Market Opportunity:
The Augmented Reality (AR) and Virtual Reality (VR) market is projected to reach at least $28 billion by 2020. The healthcare sector is slated to be one of the first enterprise markets to be transformed by this technology, with its principal application being multi-sensory instructional learning. One such application will be tools that can assist in correcting segmentation errors in brain MRI. Current approaches require a user to manually correct data on a computer screen, which is very time consuming, requires considerable expertise, and leads to variability between experts.

USC Solution:
USC researchers have developed Virtual Reality software to correct segmentation errors in brain MRI data. This provides users with a more efficient, intuitive, and engaging tool during segmentation correction. Future plans include developing and incorporating this software into AR platforms – which would provide even more benefits in the new and promising market.

Value Proposition
- Saves time and energy during imaging analysis
- User-friendly and little training required
- Highly accurate imaging and usability allows better correction
- Potential AR application to allow multi-tasking/collaboration
- Potential to provide an early AR application in neurological clinical education and surgeon training

Keywords:
Virtual reality, augmented reality, mixed reality, neurology, oncology, brain MRI scan, magnetic resonance imaging, MRI segmentation, medical imaging, medical education, medical application, automatic volume segmentation, motion tracking

Applications
- Pre-operative planning
- Image-guided surgery

Stage of Development
- Prototyped and tested
- Available for non-exclusive research license

Intellectual Property
Status:
Protected by copyright

Key Publication:
Submitted for Publication

Contact Information
Moumita Chakraborty
Licensing Associate
(213) 821-6067
moumitac@usc.edu

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