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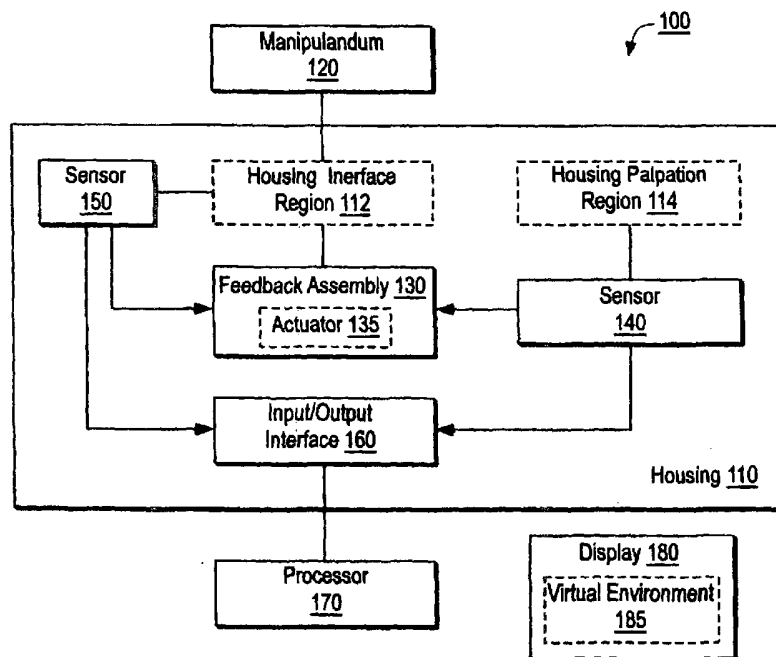
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[Continued on next page]

(54) Title: METHODS AND APPARATUS FOR PALPATION SIMULATION



(57) Abstract: An apparatus comprises a manipulandum, a housing, a sensor and an actuator. The housing has a palpation region spaced apart from the manipulandum. The sensor is coupled to the palpation region of the housing. The sensor is configured to send a signal based on a palpation of the palpation region of the housing. The actuator is coupled to the manipulandum. The actuator is configured to send haptic output to the manipulandum based on the signal.



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**B. FIELDS SEARCHED**  
Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 980 037 A (MITSUBISHI DENKI KABUSHIKI KAISHA) 16 February 2000 (2000-02-16) paragraphs '0012! - '0019! paragraphs '0021! - '0048! figures 1-11	1-23
X	WO 97/19440 A (IMMERSION HUMAN INTERFACE CORPORATION) 29 May 1997 (1997-05-29) page 10, line 2 - page 14, line 15 figures 1,2	1-23
A	WO 01/18617 A (RUTGERS, THE STATE OF UNIVERSITY OF NEW JERSEY) 15 March 2001 (2001-03-15) page 4, lines 15-21 page 5, line 30 - page 7, line 4 page 12, line 27 - page 19, line 13 figures 8-12	1,6,9, 13-15, 17,21

Further documents are listed in the continuation of box C.  Patent family members are listed in annex.

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Date of the actual completion of the international search  5 December 2005	Date of mailing of the international search report  12/12/2005
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 2003/045815 A1 (OMBRELLARO MARK P) 6 March 2003 (2003-03-06)</p> <p>paragraphs '0060! - '0093! paragraphs '0104! - '0123! figures 5-8,11-15</p> <p style="text-align: center;">-----</p>	<p>1,6,9, 13-15, 17,21</p>
A	<p>US 2003/036714 A1 (KUTH RAINER) 20 February 2003 (2003-02-20)</p> <p>the whole document</p> <p style="text-align: center;">-----</p>	<p>1,6,9, 13-15, 17,21</p>

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