



US006128012A

United States Patent [19]**Seidensticker, Jr. et al.**[11] **Patent Number:** **6,128,012**[45] **Date of Patent:** ***Oct. 3, 2000**

[54] **USER INTERFACE FOR A PORTABLE DATA MANAGEMENT DEVICE WITH LIMITED SIZE AND PROCESSING CAPABILITY**

5,760,776 6/1998 McGurrian et al. 345/353
5,790,115 8/1998 Pleyer et al. 345/341 X
5,812,117 9/1998 Moon 345/169
5,815,142 9/1998 Allard et al. 345/169 X

[75] Inventors: **Robert B. Seidensticker, Jr.**,
Woodinville; **Vinay Deo**, Bellevue;
Michael John O'Leary, Redmond, all
of Wash.

[73] Assignee: **Microsoft Corporation**, Redmond,
Wash.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: **08/826,542**

[22] Filed: **Apr. 3, 1997**

Related U.S. Application Data

[60] Provisional application No. 60/025,748, Sep. 19, 1996.

[51] **Int. Cl.⁷** **G06F 3/14**

[52] **U.S. Cl.** **345/336; 345/341**

[58] **Field of Search** 345/326-358,
345/123-125, 963, 973, 169

References Cited**U.S. PATENT DOCUMENTS**

4,862,390 8/1989 Weiner 345/352
5,295,241 3/1994 Eagen et al. 345/341 X
5,317,306 5/1994 Abraham et al. 345/124 X
5,384,579 1/1995 Nakasuji et al. 345/123
5,485,175 1/1996 Suzuki 345/353
5,495,566 2/1996 Kwatinetz 345/341
5,510,811 4/1996 Tobey et al. 345/341
5,563,631 10/1996 Masunaga 345/169
5,568,603 10/1996 Chen et al. 345/341
5,655,094 8/1997 Cline et al. 345/341
5,673,401 9/1997 Volk et al. 345/327
5,677,708 10/1997 Matthews, III et al. 345/123 X
5,689,668 11/1997 Beaudet et al. 345/353
5,689,669 11/1997 Lynch et al. 345/341 X
5,758,295 5/1998 Ahlberg et al. 345/353 X

OTHER PUBLICATIONS

Advanced Interface Design Guide, IBM Corp., 59-61, 63-72, Jun. 1989.

Cowart, "Mastering Windows 3.1", Sybex, Inc., pp. 18-20, 28-29, 266-267, 414-417, 836-838, 1993.

Microsoft Schedule + v7.0a, Microsoft Corp., screen dump pp. 1-13, 1996.

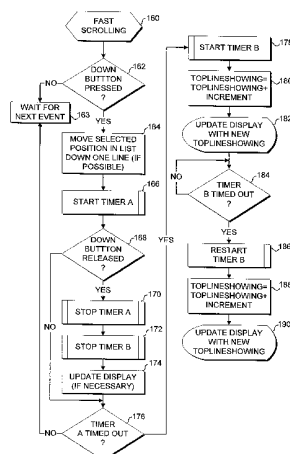
Cowart, "Mastering Windows 3.1", Sybex, pp. 268-269, 1993.

Primary Examiner—Steven Sax

Attorney, Agent, or Firm—Ronald M. Anderson

ABSTRACT

A user interface for a combination pager and personal information management (PIM) data device provides considerable versatility in accessing the data and in controlling how the data are displayed to the user. The user interface includes a display screen having only a few rows on which lines of data are displayed, and four control buttons, including an Up button, a Down button, an Action button, and a Back button. Since the device maintains data in a hierarchical directory structure and starts at the highest (root) level, the Action button is used to move to a lower level in the directory hierarchy, while the Back button is used to move back up to a higher level. In addition, the Action button is employed to initiate a selected function. If a line (or entry) of a list is above the top line displayed on the screen, an upwardly pointing arrowhead is displayed to the user adjacent the top line. Similarly, a downwardly pointing arrowhead is displayed if a line in the list is below the last line on the screen currently displayed. The user can select an application to execute in the root node of the hierarchy when the device is initially turned on, reset, or after a predefined time interval has elapsed. In addition, the user can selectively actuate a faster scroll rate to move up or down through a list that is relatively long. The format applied to data presented to the user in the display screen is user selectable.

