

Operation Observation

October 23, 2017

1 PURPOSE

The purpose of the observation is to observe the situation which must be simulated. This is done to make an assessment of what must be included in the design.

2 METHOD

To analyse and retrieve information in the matter the main method used is doing a contextual inquiry. This includes the different analysing models and interviews. A group of three was at Aalborg University Hospital to observe a robot assisted surgery performed on a person.

The observation team acquired both pictures, notes and some video from the operation. Which describes the tasks and teamwork necessary to perform such an operation. From this different models used in contextual inquiries are made. The models used are a physical model showing the layout of the room, a sequence model to clarify the work needed to be done and an artefact model showing what is used together with the robot.

3 RESULTS

The physical model shows the layout of the entire operation room and where the nurses move. This gives an overview of the operation room and how each nurse acts in the room. The figure includes doors and their movement as well as cabinets. The layout is shown in Figure 3.1.

This enables the development and design of the room when creating the simulation.

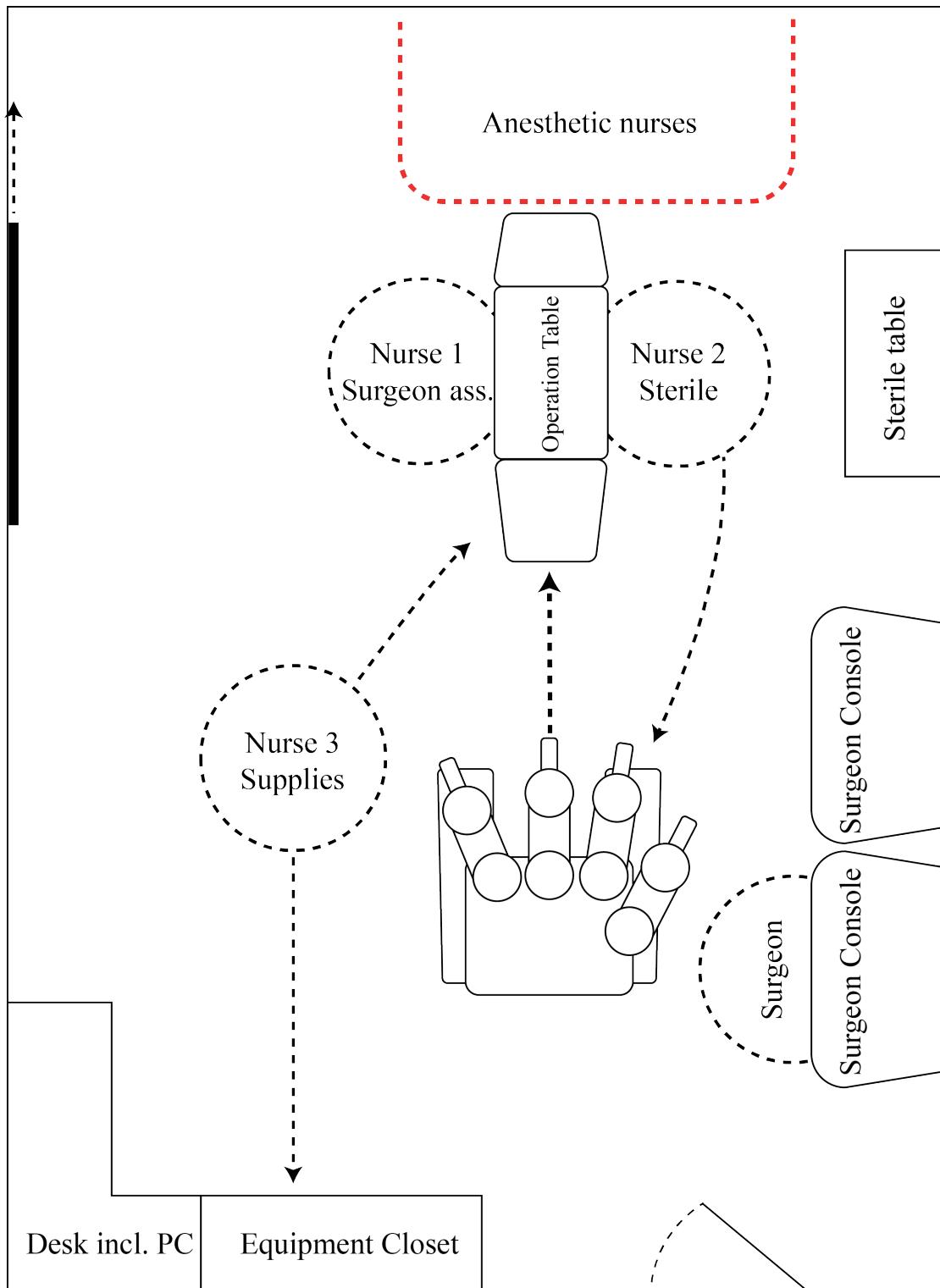


Figure 3.1: The physical model showing the layout of the operation room.

