

LEGS / LOCAL EQUIPMENT GUIDANCE SYSTEM

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In Collaboration With —







THEIR PROBLEM

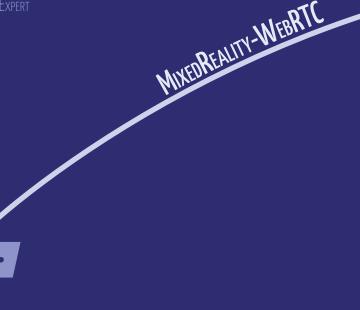
- Maintenance of specialized equipment requires trained personnel who are not always in close proximity to the repair site.
- Those who are already nearby are often untrained and need external assistance in repairing the equipment.
- Sending trained experts to on-site locations is costly, time consuming, and logistically challenging.

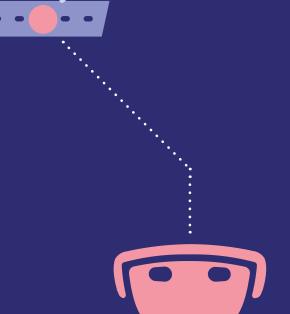
OUR SOLUTION

- On-site mechanics with minimal training will be able to repair complex systems through remote expert assistance.
- Communication via the Microsoft HoloLens 2 provides the expert a live feed of the mechanic's actions.
- AR annotations and gestures improve worker efficiency and enables real-time feedback on maintenance tasks.



- MICROSOFT HOLOLENS 2 / MECHANIC
- INTERNET-ENABLED COMPUTER / MECHANIVE & EXPERT
- ACCESS TO A SIGNALLING SERVER / MECHANIC & EXPERT





On-Site Mechanic

The on-site mechanic uses a HoloLens 2 to connect with the remote expert using our software solution. Interactive features such as AR annotations, 3D drawing, and automated object detection enhance the repair experience. Through live communication, the remote expert will provide real-time feedback and guidance to the mechanic on maintenance procedures.

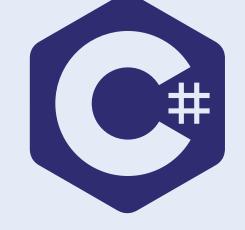


SIGNALLING SERVER

The signaling server provides the necessary infrastructure for a real-time audiovisual link between the mechanic and expert. It also allows for the creation of a persistent WebRTC connection between users. Once a connection is established, the server is no longer required to continue the call, allowing for a truly peer-to-peer system.



The remote expert uses an internet-connected computer to connect with the on-site mechanic. No other equipment is required for the expert, and they only need to use our provided client program to interact with the mechanic. The expert provides real-time insights to the mechanic and can view their perspective through our application.









Microsoft HoloLens MRTK
MIXED REALITY TOOLKIT









PEER-TO-PEER FRAMEWORK Not Required After Call Begins CONNECTS HOLOLENS & COMPUTER Transparent to Users



Audio/Video Streaming AR Marker Generation HOLOLENS PERSPECTIVE VIEWER USER SYNCHRONIZATION



3D Drawing in AR Space CUSTOM AR MARKER PLACEMENT AUDIO/VIDEO STREAMING REAL-TIME OBJECT DETECTION









