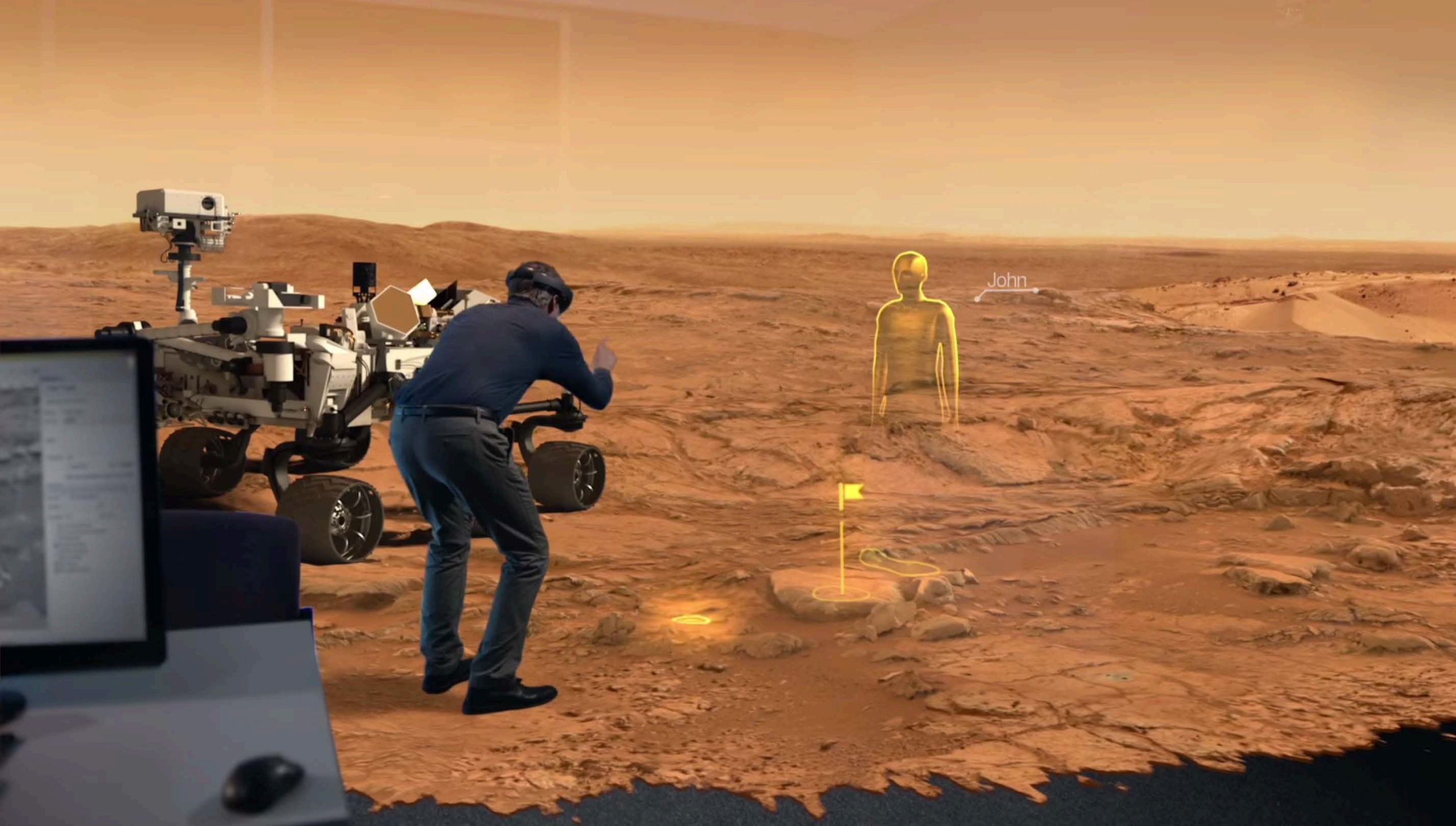
3 October 2018



object theory



We solve enterprise problems with mixed reality.





