



Mixed-Reality technology

The term holomedicine stands for the fusion of hologram and medicine. The innovative approach extends reality with additional holograms that are based on real medical data and can map and move them in space as a three-dimensional model. This approach promises the medical technology industry new breakthroughs and a wide range of application fields. Currently, holomedicine is primarily used as a simulator in surgical training, but the first operations on living humans have already been performed using mixed reality technology.

But how can this work? The holomedical application requires software and mixed reality glasses to make a three-dimensional model visible in space.

The user is shown their real environment through the AR glasses and also the 3D scan based on information from a computed tomography (CT) or magnetic resonance imaging (MRI) scan. This 3D scan is projected onto the glasses display, giving the user free access to a comprehensive, spatial understanding of the scan and more structural details. In addition, the three-dimensional anatomical image can be placed anywhere in space and streamed live so that it can be used simultaneously by other doctors or for lecture purposes.

VSI HoloMedicine by apoQlar offers a mixed reality telemedicine network as well as a platform for patient education and a collaboration platform within a care centre. The platform solutions can be easily integrated into everyday clinical workflows. The interoperable communication system also ensures secure data storage and transmission as well as 3D DICOM and STL display.

Three-dimensional visualisation with automatic image enhancement allows diagnostics to be optimised and operations to be performed more precisely. Surgeons receive exact information about physiological and anatomical structures, which means that the individual characteristics of each patient can be better taken into account.

INNOVATIVE TECHNOLOGICAL APPROACH

- ♦ **Company:**
apoQlar & Microsoft
- ♦ **Technological base:**
AR glasses + software
- ♦ **Product:**
VSI HoloMedicine with
MS HoloLens
- ♦ **Field of application:**
Simulations &
surgical operations &
medical lectures /
training
- ♦ **Location of operation:**
Practices and care
centres in the fields of
radiology, orthopaedics,
cardiology, surgery, ENT
medicine and dental
practices
- ♦ **Website**
[https://apoqlar.com/
collaborative-medi-
cal-education/](https://apoqlar.com/collaborative-medical-education/)

Advantages of holomedicine:

- ♦ Targeted focus on organs by masking out the possibility of other organs
- ♦ Real-time data can be superimposed
- ♦ Live tracking of operations
- ♦ OP planning
- ♦ Simplified explanation of the examination results to the patient
- ♦ Reduces cognitive overload during complex operations

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