

# Touch and **Feel**

Koç University Robotics and Mechatronics Laboratory anticipates that the use of vibrotactile feedback as an additional information channel in the touch screens of mobile phones, touch pads, tablet PCs, kiosks, and large displays will result in a new interaction paradigm, and enable novel applications.

Mobile phones, touch pads, tablet PCs, kiosks and large displays are getting increasingly widespread. Nevertheless, our sensory interaction with these devices occurs largely through traditional means of interaction that primarily use the visual and auditory information channels. However, visual and auditory channels are already highly overloaded. Therefore, there is a need for supporting interaction methods that can utilize additional channels of information. Since we naturally use our hands to interact with the devices mentioned above and it is known that our fingers are sensitive to the amplitude, duration and frequency of a vibrotactile stimulus, we believe that some of the information can be easily transmitted to our brain through vibrotactile haptic feedback. We anticipate that the use of vibrotactile feedback as an additional information channel in the touch screens of mobile phones, touch pads, tablet PCs, kiosks, and large displays will result in a new interaction paradigm, and enable novel applications. The potential application areas of the proposed technology include games, entertainment, interfaces for children, blind, and deaf, internet-based businesses, and many more.

Robotics & Mechatronics Laboratory: <http://rml.ku.edu.tr>

*Imagine that you receive haptic feedback from the touch screen of your cell phone while dialing a number, scrolling down a document, flipping your rolodex, or exploring the surface of a blue-jean that you purchase from Internet. Imagine that a web-user is playing an interactive board game and receives frictional force feedback as she/he strokes his finger on the screen to tilt the board or your child feels the hair of a dog displayed on the screen.*



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