28 Claims, 8 Drawing Sheets

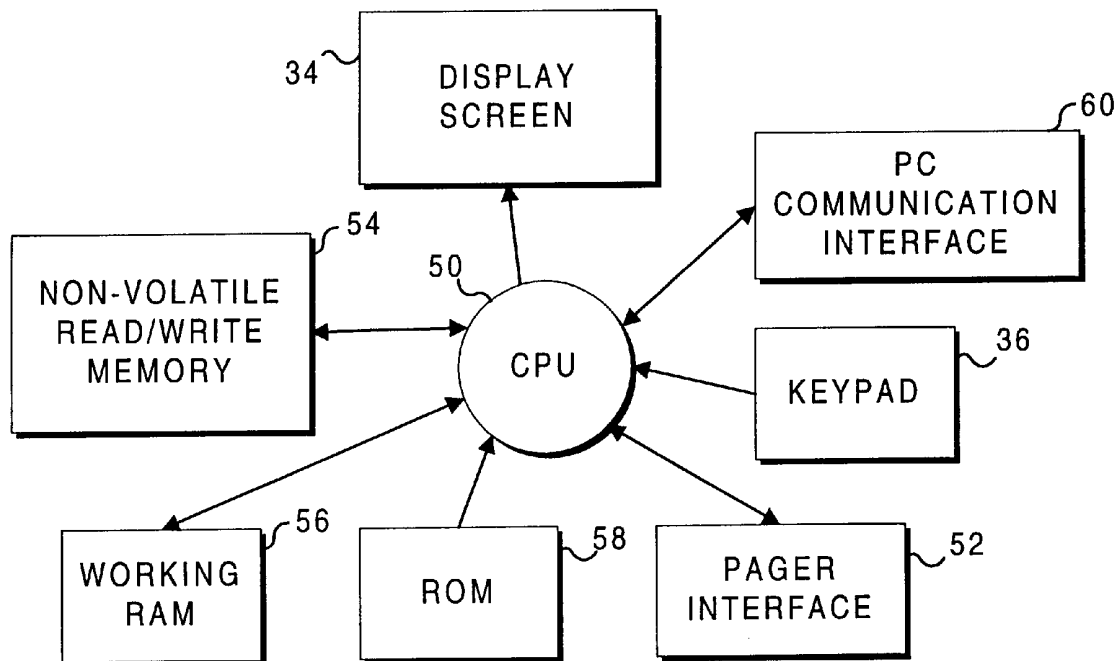
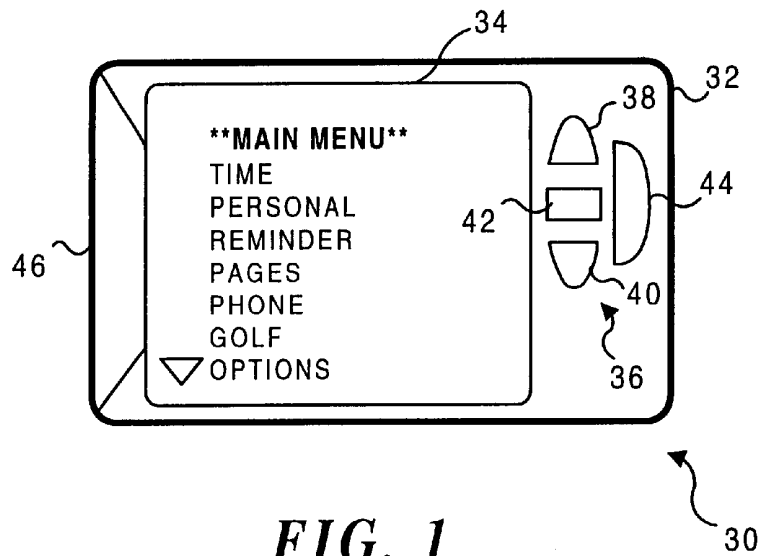
