

# EXHIBIT 2

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

(10) **Patent No.:** **US 6,580,999 B2**  
(45) **Date of Patent:** **\*Jun. 17, 2003**

(54) **PORTABLE TERMINAL WITH THE FUNCTION OF WALKING NAVIGATION**

(75) Inventors: **Kishiko Maruyama**, Kodaira (JP);  
**Shigeru Shimada**, Kodaira (JP);  
**Toshiichirou Sasaki**, Iwaki (JP)

(73) Assignee: **Hitachi, Ltd.**, Tokyo (JP)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **10/173,423**

(22) Filed: **Jun. 18, 2002**

(65) **Prior Publication Data**

US 2002/0165662 A1 Nov. 7, 2002

**Related U.S. Application Data**

(63) Continuation of application No. 09/613,634, filed on Jul. 11, 2000, now Pat. No. 6,430,498.

(30) **Foreign Application Priority Data**

Jul. 12, 1999 (JP) ..... 11-197010

(51) **Int. Cl.**<sup>7</sup> ..... **G01C 21/00**

(52) **U.S. Cl.** ..... **701/200; 701/201; 342/357.01; 342/357.08**

(58) **Field of Search** ..... 701/200, 201, 701/202, 211, 212, 213, 214; 340/988, 995; 342/357.01, 357.06, 357.08, 443, 147; 367/118

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,146,231 A	9/1992	Ghaem et al. ....	342/419
5,528,248 A	6/1996	Steiner et al. ....	342/357.06
6,069,585 A	5/2000	Lanciaux .....	342/443
6,124,826 A	9/2000	Garthwaite et al. ....	342/357.09
6,430,498 B1 *	8/2002	Maruyama et al. ....	701/200

\* cited by examiner

*Primary Examiner*—Yonel Beaulieu

(74) *Attorney, Agent, or Firm*—Mattingly, Stanger & Malur, P.C.

(57) **ABSTRACT**

A portable terminal with the function of walking navigation. The portable terminal displays information on its narrow screen so as to make it easy for the user (walker) to understand and realize an interface that enables the user to understand inputs of retrieving conditions intuitively, thereby saving the input labor.

Assume now that a user (walker) **10** is lost while walking towards a destination **11**. In such a case, the present invention enables necessary information to be compressed, for example, so as to display both direction and distance to the destination from a present place with an orientation and a length of an arrow on a small screen and further so as to match the orientation of the arrow with the direction of the destination in the actual space. If the user (walker) **10** specifies a compressed information item **12**, **13**, or **14** for inquiry, the present invention controls so that the arrow always points the direction of the destination corresponding to each of those compressed information items **12**, **13**, and **14**. The condition of retrieval can also be set by turning, for example, the tip of the portable terminal directly in the desired direction **12**, **13**, or **14**.

