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*The Boston Globe***BRINGING TOUCH TO VIRTUAL WORLDS****Author(s):** MARK BAARD **Date:** August 7, 2006 **Page:** D2 **Section:** Business

Virtual worlds such as Second Life offer bored and lonely romantics a shot at parallel existences that are more stimulating than their workaday lives. They also present the unlucky a chance to fall in love with their perfect mate.

One thing you can't do in Second Life, however, is feel the cashmere on your date's sweater, or the smack across the face that tells you the gesture was unwelcome. It's called haptics, and it's the next frontier in virtual reality and immersive computing: adding the sense of touch to online interactions. Visitors to **SIGGRAPH** this week in Boston got to check out a prototype haptic device, the Fingertip Digitizer from the University at Buffalo, which has a thimble-like metal tip through which you can sense and control virtual objects.

"They said it was the most intuitive interface they had seen for art and design work," said Thenkurussi Kesavadas, director of UB's Virtual Reality Lab, who created the Fingertip Digitizer with UB mechanical engineer Young-Seok Kim.

The Fingertip Digitizer has a force sensor, an accelerometer, and a motion tracker, so you can feel "resistance" from objects that you "touch" on the screen, and manipulate them with your hand and finger movements (all without actually touching the screen).

Kesavadas sees applications for the Fingertip Digitizer as a medical diagnostics device and video-gaming controller, and as an interface for people with motor control problems that prevent them from using a keyboard and mouse effectively. He said commercial versions of the Fingertip Digitizer may be available in two years, as the costs of its components come down.

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