Using web-based computer graphics to teach surgery

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Abstract

Computer graphics and virtual reality promises to deliver an attractive opportunity for training in complex surgical procedures. However typically the solutions proposed are expensive, dedicated installations. In this paper we consider whether simple web-based solutions can offer a cost-effective alternative. Two applications of web-based surgical simulations are described — one in neurosurgery, the other in vascular surgery. Both exploit VRML, the ISO standard for 3D Internet graphics, and JAVA.

Article Outline

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2. Virtual environments for surgical training
3. A web-based approach to surgical training
4. Neurosurgery
5. Vascular surgery
6. Critical issues: interaction, visual realism and haptic feedback
7. Conclusions
Acknowledgements
References