6) 3D IoT - 3D recognition initiating IoT data for industrial training; **Realmax Oy**, Finland

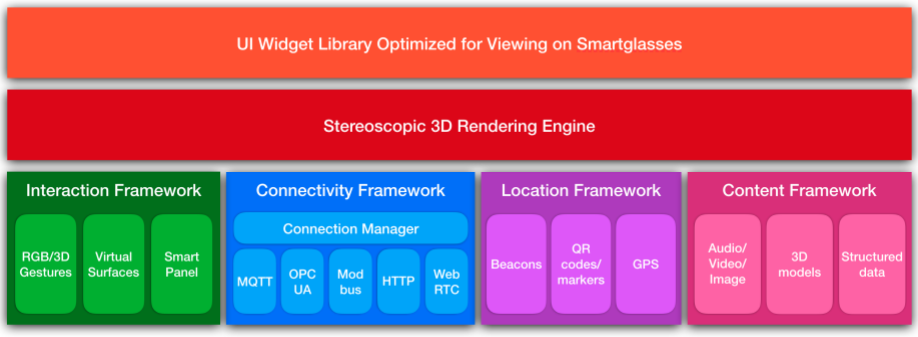
EXPERIMENT DESCRIPTION

Realmax Finland, within the MIDIH experiment, developed a technical design and system demo for "3D recognition initiating IoT data for industrial training". The experiment focused primarily on the development of "Connected Industrial Worker".
We were able to utilize artificial reality, 3D and remote connectivity/mentoring technologies to support the modern industrial worker. Use case evolves around the maintenance management of the industrial site and equipment, "Smart Factory". From the architectural point of view, both "Data-in-Motion" and "Data-at-Rest" are utilized in this project in a meaningful manner.

TECHNICAL IMPACT

Developing a UI version for the HMT-1, voice controlled wearable smart device, with the following features:

1. Enabling HMT-1 voice commands for the application control.
2. Scanning QR codes to recognize industrial facility and/or machines.
3. Receiving live IoT data from the factory servers and rendering it to HMT-1 display, based on the QR code scanned. For a while, the data will remain at nominal values, then it starts going off-track and an alert is generated.
4. Launching an external remote mentoring application.
5. After remote mentoring session, the new parameters are set.
6. Once set up of new parameters is finished, the IoT data returns to nominal values.



ECONOMICAL/BUSINESS IMPACT

The few leading Industry 4.0 businesses are already investing vastly in augmented reality and enhanced MRO (maintenance, repair, and operations) practices, while conservative industries still observe the action.
Augmented reality in maintenance will play a very important role in the industrial sector. It has a direct influence on performance, productivity and product quality and, also profit and reputation.
Augmented reality allows users to enhance their field of view with the real-time digital information. However, it is also a valuable solution for many of the challenges which surround the industrial maintenance and operations.

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