

Holographic Telepresence

Objective: to offer a telepresence system in which the volumetric video of a remote assistant is projected using augmented reality techniques.

Description: In a meeting room, participants with HoloLens 2 augmented reality glasses will be able to access the telepresence service and have the participation of the remote assistant as a three-dimensional volumetric figure. The figure can be viewed from all angles. In addition, the hologram can be viewed on a tablet, where the application can also be used to play with different angles and sizes of the figure.

Holographic telepresence has two fundamental uses: on the one hand, due to the realistic sensation of presence, it is useful for presentations of celebrities, football players, or the launch of a new record, film, made by a singer, actor, etc. On the other hand, being able to interact in real time, it also has various uses, for example in the fashion sector (remote fittings), for guided medical rehabilitation, the training of a new tool in the medical or industrial sector, or the presentation of a novel design due to its geometry or finish.

For the pilot, a volumetric capture room will be deployed, with twelve Intel RealSense depth cameras, which will capture the 3D body of a person in real time, and will generate, using Evercoast software, a volumetric video that will be sent through the 5G network due to its high upload bandwidth, to the Telepresence platform. On the other hand, the operator's Edge Computing deploys the Telepresence platform that will serve this volumetric content to the attendees of the virtual meeting, through its consumption in HoloLens 2 glasses or Tablet.

The project was presented on Monday 28 February at the Mobile World Congress 2022 through an interview with Olympic badminton champion Carolina Marín, who was 600 km away in the capture room in the Telefónica District, while through augmented reality and 5G she appeared on stage as a complete volumetric figure with whom she could interact and talk in real time.

[Press release](#)

[Video report](#)

[MWC'22 Carolina Marín interview](#)

