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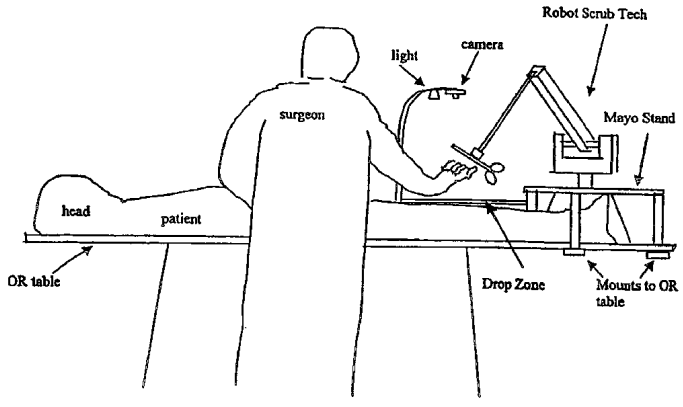
[Continued on next page]

(54) Title: ROBOTIC SCRUB NURSE

OVERALL VIEW OF THE ROBOTIC SCRUB TECH IN ACTION, SHOWING SPATIAL AND FUNCTIONAL RELATIONSHIP TO SURGEON AND PATIENT



(57) Abstract: A robotic system (1), and corresponding method, performs the function of a human scrub technician in an operating room. The present invention is directed to a device, and associated method for using the device, which performs one, or more, of the following functions: instrument identification, instrument localization, instrument handling, interaction with a human, and integration of functions through a cognitive system. A method for movement of the device comprises the steps of modeling the arm of the robot to create a model comprising elements of finite mass joined by junctions, using an algorithm to calculate results of the effect of applying force to the elements of the model, using attractive, replusive and postural forces in the algorithm, and using the results of the model to direct motion of the device.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G05B 19/00
US CL : 700/245, 258

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 700/245, 258

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
WEST

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
IEEE, INTERNET

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,762,458 A (WANG et al.) 9 June 1998 (9.06.1998), see entire document	1-27
Y	US 6,001,108 A (WANG et al.) 14 December 1999 (14.12.1999), see entiere document	1-27
Y,P	US 2003/0013949 A1 (MOLL et al.) 16 January 2003 (16.01.2003), see entire document	1-27
Y	Mack, Minimally Invasive and Robotic Surgery, 2001, Internet, pp. 568-572, see entire document	1-27

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed

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