

Problem Statement

September 25, 2017

1 MOTIVATION

Robot assisted minimally invasive surgery (RAMIS) is used for many medical procedures. It allows for precision surgery and lowers the risk of injury while reducing recovery time for patients (source here). Traditionally the surgical performance has been measured in terms of the surgeons visuo-motor skills and dexterity, however a shift in the conceptualization of competencies is emerging in new literature (Source book p 83). One of these competencies include teamwork in the operational theatre (source Hayley et al). A study concluded that 80% of incidents in anaesthesia related errors were preventable 75% of these were due to human error (source 1739559).

Something with the human factors during surgery to state the problems

Something that has already been done to improve nurses in this context (tjek zotero)

Something with the introduction of training simulations to introduce the technology and its capabilities

Something with introduction of VR (maybe in other profesional, high risk contexts) to support eh above

Something with VR and teamwork to prove that it can work maybe

1.1 PROBLEM STATEMENT

Based on the information above and with a focus on the impact of recent VR technology, this paper aims to answer the following problem statement:

"How can virtual reality be utilized to improve the teamwork and performance of the operating team?"

1.2 SUCCESS CRITERIA

These will be made after we have had a group discussion.

Suggestions:

- have a working prototype - have a way of measuring teamwork - have a way of measuring performance - have a procedure for testing the above and plan statistical test