

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

(10) **Patent No.:** **US 6,590,568 B1**
(45) **Date of Patent:** **Jul. 8, 2003**

(54) **TOUCH SCREEN DRAG AND DROP INPUT TECHNIQUE**

6,430,164 B1 * 8/2002 Jones et al. 370/313
6,433,801 B1 * 8/2002 Moon et al. 345/777

(75) Inventors: **Arto Astala**, Vantaa (FI); **Tapio Mansikkaniemi**, Espoo (FI)

* cited by examiner

(73) Assignee: **Nokia Corporation**, Espoo (FI)

Primary Examiner—Steven Saras
Assistant Examiner—Michael J Moyer
(74) *Attorney, Agent, or Firm*—Antonelli, Terry, Stout & Kraus, LLP

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 200 days.

(57) **ABSTRACT**

(21) Appl. No.: **09/714,939**

A method of and apparatus for dragging and dropping items displayed on a touch screen. In one embodiment, the item on the touch screen is touched with a pressure greater than a first predetermined pressure for a first predetermined period of time. The pressure on the item is then reduced, and the item is dragged with the reduced pressure to a second location at which the touch screen is touched with a pressure greater than a second predetermined pressure for a time duration greater than a second predetermined time period. In another embodiment, the item on the touch screen is touched with a pressure greater than a predetermined pressure for a first predetermined period of time, and then the touch screen is touched at a second location with a pressure greater than the predetermined pressure for a second predetermined period of time, less than the first predetermined period of time.

(22) Filed: **Nov. 20, 2000**

(51) **Int. Cl.**⁷ **G09G 5/00**; G09G 5/08

(52) **U.S. Cl.** **345/173**; 345/156; 345/157;
178/18.01

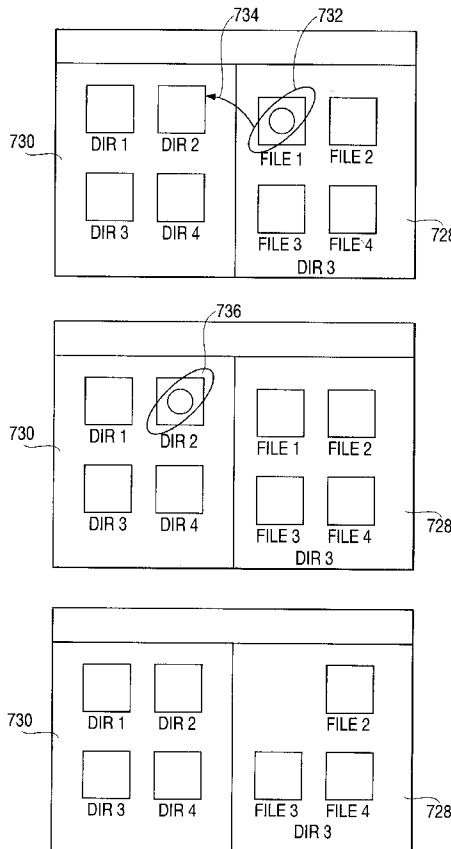
(58) **Field of Search** 345/156–179,
345/799, 856–857

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,327,161 A * 7/1994 Logan et al. 345/173
5,463,388 A * 10/1995 Boie et al. 345/174
5,673,066 A * 9/1997 Toda et al. 345/173
5,825,352 A * 10/1998 Bisset et al. 345/173
5,880,411 A * 3/1999 Gillespie et al. 178/18.01

