

ABSTRACT

A MULTI-ARM SURGICAL ROBOTIC SYSTEM FOR TELE-SURGERY

The invention relates to a multi-arm surgical robotic system (100) for tele-surgery comprising a local system (102), a remote system (104), a private network (N1), and a public network (N2). The local system (102) comprises of a plurality of robotic arms (106a, 106b, 106c, 106d, 106e) connected to an endoscopic camera (C), and the remaining robotic arms are each connected to one of a surgical robotic instruments (110, 112, 114, 116), a local surgeon console (118) coupled to a master controller (136) to provide a control input to the plurality of robotic arms (106a, 106b, 106c, 106d, 106e), and a conferencing system (138). The remote system (104) comprises of a remote surgeon console (140) coupled to a master controller (158) and a conferencing system (160), which is operably connected to the conferencing system (138) via the public network (N2). The communication between the local surgeon console (118) and the remote surgeon console (140) via the private network (N1), enables the remote surgeon (154) to control and monitor the robotic arms (106a, 106b, 106c, 106d, 106e), allowing the remote surgeon (154) to perform a robotic surgical procedure remotely. In case of failure of the private network (N1), control can be shifted from the remote surgeon console (140) to the local surgeon console (118), allowing control of the robotic surgical procedure.

Figure 1