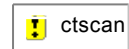


Surgical Simulation



Minimally Invasive Surgery requires the surgeon to operate on a 3-D image by way of a 2-D device (a monitor). Often the surgeon has little means for preoperative imaging (i.e. CT scans) and most only describe the anatomy in two dimensions. The surgeon must translate these images into a 3D workspace. Current surgical simulation devices are available, but none are based on patient specific data, but rather a model of an ideal person.

Patient specific virtual reality laparoscopic simulation would allow the user to practice realistic surgical procedures based each patients specific anatomy. The advantages to this type of technology are numerous. Surgeons could visualize the patient's internal organs without incisions. Procedures could be planned and practiced before the actual surgery. This Virtual Environment could also be used to train new surgeons.

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