24 Claims, 7 Drawing Sheets



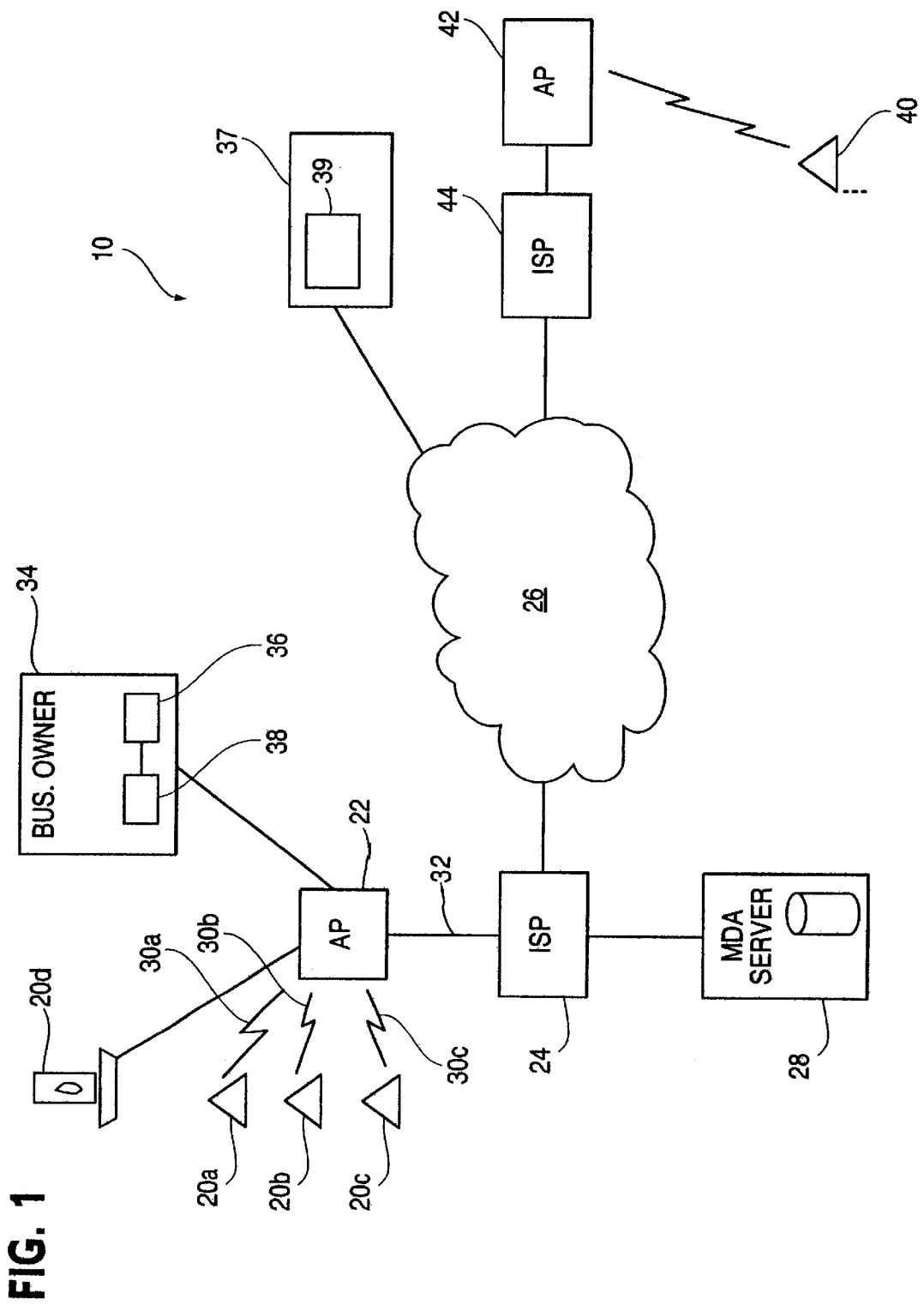


FIG. 1

FIG. 2