The sequence model is made from the handed out paper "Teoretisk og praktisk undervisning ved robotten som følgende". The sequence model is shown in Figure 3.2.

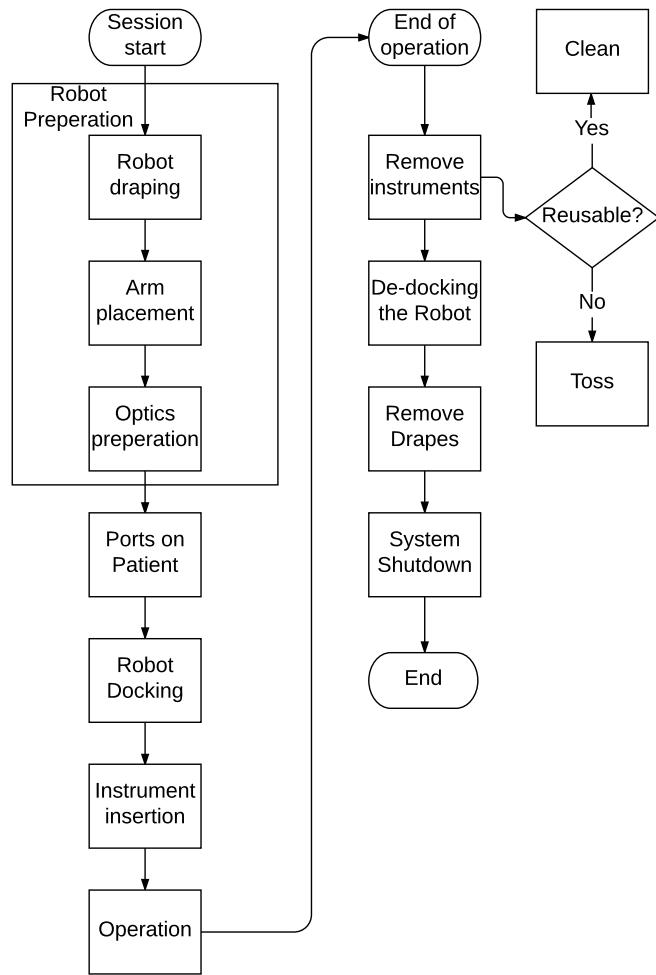
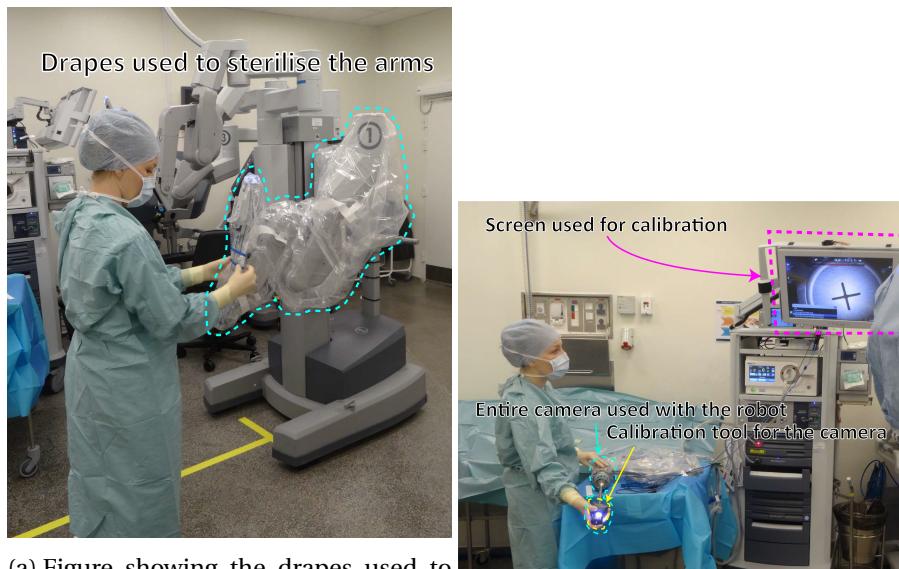


Figure 3.2: Flowchart of the sequence model showing how the operation preparation and de-brief is carried out.

The sequence model describes the actions necessary to both start the operation and to end it. This enables the design of the tasks which should be included in the simulation and their order of appearance to the user. The model shown is for an operation without any complications which could lead to de-docking of the robot in an emergency.

The Artefact models are shown in Figure 3.3. These are created from pictures taken at the observation of the operation. Figure 3.3a shows the drapes used to cover the arms of the robot sterilising the robot. Figure 3.3b shows the camera also known as the endoscope and calibration equipment.



(a) Figure showing the drapes used to cover the arms of the robot, sterilising them. (b) Figure showing the camera used with the robot and a calibration tool.

Figure 3.3: The figures show the artefacts used with the robot.

4 CONCLUSION