USE CASE
Remote Collaboration

Shared Experiences in Mixed Reality



Two or more people experiencing the same holographic object(s) and/or environment(s)

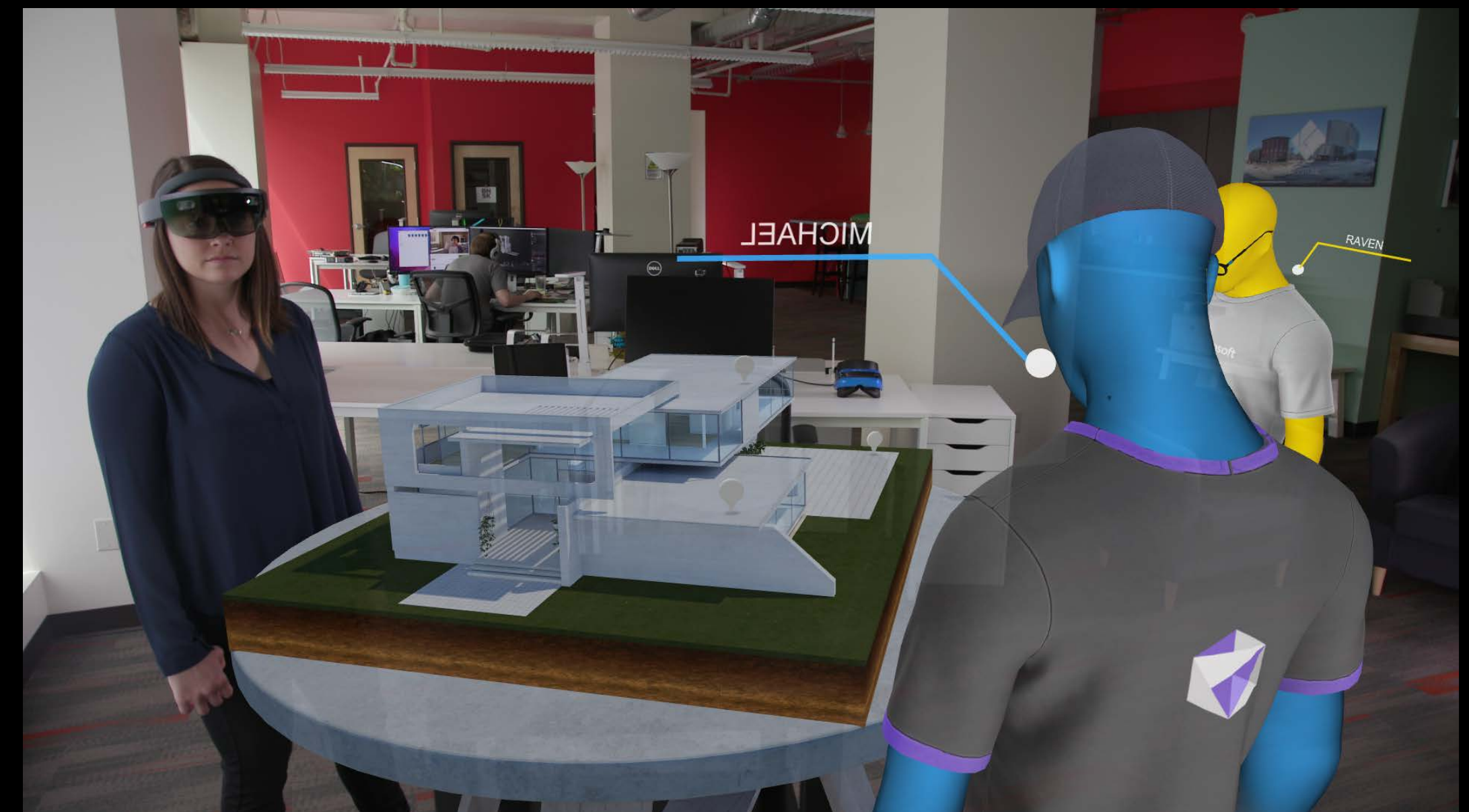
People • Places • Things

Types of Shared Experiences

Co-located Collaboration



Remote Collaboration



REMOTE COLLABORATION WITH MIXED REALITY

THE BUSINESS CHALLENGE

When dispersed teams collaborate on 3D problems, it's difficult to establish an accurate shared context and convey intent with existing 2D tools such as screen sharing, which can result in costly mistakes.

MIXED REALITY SOLUTION

Collaborators feel a sense of presence, plus spatially-relevant annotations and markers can accurately convey intent to establish a more accurate shared context resulting in more informed decisions and fewer mistakes due to miscommunication.



REMOTE COLLABORATION WITH MIXED REALITY

WHY MIXED REALITY?