**6 Claims, 10 Drawing Sheets**

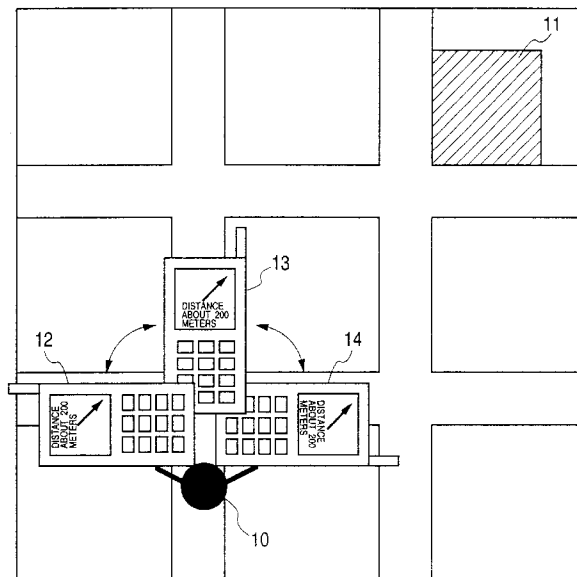


FIG. 1

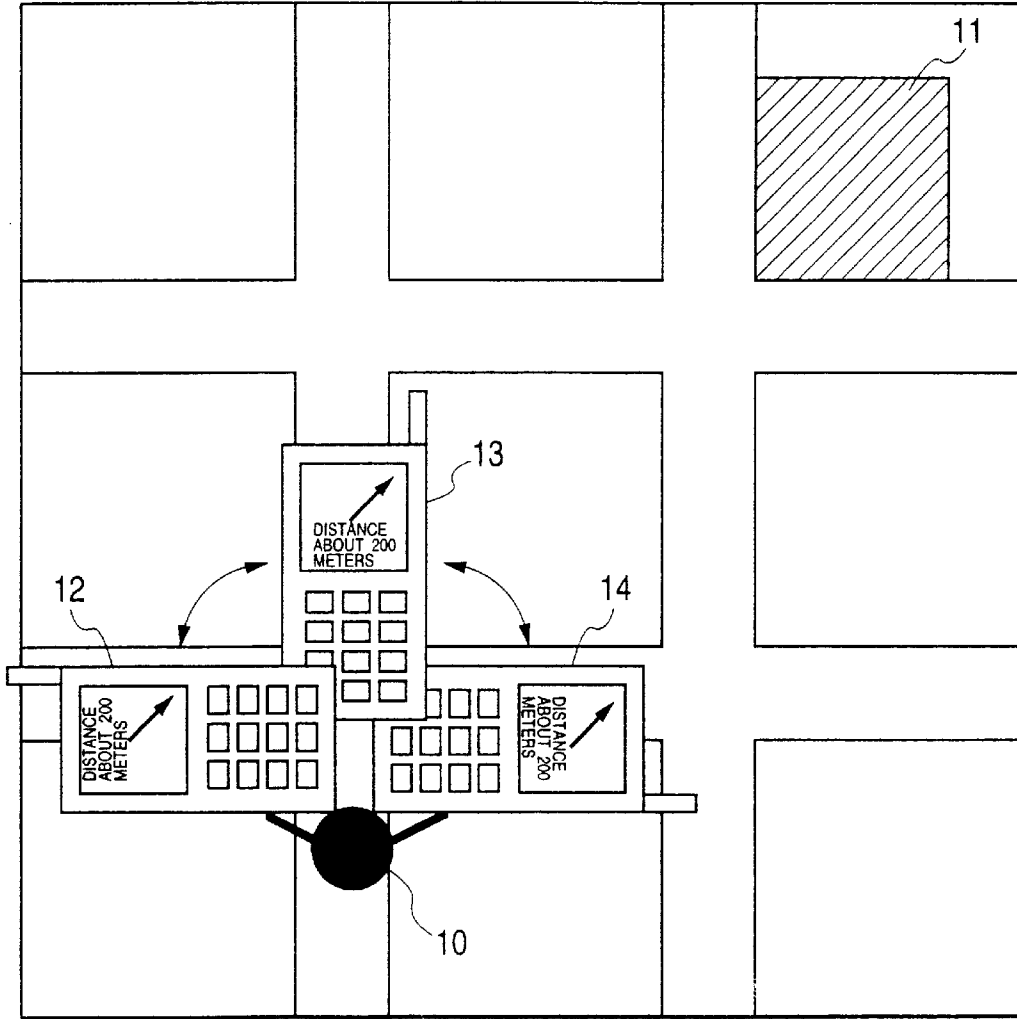


FIG. 2

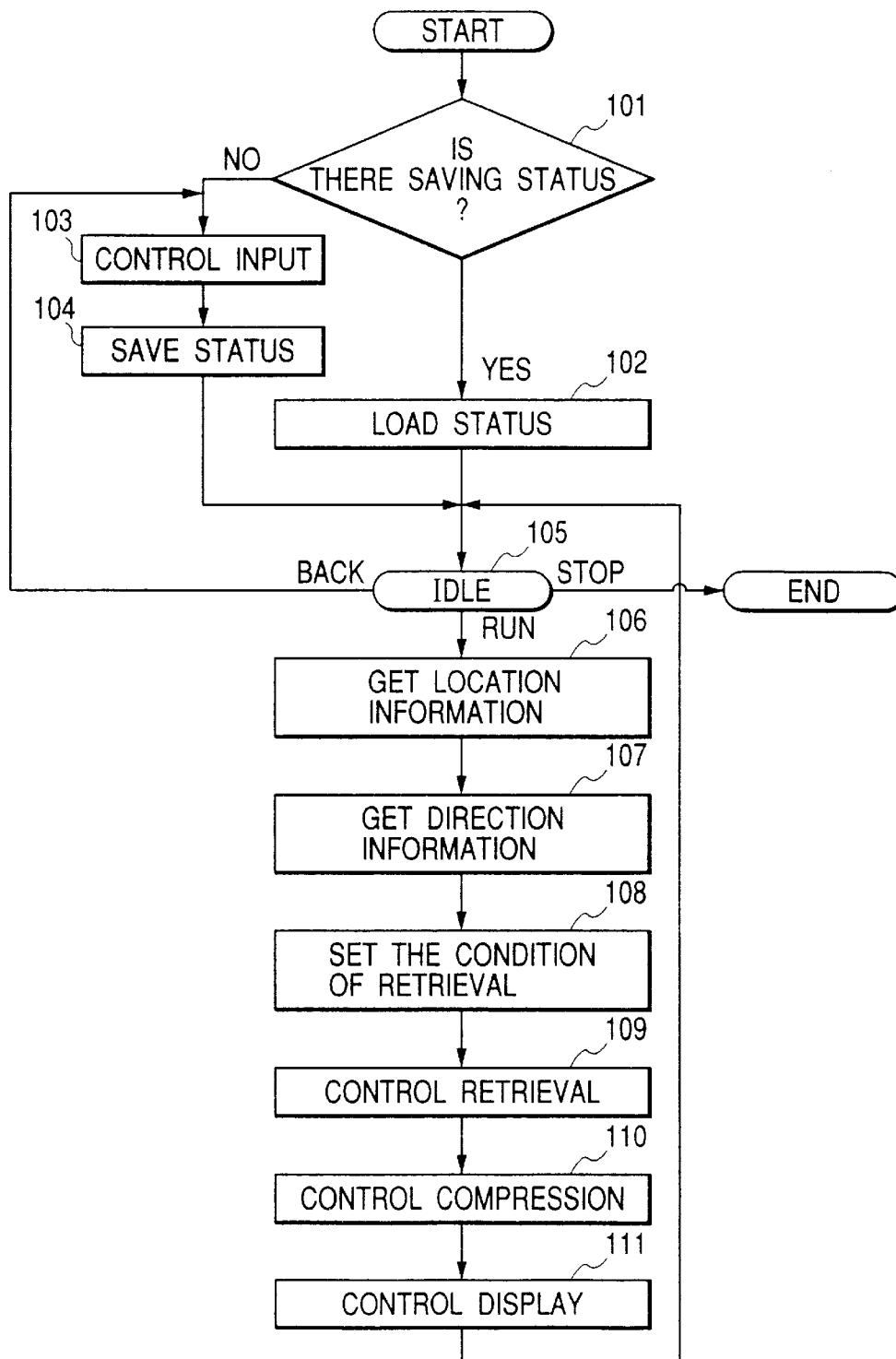


FIG. 3(a)

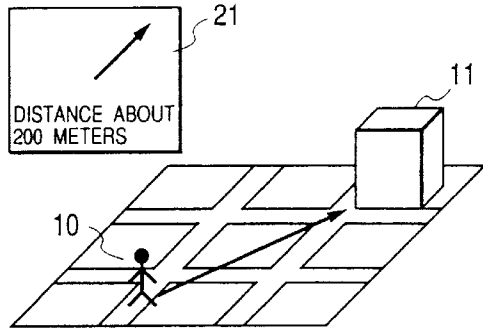


FIG. 3(b)

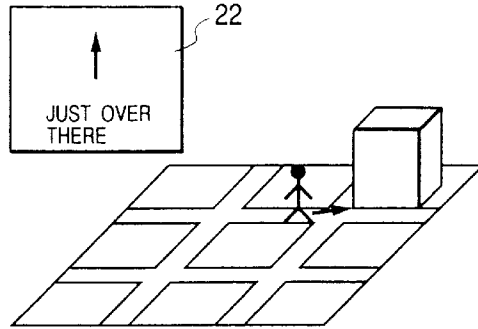


