

Master's Thesis

Natural User Interface for Volume Rendering on HoloLens

Microsoft's HoloLens is the world's first head-mounted display capable of creating convincingly real-looking 3D objects in a user's field of view. We are using HoloLens to visualise live 3D ultrasound data using ray casting. A major difficulty is to create a natural way of interacting with the volume. This includes moving, rotating, selecting cutting planes and – most challenging – adjusting the transfer function. We are looking for a talented student interested in developing a natural user interface (NUI) to deal with this problem, possibly using gestures, voice control or classic user interface elements.

Tasks

You will develop ideas for possible user interfaces (concept art, sketches, etc.) and evaluate them with potential users, including computer scientists and medical personnel. The most promising solution should then be implemented prototypically and its functionality demonstrated.

Qualification

- Graphical skills and the willingness to work in a team
- Interest in medical technology
- Programming skills (C#, Universal Windows Platform, Unity 3D, etc.)



Interested? Contact Dr. Verónica García Vázquez at garcia vazquez@rob.uni-luebeck.de