

Cleopatra — A Wearable Surgical Camera

Summary

Vanderbilt researchers have developed a wearable surgical camera designed for use over the top of a surgical gown. The system, nicknamed Cleopatra, is designed specifically for the OR, maintains a consistent view of the operative field during a procedure, and is capable of supporting video, audio, lighting, and other technology in the immediate vicinity of the surgical field.

Addressed Need

This device overcomes challenges of stability and obstruction that occur using existing surgical cameras (e.g., room camera, light camera, head mounted) to film open surgical procedures. The present technology can be used for quality control, education, and/or to supplement patient records. This device can also facilitate large scale data analysis of surgical activity.

Unique Features

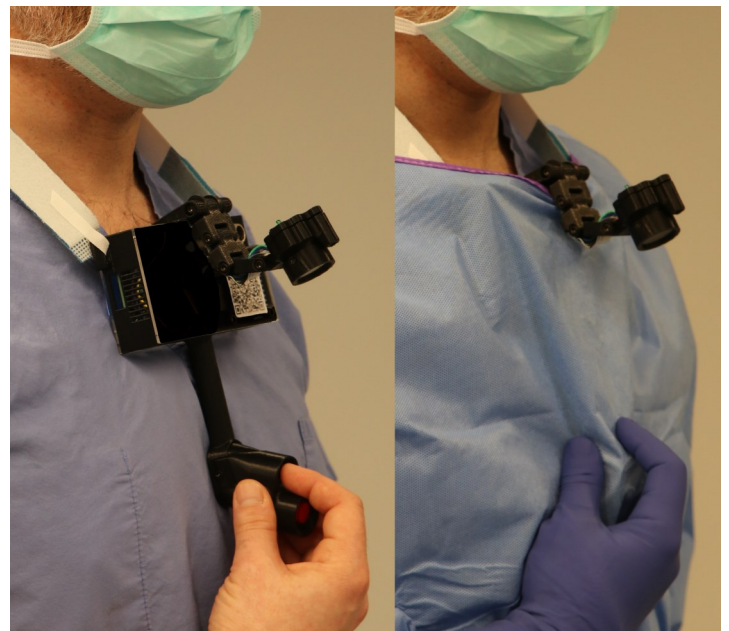
- Designed to be worn by a gowned operator in a sterile, OR environment
- Mounting location promotes stable, non-obstructed, point-of-view video capture
- Focal length selected for near/ stereoscopic/ manual tasks
- Adjustable aiming of the camera
- Controls are accessible through the gown to maintain sterility (see figure)

Technology Development Status

A working prototype of this technology has been developed and tested. Further refinement of the system is ongoing and includes improvements to optics, stability, wearability, and overall performance. Some planned enhancements include auto-stability, UI enhancements, cleanability, broadcasting, and audio-recording.

Intellectual Property Status

A patent application has been filed.



Vanderbilt researchers have created a wearable surgical camera that is controlled through a surgical gown for use in sterile OR environments.

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