Team Schmalstieg
Institute of Computer Graphics and Vision
Graz University of Technology

Augmented Reality for Prenatal Ultrasound Navigation

Ultrasound Device

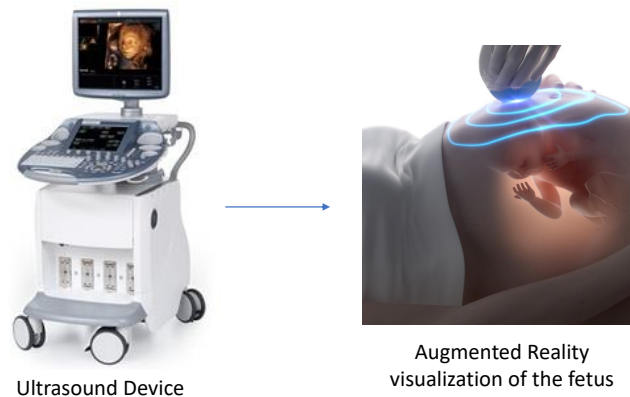Augmented Reality
visualization of the fetus

Figure 1: The aim of this project is to develop an augmented reality application to support prenatal ultrasound.

Description:

The aim of this interdisciplinary project between computer science and medicine is the development of a device to support ultrasound (US) examinations of expectant mothers using augmented reality (AR). The AR device should enable a real time, three dimensional "X-ray vision" of the fetus directly on the area of investigation. As a first step, a software framework to enable communication between the ultrasound machine, a host computer which decodes the ultrasound data, and a mobile device to display the data should be developed.

Objective:

- Help with hardware setup of the system

- Develop an application which receives, decodes and renders US scans on a host PC

- Develop an application for displaying these US scans on mobile devices

Qualifications:

- basic programming skills

- Experience in the development of mobile applications for iOS / Android / UWP or experience with Unity

- Experience with networking applications / sockets

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