

EXHIBIT 4



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(12) **United States Patent**
Knaven

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(54) **METHOD, SYSTEM, APPARATUS AND COMPUTER-READABLE MEDIA FOR DIRECTING INPUT ASSOCIATED WITH KEYBOARD-TYPE DEVICE**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1360 days.

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(21) Appl. No.: **11/036,267**

Don Hopkins, "A Description of Pie Menus" (<http://catalog.com/hopkins/piemenus/PieMenuDescription.html>).

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G06F 3/02 (2006.01)
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(52) **U.S. Cl.**
USPC **345/168; 345/2.1; 715/773**

(58) **Field of Classification Search**
USPC 345/168-172, 2.1; 715/773
See application file for complete search history.

(57) **ABSTRACT**

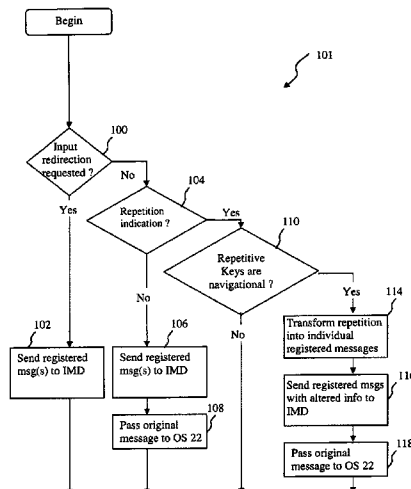
In one aspect of the present invention a computer-implemented method is provided of processing input key events associated with user input received from a keyboard-type device, wherein the keyboard-type device selected from at least one of a keyboard and a keypad. In this aspect, input key events associated with a first process active within an operating system are received and monitored for a first predefined input key event associated with user selection of a first key of the keyboard-type device for at least a predetermined time period. In response to identifying the first predefined input key event, the input key events are redirected from the first process to a second process. The input key events are monitored for a second predefined input key event associated with further redirection of the input key events. In response to identifying the second predefined input key event, the input key events are redirected to the first process.

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53 Claims, 21 Drawing Sheets



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