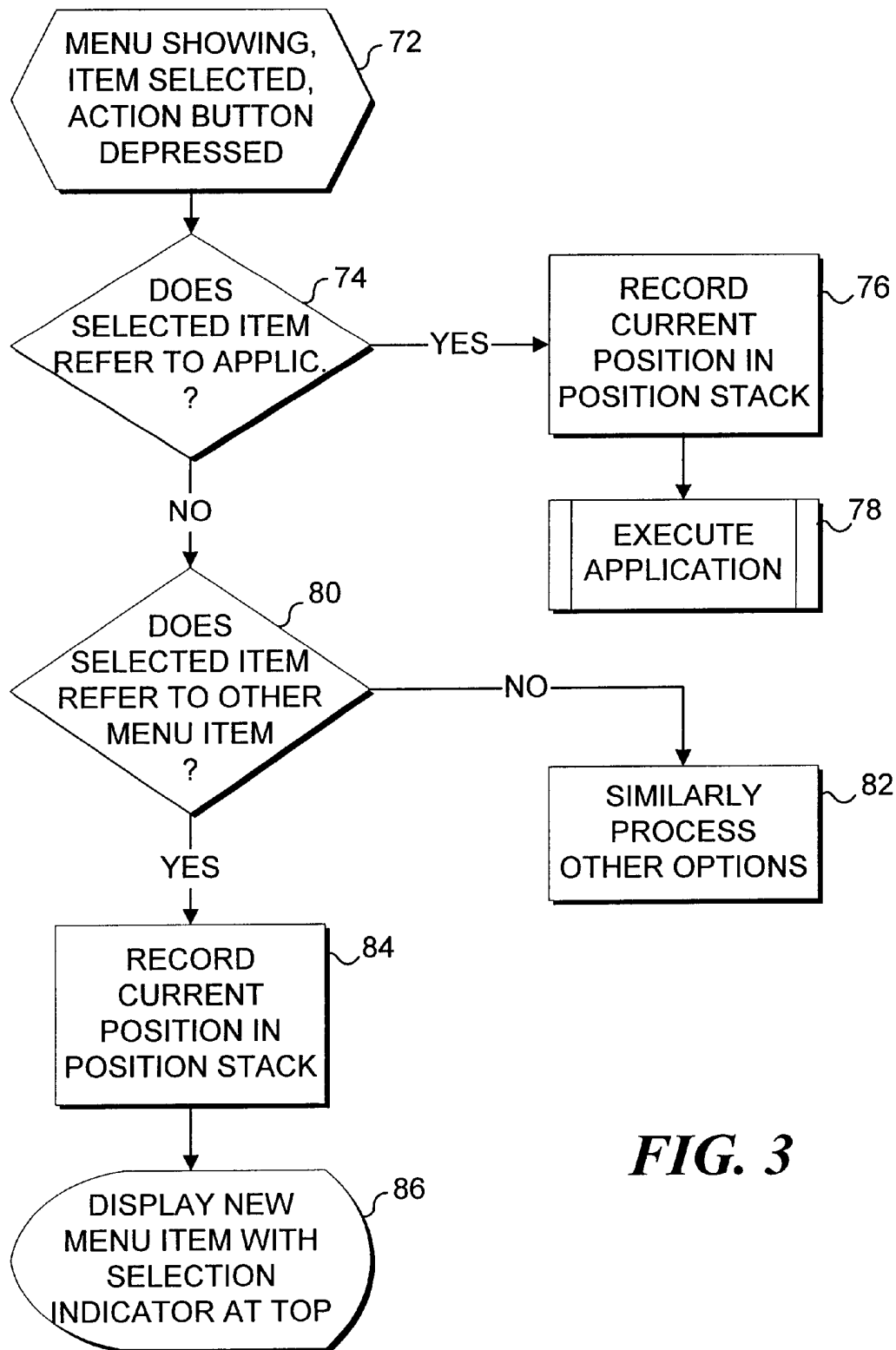
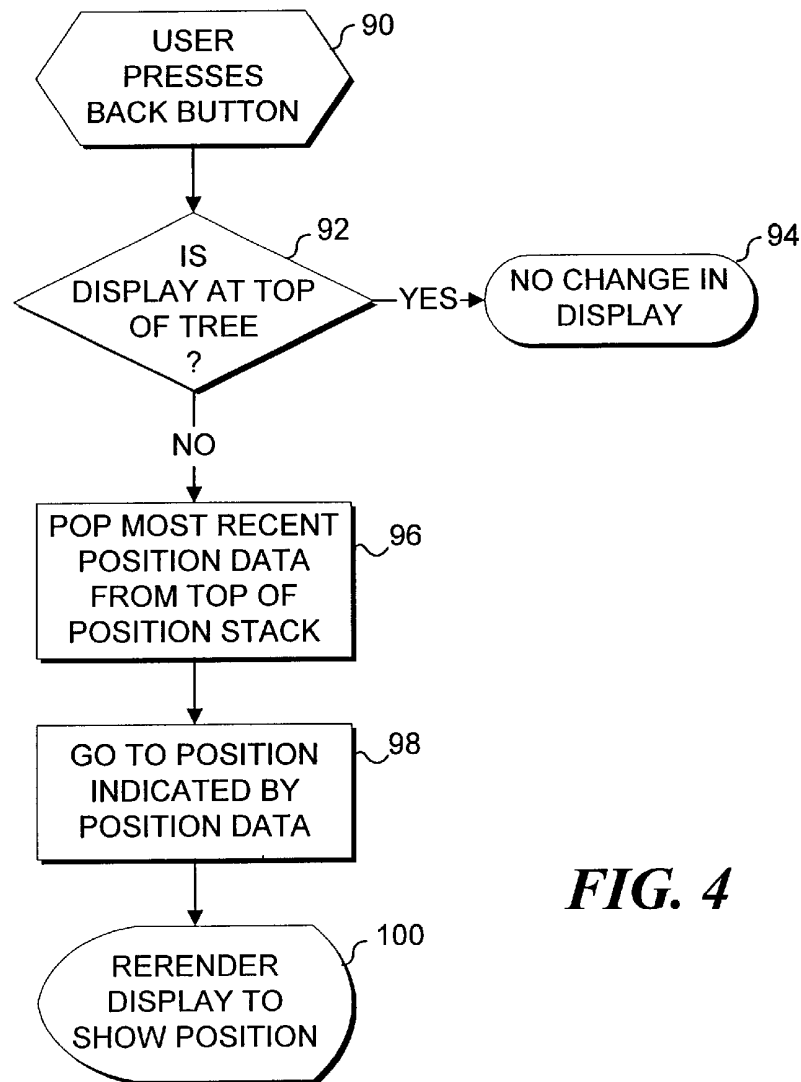
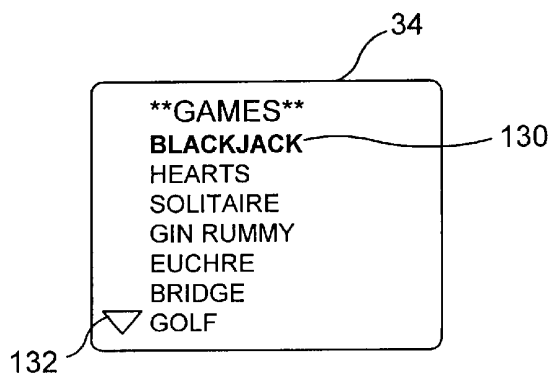
