[0031] **FIG. 11** is a block diagram illustrating an arrangement of registered expander processes, in accordance with the embodiment of the present invention shown in **FIG. 8**;

[0032] **FIG. 12** is a block diagram illustrating yet another embodiment of the invention;

[0033] **FIGS. 13 and 14** are flow diagrams illustrating the operation of an input management system and an input management director in accordance with another embodiment of the present invention;

[0034] **FIG. 15** is a flow diagram illustrating the operation of another variation of an input management director in accordance with another embodiment of the present invention;

[0035] FIGS. **16** to **20** are diagrams illustrating yet further aspects and variations in accordance with the present invention; and

[0036] FIGS. **21** to **25** are diagrams illustrating further aspects and variations associated with an enhanced keyboard-type device, in accordance with the present invention.

DETAILED DESCRIPTION

[0037] Reference will now be made in detail to implementations and embodiments of the invention, examples of which are illustrated in the accompanying drawings.

Introduction

[0038] Referring to **FIGS. 1 and 2**, in accordance with a first embodiment a computer-implemented input management system **20** is configured to process input key events associated with user input received by a personal computing device **10** from a keyboard-type device **14**. In the first embodiment, for illustration purposes, the personal computing device **10** is a laptop and the keyboard-type device **14** is a keyboard **14.1** (for example, a QWERTY-type keyboard). As discussed further below, however, many various types of personal computing devices and keyboard-type devices (including keyboards and keypads) can be used in connection with the present invention and the components described in the first embodiment are meant to be illustrative only.

[0039] The input management system **20** operates in association with a computer-implemented operating system **22**, which for the purposes of the first embodiment is Windows XP™. Both the input management system **20** and the operating system **22** are stored on and run on the personal computing device **10** in the first embodiment. In other embodiments, the personal computing device may be operative over a computer network with some or all of the operating system **22** located on a host computer server or other remote computing device. Similarly, the input management system **20** may be located on a remote computer server or other remote computing device and accessed remotely by a terminal-type unit or by another form of personal computing device (including personal computing device **10**).

[0040] The input management system **20** is configured to monitor a user input stream **24** associated with a first process **30** active within the operating system **22**. The user input stream **24** comprises codes representing input key events associated with user operation of the keyboard-type device **14**. As the user operates the keyboard-type device **14**, selecting and deselecting keys, the codes are received by the personal computing device **10** and identified as input key events by the operating system **22**.

[0041] The input management system **20** monitors the user input stream **24** for an occurrence of a first predefined input key event associated with user selection of a first key of the keyboard-type device **14** for at least a predetermined time period T_1. In the first embodiment, the input management system **20** comprises a monitoring module **28** configured to perform the monitoring of the user input stream **24**. In response to identifying the occurrence of the first predefined input key event, the input management system **20** is configured to redirect the user input stream **24** from the first process **30** to a second process **34**.

[0042] For the purposes of this specification, the term "process" means a computer-implemented process for completing a set of computer-implemented instructions in order to provide predetermined functionality to a user and which is receptive to user input. Such a process can be a computer program, including a software application, applet or the like, and can be either an independent program or it may be a program that provides certain functionality to a larger program.

Windows Applications

[0043] In the first embodiment, processes are represented by windows applications which are displayed on a graphical user interface. For illustration purposes, the first process **30** is a word processor application, more particularly Microsoft™ Word™, and the second process **34** is a predictive text entry system **34.1**. In the illustrated embodiment, the predictive text entry system **34.1** is an application configured to predict and retrieve predictive text completion candidates (or completion candidates) from a dictionary by determining which predictive text completion candidates in the dictionary are more likely to be the ones that the user is attempting to type based on the characters in the partial text entry generated by the user, as illustrated in co-owned U.S. patent application Ser. No. 10/399,560 (corresponding to PCT/CA01/01473, International Publication No. WO 02/33527 A2). Various forms of the predictive text entry system **34.1** may be used as illustrated in PCT/CA01/01473. Preferably, potential completion candidates retrieved by the predictive text entry system **34.1** are displayed in a searchable list and may be selected using the keyboard or a mouse or a combination of both the keyboard and the mouse. Other types of predictive text entry systems may be used in the present case. By way of example, other predictive text entry systems are illustrated in co-owned U.S. patent application Ser. No. 09/272,700 (PCT/CA00/000285, International Publication No. WO 00/57265).

[0044] As indicated above, the use of the word processor application as the first process **30** and the predictive text entry system **34.1** as the second process **34** are for illustration purposes. It will be appreciated that many other end-user processes may be used in substitution of a word processor and the predictive text entry system **34.1**. By way of example, the first process **30** can, in the alternative, be a spreadsheet, a browser, a database interface, an enterprise resource planning system, or some other form of process providing functionality to a user and receptive to user input in association with a keyboard-type device. In addition or in