- Gaze indicates focus and intent
- 3D Spatial sound provides cues and sense of presence
- Stereoscopic vision improves comprehension
- Spatially-relevant annotations provide critical context
- Ability to see content while conversing/collaborating

REMOTE COLLABORATION WITH MIXED REALITY

POTENTIAL CHALLENGES

- Geometry complexity
- Outdoor use / safety compliance requirements
- Ubiquitous access to Internet
- Large-group conversations



REMOTE COLLABORATION WITH MIXED REALITY

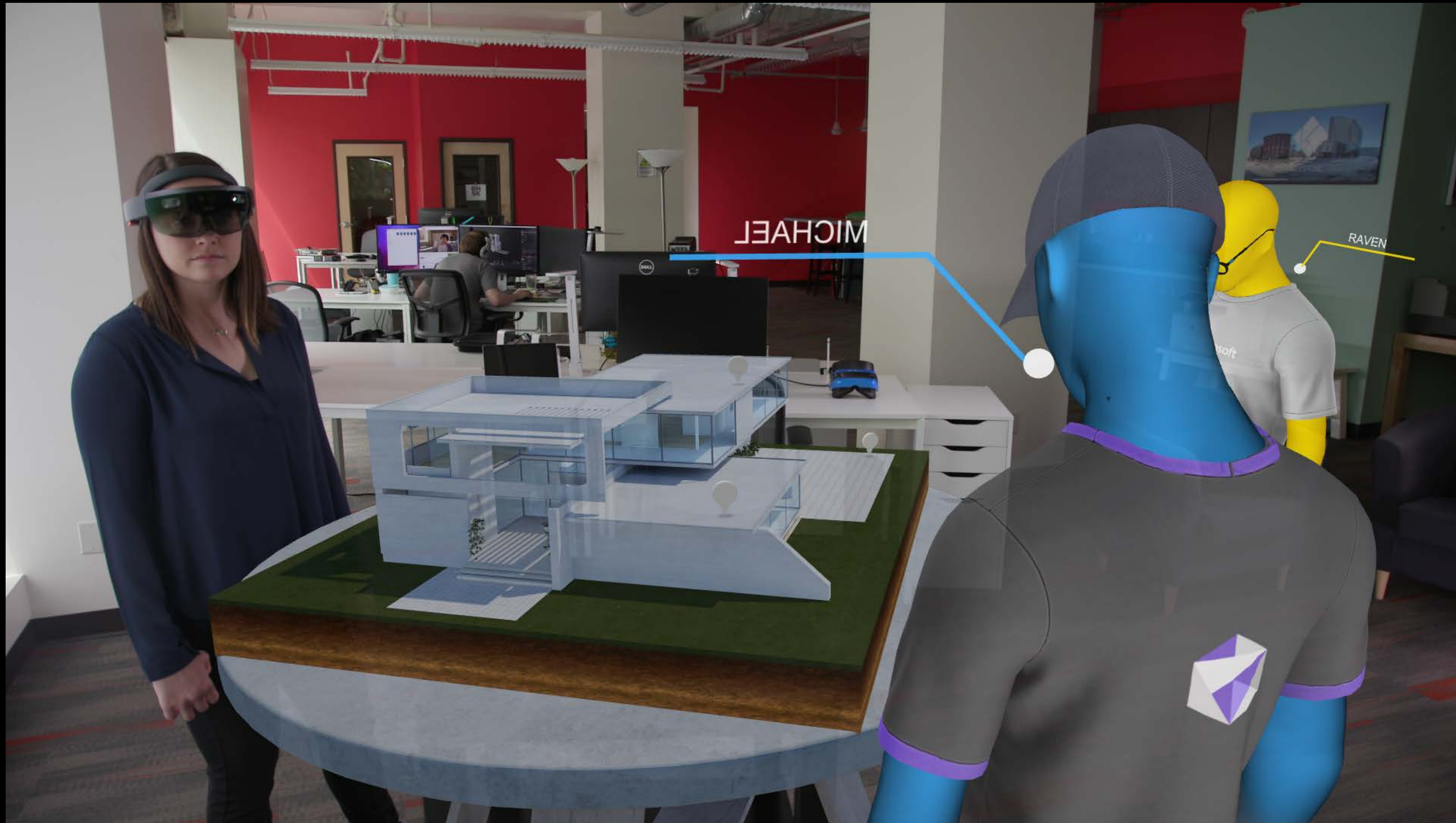
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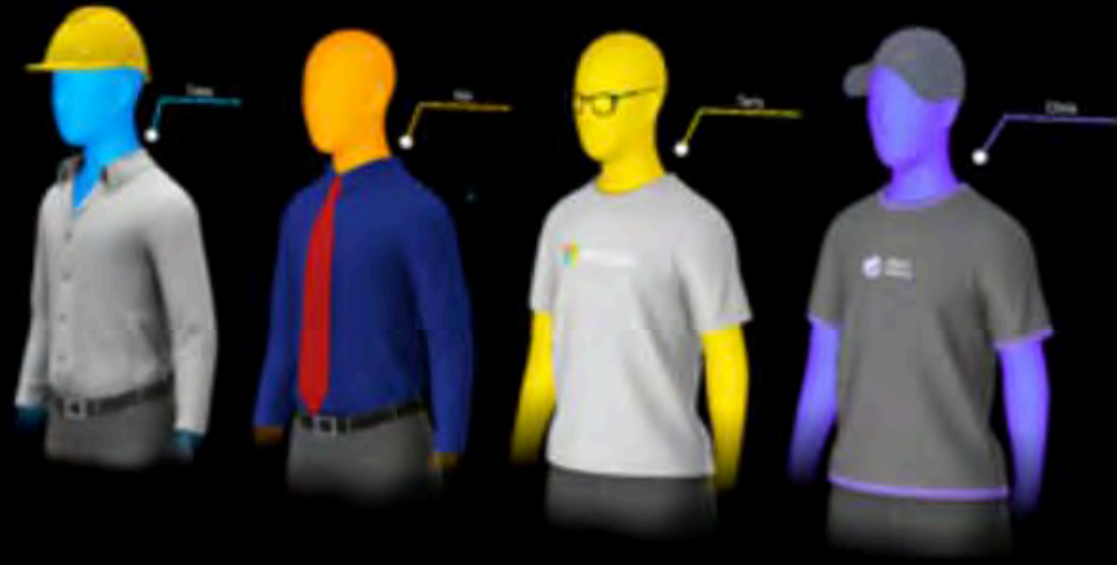
REMOTE COLLABORATION WITH MIXED REALITY