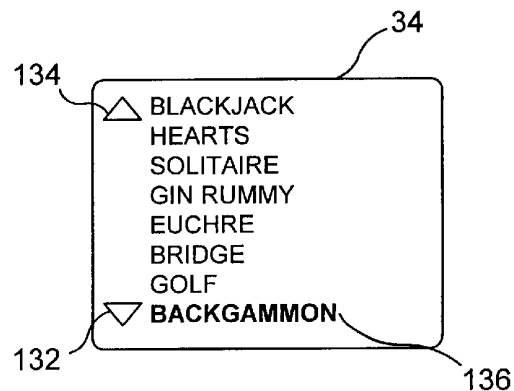
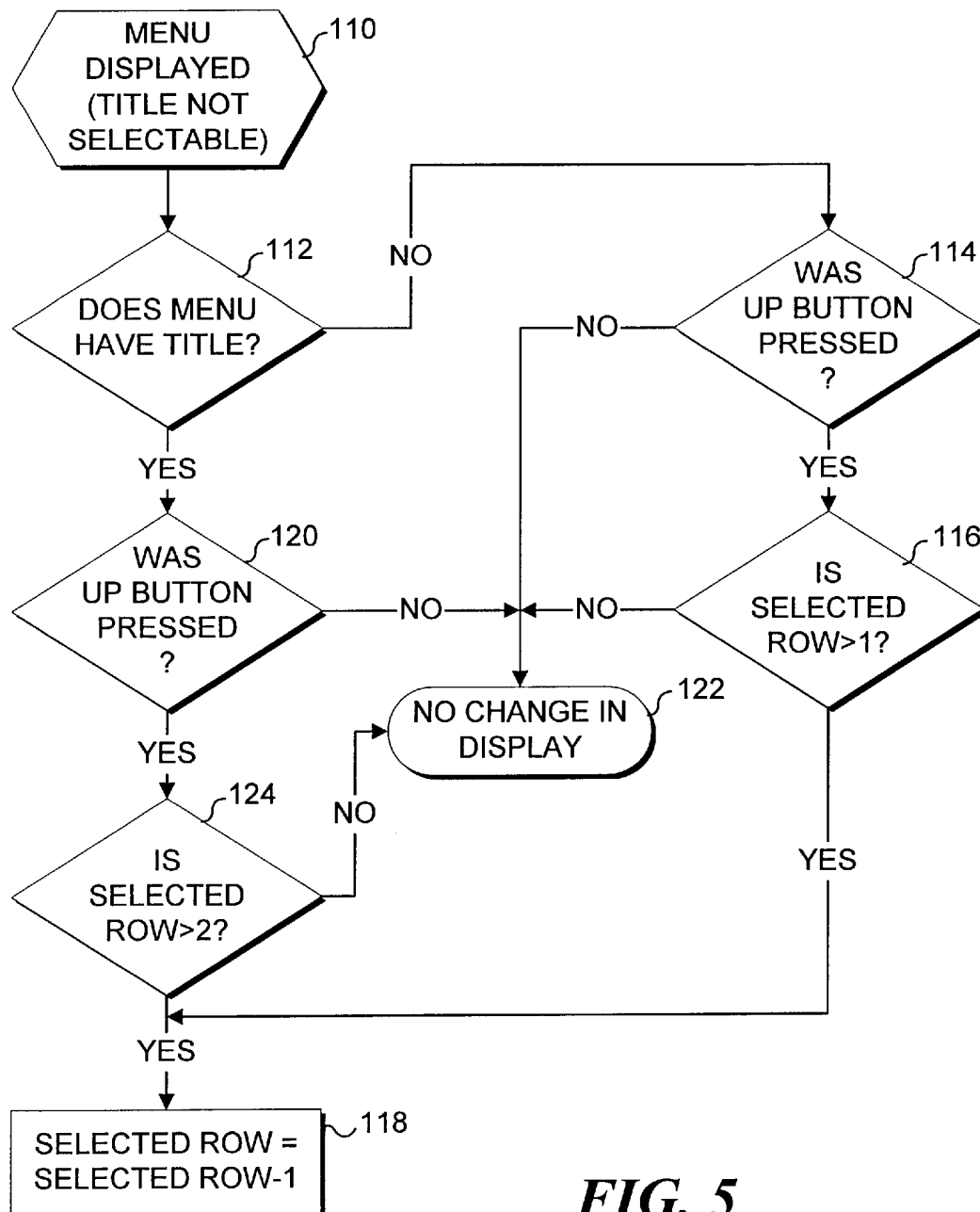


FIG. 2

**FIG. 3**

*FIG. 4**FIG. 6A**FIG. 6B*

**FIG. 5**

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.