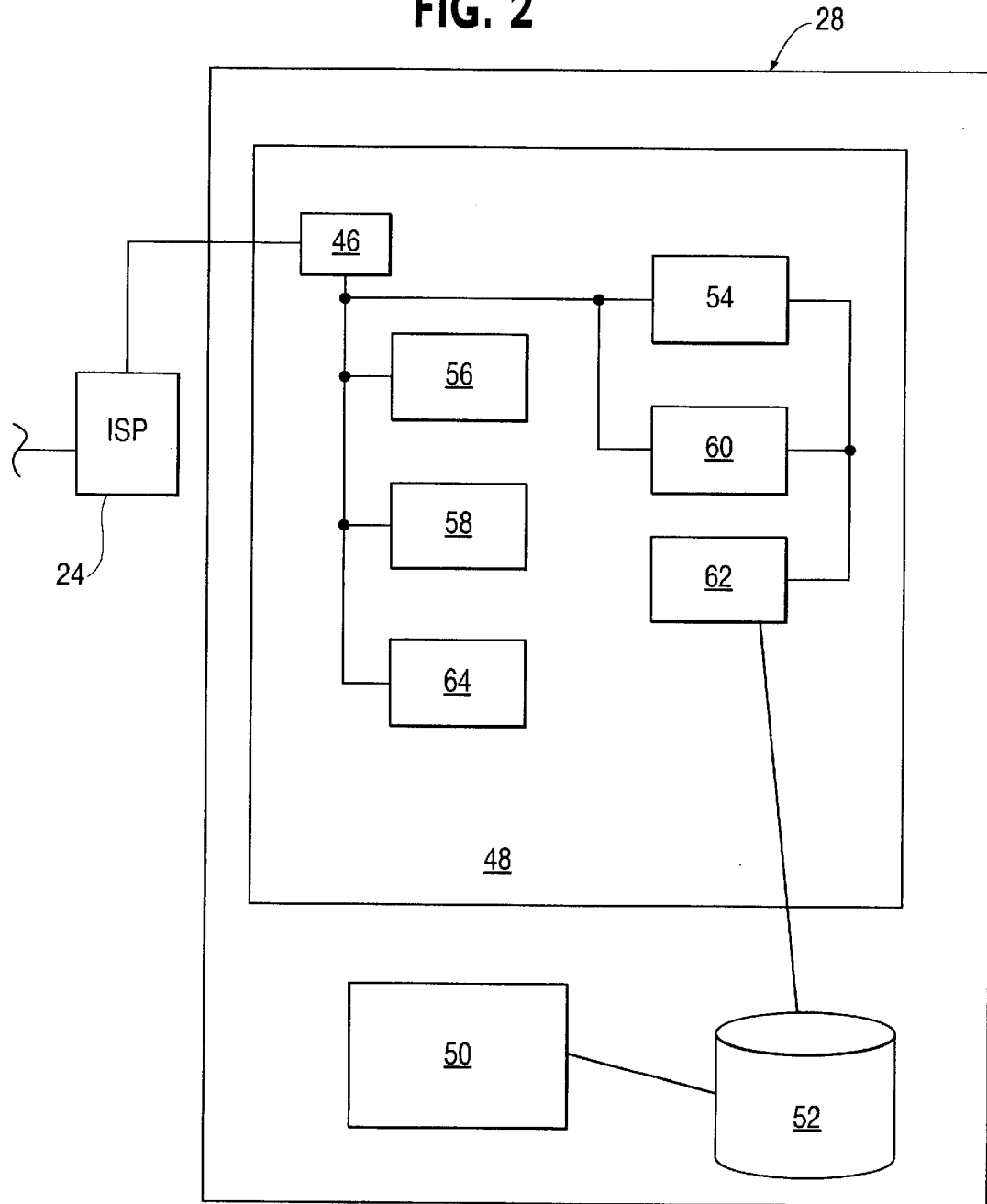


FIG. 3

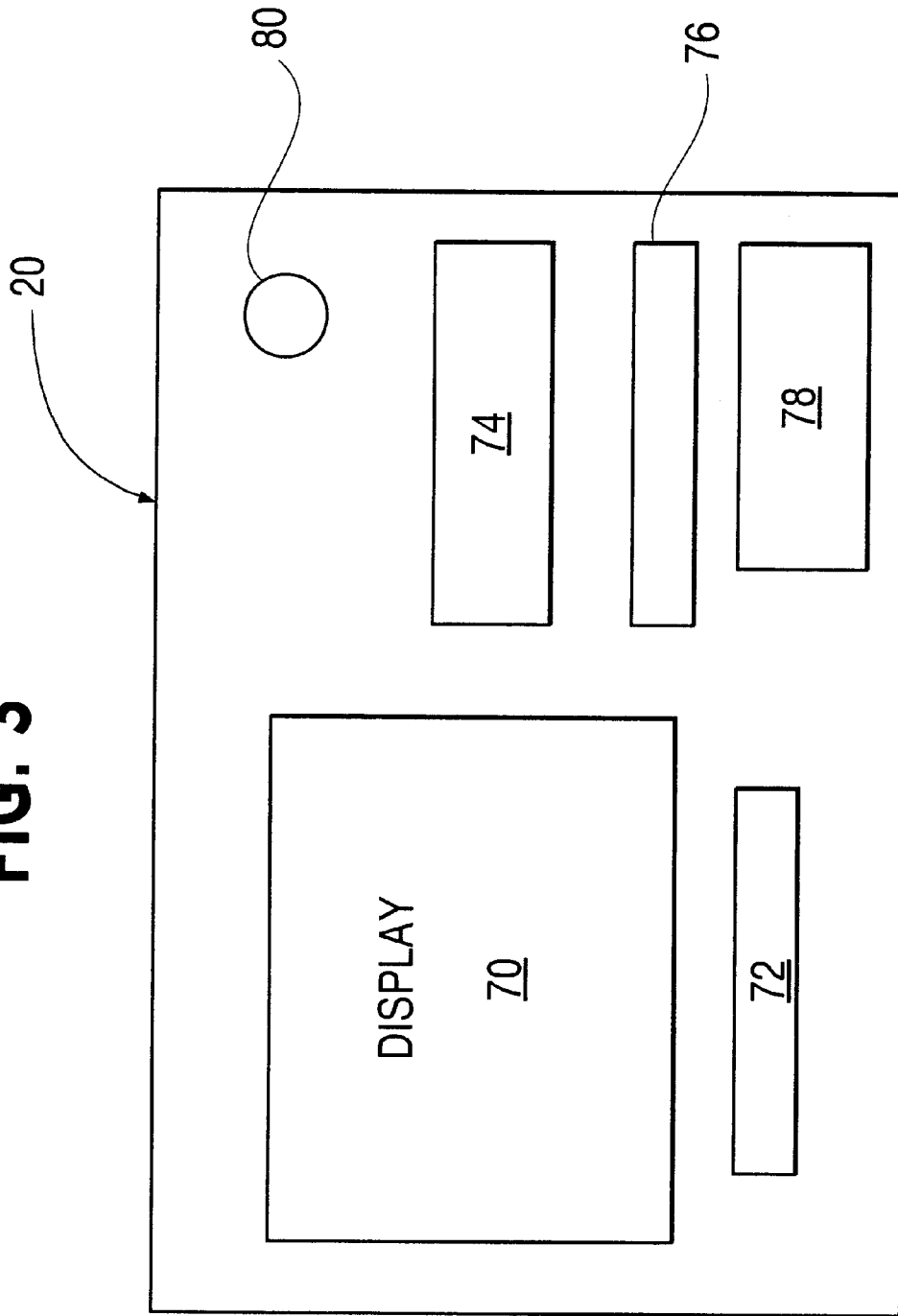