FIG. 3(c)

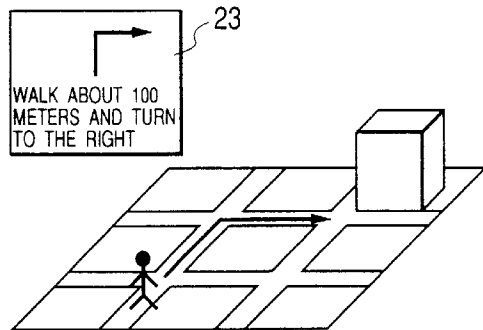


FIG. 3(d)

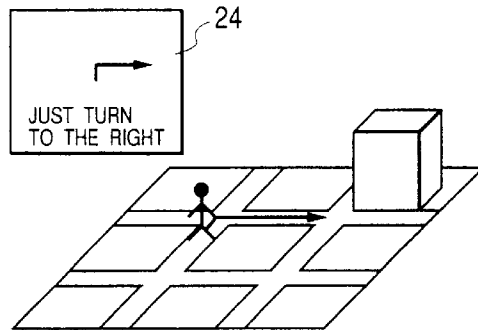


FIG. 3(e)

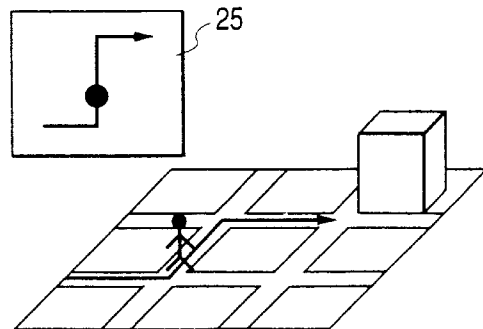
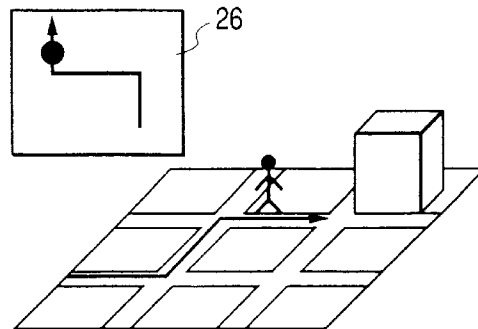


FIG. 3(f)



# 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.