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(54) **Position tracking and imaging system for use in medical applications using a reference unit secured to a patients head**

(57) A system is disclosed for monitoring the position of a medical instrument with respect to a patient's body and for displaying at least one of a plurality of pre-recorded images of said body responsive to the position of said medical instrument. In one embodiment the system includes a reference unit secured from movement with respect to the patient's body such that said reference unit is substantially immobile with respect to a target operation site. The system also includes a remote unit for attachment to the medical instrument. A field generator may be associated with one of the units for generating a position characteristic field in an area including the target operation site. One or more field sensors may be associated with either of the units responsive to the presence of the position characteristic field for producing one or more sensor output signals representative of said sensed field. A position detector in communication with the sensor output signal produces position data representative of the position of the remote unit with respect to the reference unit. An output display in communication with the position detector displays at least one of the prerecorded images responsive to the position data.

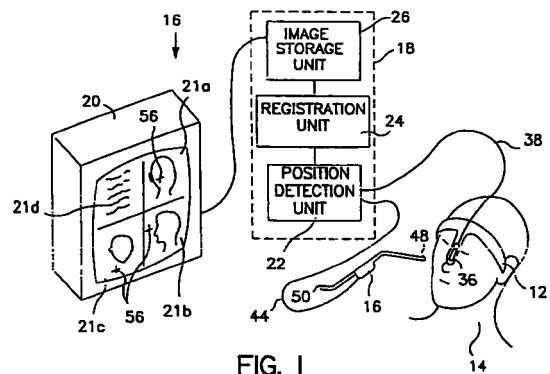


FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 99 11 4366

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 19 April 2000	Examiner Raybould, B
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