

〈シンポジウム II〉

『感覚から香粧品の価値を考える』

触覚を可視化する・共有する

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Visualization and Sharing of Haptic Sensation

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Abstract

In this paper, a novel method for preserving and reproducing human haptic sensation based on real-world haptic technology is described. Real-world haptic technology makes it possible to preserve and reproduce human motion using a paired master and slave system. Because it is possible to preserve motion information based on position trajectory and force input, future human support technology that will facilitate haptic data acquisition, physical representation, and tele-communication will be developed. Once human motions are preserved, it will be possible to process them for various applications. For example, it is possible to visualize the haptic data using frequency analyses such as Fourier transformation, wavelet transformation, etc. Visualization of haptic data represents how much force is applied by a human. It helps understanding the evaluation of skills of human side and/or surface roughness of environmental side. In addition, real-world haptics can reproduce haptic data as physical force. As a result, the temporal and spatial coupling of perception and action can be attained. This type of physical extension technology based on haptics will be important for the future of human support in our society.

Key words: haptics, bilateral control, motion-copying system, haptograph, 4D-reality.