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(54) **HAPTIC STYLUS UTILIZING AN ELECTROACTIVE POLYMER**

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(57) **ABSTRACT**

Haptic feedback interface devices using electroactive polymer (EAP) actuators to provide haptic sensations. A haptic feedback interface device is in communication with a host computer and includes a sensor device that detects the manipulation of the interface device by the user and an electroactive polymer actuator responsive to input signals and operative to output a force to the user caused by motion of the actuator. The output force provides a haptic sensation to the user. In an embodiment, a stylus including a body having a first end and a second end opposite from the first end, a moveable member coupled to the body and capable of being in contact with a user's hand; and an electro active polymer actuator coupled to the moveable member, wherein the electroactive polymer moves the moveable member from a first position to a second position with respect to the body upon being activated.

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**Related U.S. Application Data**

(63) Continuation of application No. 11/711,400, filed on Feb. 26, 2007, now Pat. No. 7,339,572, which is a continuation of application No. 09/866,385, filed on May 24, 2001, now Pat. No. 7,196,688.

