The utilization of the Internet and IoT in medical practice can take many shapes and forms. Ranging from the awe-inspiring telesurgical procedures [1,2] to complex AI machine learning applications that aid in medical decision making [3], to a simple email containing a preoperative CT scan, the Internet of Surgical Things (IoST) is here to stay. A representative example of the IoST is a smart ingestible sensor (pill) that is activated after being swallowed [4], “travels” in the body through the colon and sends data to outer devices such as computers and smartphones when it detects a threat for cancer. Such a device can be used instead of colonoscopy for people who cannot obtain a colonoscopy due to psychological and physiological problems

Looking into our specified research questions, some examples of IoT applications would be, for instance, a network comprising a preoperative imaging modality (e.g., MRI scanner), a processing station, and software within a specialized robot or specialized augmented reality glasses that ultimately aim to facilitate a procedure by superimposing real-time image guidance

Finally, telemonitoring is carried out by an interconnected series of sensor-bearing devices that centripetally transmit patient data, either directly to the physician, or to a dedicated data-gathering station

telementoring is the performance of live surgery on-site, with the live assistance of a more experienced surgeon, located off-site [9–25]. In order to achieve the latter, a network of connected cameras, microphones, screens and computers is necessary [25–31]. A fundamental outline of the network and crosstalk required is depicted in Figure

Diagram

Description automatically generated

Material list:

- Real time Surgery scanner: CT scan(o-arm real time), ultrasonic (realtime)

- Stereo camera: V120: Trio (€4000)

- Optical see-through display + support

- Projecting screen + processing unit

- Cloud server