DESIGN CONSIDERATIONS

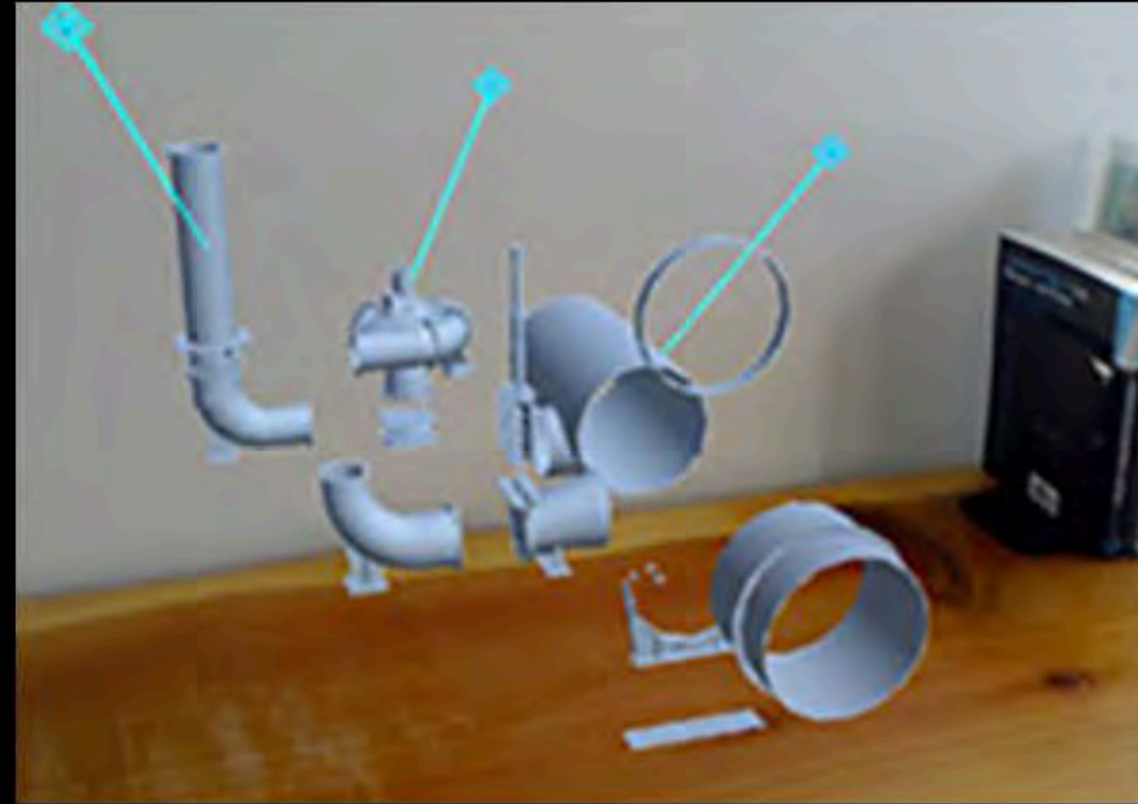
- Create presence with avatars
- Provide for human comfort
- Make roles and control clear
- Make intent and focus obvious
- Maintain object consistency
- Create pleasant transitions
- Adapt to, or be consistent across, environments
- Think about levels of persistence



