

HOLOMESSAGES PROJECT

Eran Tzabar

PROJECT IDEA

HoloMessages is an Augmented Reality system for sending and receiving office messages.

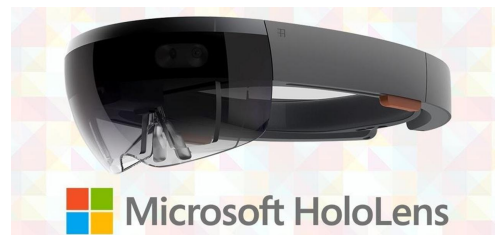
Using the Hololens device by scanning a QR code at the entrance to the office, you can load user information and leave a message.

Holomessages



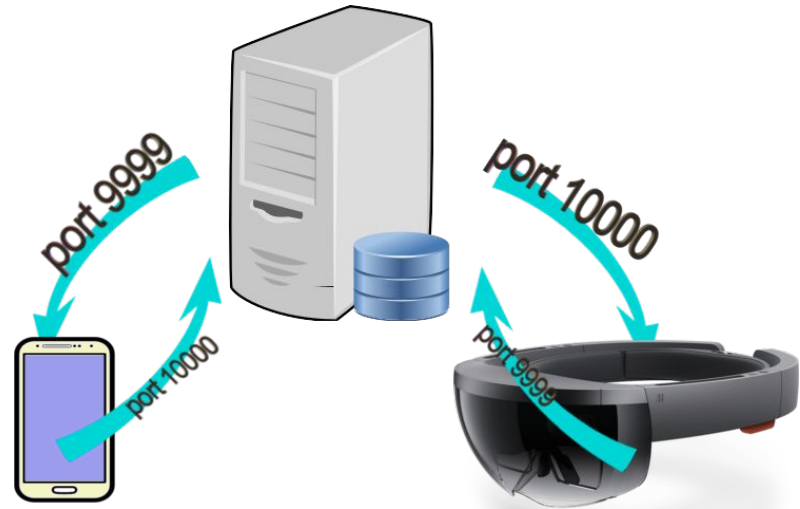
SYSTEM

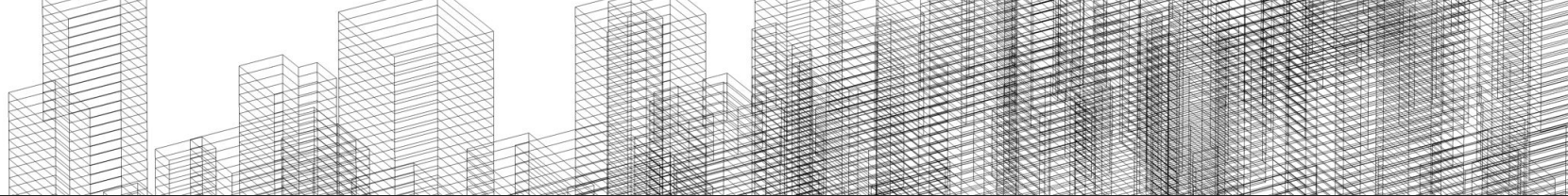
- ❖ Hololens
- ❖ Unity 2017.3.0f3, C# scripts
- ❖ Visual studio 2017
- ❖ Smartphone



APPLICATION OVERVIEW

The system consists of an application for the Hololens(UWP), an application for a smartphone(Android) and a Server software (Windows), the communication between the components is carried out using a UDP protocol, through ports: 10000,9999.





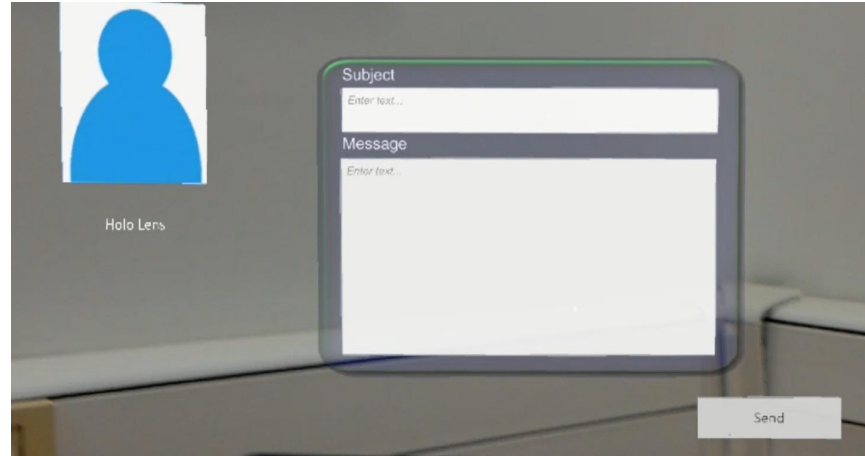
FEATURES

Read And Send Messages

Once a user logs on to the Hololens App, he can view messages, delete messages and leave messages to other users.

