

(12) **United States Patent**  
**Matsuzawa et al.**

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(54) **INPUT DEVICE, INPUT METHOD, AND COMPUTER PROGRAM FOR INPUTTING CHARACTERS, NUMBERS, OR SYMBOLS BY USING AN ON-SCREEN KEYBOARD**

(58) **Field of Classification Search**  
CPC ..... G06F 3/048; G06F 3/04886; G06F 3/02; G06F 3/041; G06F 3/0237; G06F 3/0238  
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See application file for complete search history.

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(56) **References Cited**

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U.S. PATENT DOCUMENTS

5,581,243 A \* 12/1996 Ouellette et al. .... 345/173  
6,944,472 B1 9/2005 Ishigami

(Continued)

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FOREIGN PATENT DOCUMENTS

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 187 days.

CN 101593033 12/2009  
JP 07-295720 11/1995

(Continued)

OTHER PUBLICATIONS

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(30) **Foreign Application Priority Data**

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(57) **ABSTRACT**

An input control unit includes: a keyboard display unit configured to display a keyboard that shows a set of a plurality of characters or symbols that can be input on a screen and receive a user's selection of a character or a symbol so as to enter the character or the symbol received from the user on a mobile terminal; an input receiving unit configured to receive the character or the symbol selected by the user from among the plurality of characters or symbols; and a screen control unit configured to change a priority of displaying the keyboard screen if an operation is received from a rear touch panel provided on the rear face of a mobile terminal.

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**4 Claims, 16 Drawing Sheets**

(52) **U.S. Cl.**  
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