Prism by Object Theory



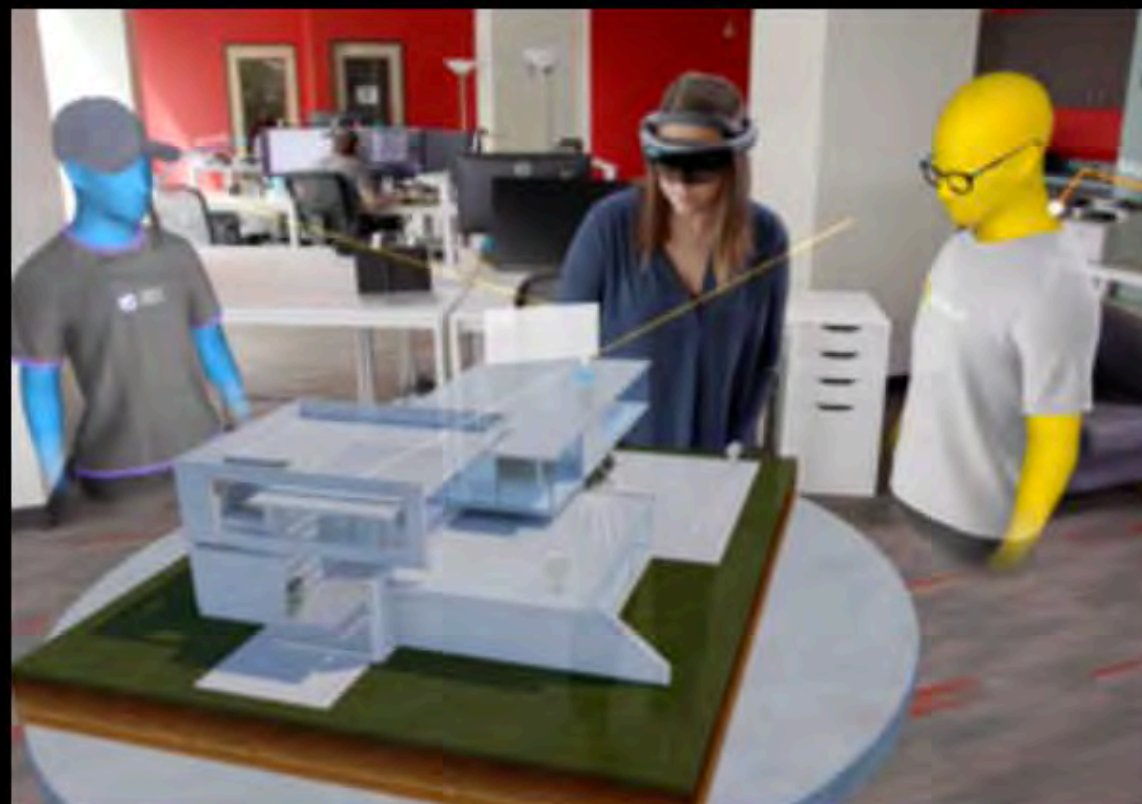
Customized avatars



Display of 3D models



Multi-platform



Spatial audio chat



True-scale mode



Annotations



object theory



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