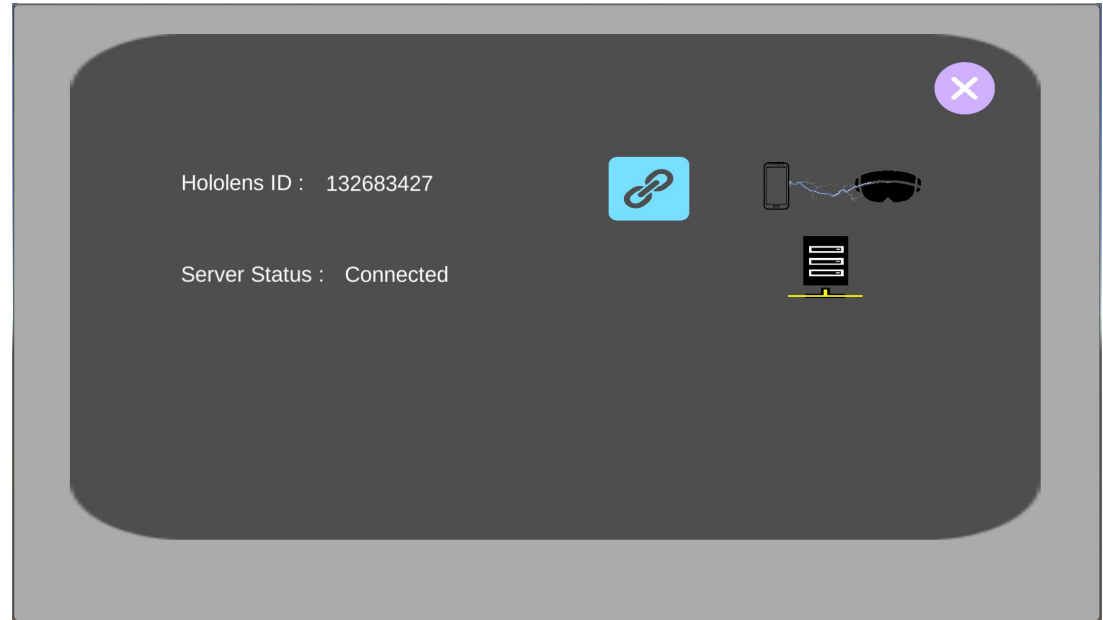
When a user wants to send a message to another user, he needs to scan the QR code of that user. Using a "scan" command, the user can ask the Hololens app to scan a QR code to identify the user he wants to send a message to.

QR identification code execution via Open Source library called ZXing, this library customized to UWP.



Connect with your smartphone

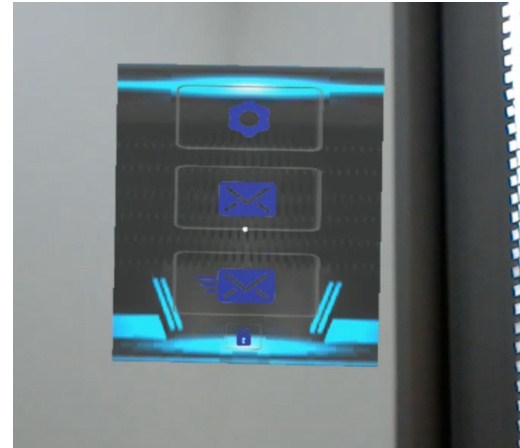
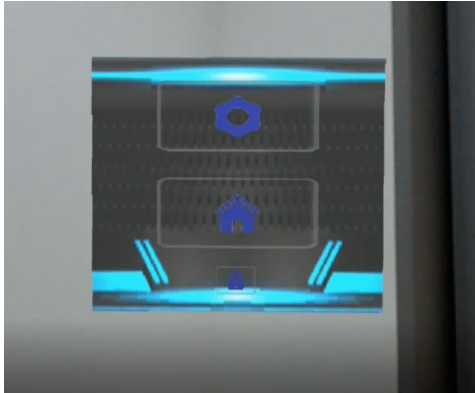
So the user can choose to connect to the Hololens app by registering with a special ID that can be found in the Hololens app, With this option, he can select a text box in the Hololens app and type the text and update it via the smartphone application.



Menu

In the Hololens app there is a dynamic user interface menu that accompanies the user while using the application and allows him to navigate between the various options of the application.

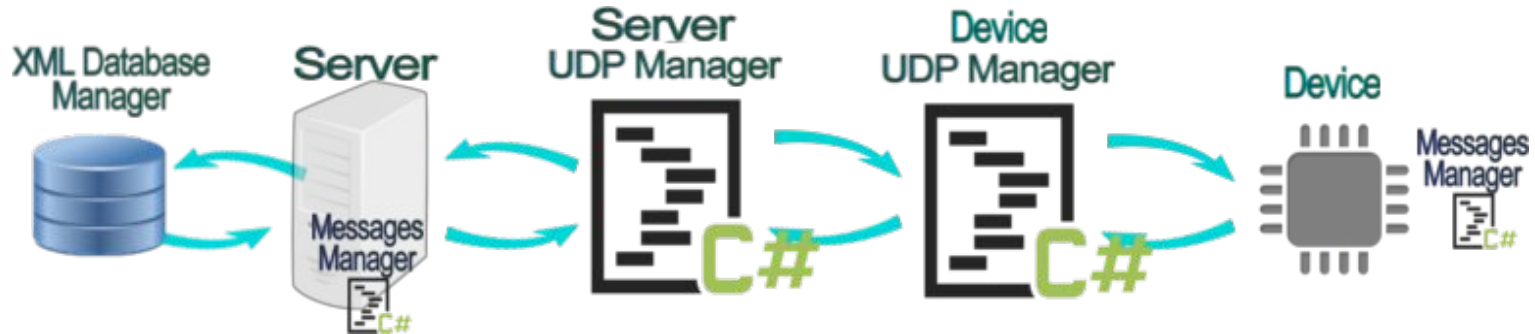
The basic idea is to make it as easy to get to tools as possible, with the user's gaze being the center of the action. If they look at an object, the usable functions for that object appear within close proximity to the gaze cursor. Of course, head locking is a no-no, so we want to avoid that.



Network

Each system component has a UDP Manager script that manages and sends incoming information, UDP Manager not responsible for information processing or responsible for information content. Its function is to listen to the ports and send information through them.

When information is received, it goes to Network Messages Manager script, which is responsible for assembling network messages and assemble them like a puzzle.



[Project Website](#)

[Project Documentation](#)

[Project Video](#)

