



UNIVERSITY OF WYOMING

Wyoming Technology Transfer and Research Products Center



## 3D Hologram of Medical Images Using Augmented Device for Physician-Physician- Patient Interactions

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**Patent Status:**

Patent Pending

### Description of Technology

Medical imaging technology like MRIs, CT-Scans, and Ultrasounds are great at allowing physicians to diagnose what is wrong with a patient. The current problem with these technologies is that they all render in 2D images. This can limit the ability of physicians to understand both the anatomical and the functional aspects of a target area and also limits the communication between the main physician to either the patient or to other physicians.

Researchers at the University of Wyoming have created a software that renders a patient's MRI, CT-Scan, and Ultrasound images in 3D using an augmented reality device such as the Microsoft Hololens. This makes it easier for physicians to communicate with their patient about his/her medical diagnosis. It also allows physicians to work with other physicians on a diagnosis remotely. With this software, a physician can draw and annotate on the hologram and then share them with other physicians for better communication. The 3D holograms will be easier for patients to understand and are easier for physicians to analyze compared to a 2D image.

### Applications

This technology can be used to make a 2D image from an MRI, CT-Scan, or Ultrasound into a 3D hologram. This can make communication easier between a physician and their patient, or between physicians so they can work on a diagnosis together.

### Features & Benefits

- Creates 3D holograms from MRI, CT-Scan, and Ultrasound images
- Physicians can annotate and draw on the holograms for better explanation
- Holograms can be shared between physicians remotely

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