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(72) Inventors; and

(75) Inventors/Applicants (for US only): **BIGGS, Silmon, James** [US/US]; 18410 Montevue Road, Los Gatos, CA 95033 (US). **HITCHCOCK, Roger** [US/US]; 1614 Graff Avenue, San Leandro, CA 94577 (US).(74) Agents: **CHEUNG, Noland J.** et al.; Bayer Materials LLC, 100 Bayer Road, Pittsburgh, PA 15205-9741 (US).

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[Continued on next page]

(54) Title: HAPTIC APPARATUS AND TECHNIQUES FOR QUANTIFYING CAPABILITY THEREOF

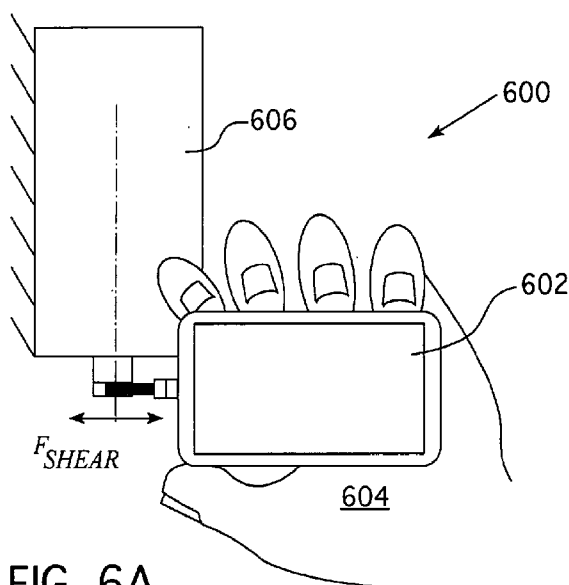


FIG. 6A

(57) Abstract: A computer-implemented method of quantifying the capability of a haptic system. The haptic system comprises an actuator. The computer comprises a processor, a memory, and an input/output interface for receiving and transmitting information to and from the processor. The computer provides an environment for simulating the mechanics of the haptic system, determining the performance of the haptic system, and determining a user sensation produced by the haptic system in response to an input to the haptic system. In accordance with the computer-implemented method, an input command is received by a mechanical system module that simulates a haptic system where the input command represents an input pressure applied to the haptic system. A displacement is produced by the mechanical system module in response to the input command. The displacement is received by an intensity perception module. The displacement is mapped to a sensation experienced by a user by the intensity perception module and the sensation experienced by the user in response to the input command is produced.



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