

Pattern Adaptive and Finger Image-guided Keypad Interface for In-vehicle Information Systems

Sang-Ho Kim, Kosuke Sekiyama, Toshio Fukuda
Department of Micro-Nano Systems Engineering
Nagoya University, Furo-cho Chikusa-ku
Nagoya, Japan

Emails: kim@robo.mein.nagoya-u.ac.jp, sekiyama@mein.nagoya-u.ac.jp,
fukuda@mein.nagoya-u.ac.jp

Abstract- In this paper we propose a pattern adaptive keypad interface for in-vehicle information system. The keypad interface recommends the estimated input sequence to fit the user's preference based on individual model of operation pattern. Pattern (shape) of button switches corresponding to the estimated input sequence is actively reformed. Button switches are displayed tactilely and visually. Finger image is shown on the monitor in real-time in order to guide input operation on the tactile input device. To confirm the effect of the keypad interface, experiments are performed comparing with a touch screen on which pattern (shape) of buttons switch is unchanged.