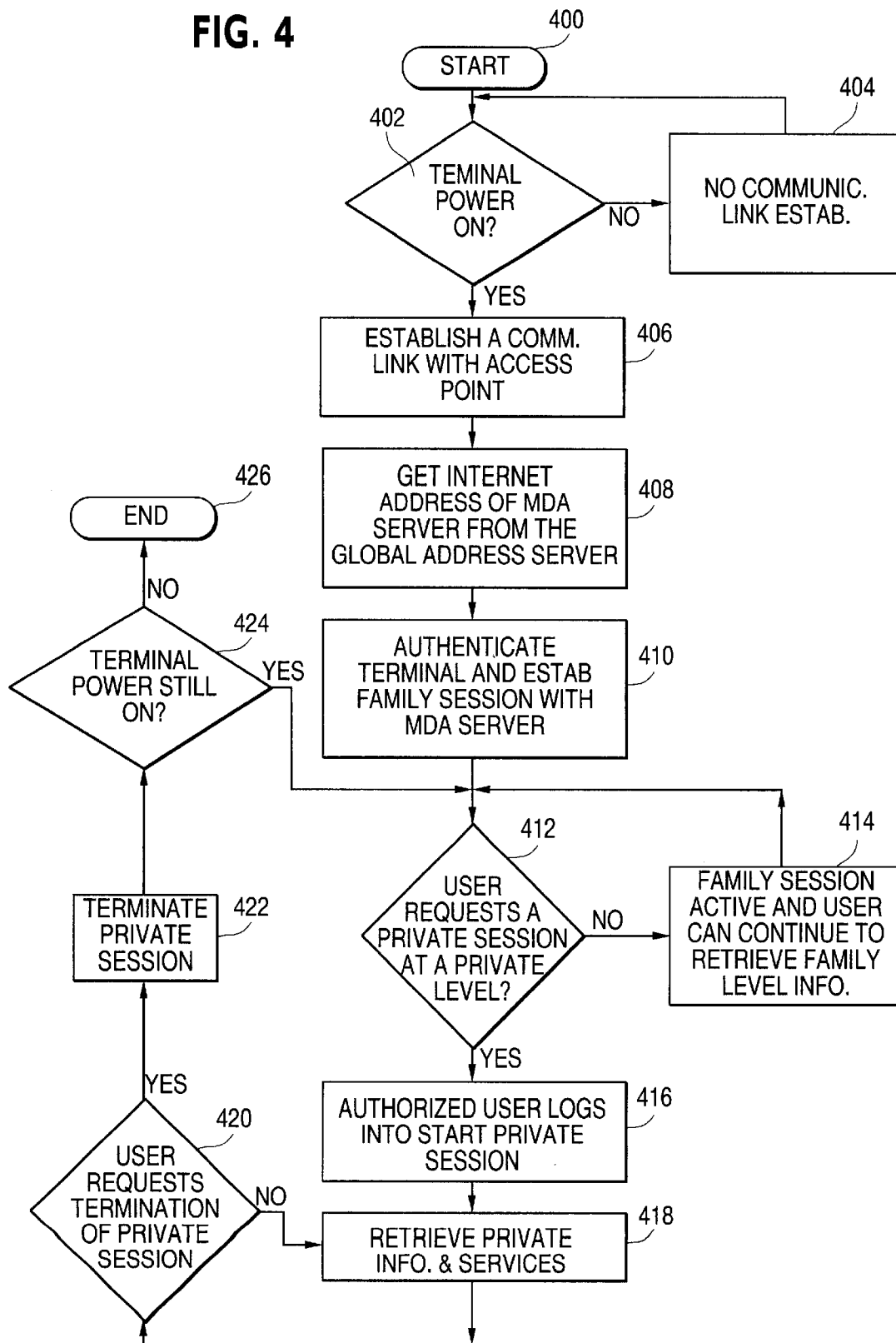


FIG. 4



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.