


EXHIBIT F

Maxell, Ltd. v. ZTE USA Inc.

'317 Patent Invalidity

June 18, 2018

'317 Patent



 US00548317B2

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

(19) Patent No.: **US 6,748,317 B2**
 (45) Date of Patent: ***Jun. 8, 2004**

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

(75) Inventors: **Kohichi Maruyama, Koharu (JP); Shigeru Shimada, Koharu (JP); Toshihiro Senaka, Tokyo (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.: **10/428,755**
 (22) Filed: **May 8, 2003**
 (43) Prior Publication Data: **US 2003/05585 A1 Oct. 16, 2003**

Related U.S. Application Data
 (53) Continuation of application No. 10/173,622, filed on Jan. 10, 2002, now Pat. No. 6,509,976, which is a continuation of application No. 09/610,528, filed on Mar. 11, 2001, now Pat. No. 6,431,049.

Foreign Application Priority Data
 (30) Jul. 12, 1999 (JP) 11-197010
 (51) Int. Cl. **G01C 21/00**
 (52) U.S. Cl. **701/200; 701/201; 342/373(1); 342/373(8)**
 (58) Field of Search: **701/200, 201, 300(21), 312, 313; 340/888, 895, 942, 979(1), 957, 96, 957, 98**

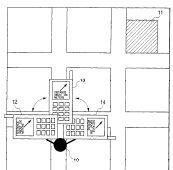
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Primary Examiner—Xiaohu Beaudin
 (74) Attorney, Agent, or Firm—Mattigley, Stanger & Mink, PC.

ABSTRACT
 A portable terminal has a function of walking navigation. The direction of a destination is displayed by an indicating arrow that always points in the direction of the destination. In the navigation processing, the user enters data to select a menu and/or set restricting conditions on the screen. At the time, the user gets the location information of the portable terminal, represented by a latitude/longitude or coordinates and an altitude, for example. Then, the user gets the direction information of the portable terminal, which is the direction of the tip of the portable terminal as determined by a compass, a gyro, or a accelerometer. The location information and the direction information are set as terminal information for the navigating condition. The system controls navigating of the database and retrieves the information corresponding to the selected menu, such as route guidance.

20 Claims, 10 Drawing Sheets



(30) Foreign Application Priority Data
Jul. 12, 1999 (JP) 11-197010

Claim Construction

Claim Term	Court's Construction
"an input device for inputting a destination" ('317 Patent, Claim 1)	Plain and ordinary meaning
"walking navigation" ('317 Patent, Claim 1)	"information to navigate a user who is walking"

Claim Construction Order, Dkt. 175

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'614 Patent - Alumbaugh

US9055614B1

(12) **United States Patent**
Alumbaugh

(10) Patent No.: **US 6,266,614 B1**
(15) Date of Patent: ***Jul. 24, 2001**

(54) **TRAVEL GUIDE** 5,267,265 * 6/1998 Schickel 240,906
5,802,002 * 9/1999 DeLorenzo et al. 70,211
5,830,861 * 11/1999 Douma et al. 70,211
6,080,048 * 7/2000 Hansen et al. 70,211
* cited by examiner

(70) Inventor: **Wendell Alumbaugh**, 1301 Meadow Ridge Ct., Houston, TX (US)

(*) **Notice**: This patent issued on a continued prosecution application that under 37 CFR 1.53(a), and is subject to the twenty year patent term provisions of 35 U.S.C. 156(a)(2).

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

(21) Appl. No. **09/043,099**

(22) Filed: **Apr. 26, 1998**

Related U.S. Application Data

(69) Provisional application No. 60/068,775, filed on Dec. 24, 1997.

(51) Int. Cl. **G01C 21/04**, **G06G 7/78**

(52) U.S. Cl. **701/211**, **340/902**, **342/373**, **407**

(58) **Field of Search** 701/211; 340/902; 342/373; 407

(56) **References Cited**

U.S. PATENT DOCUMENTS
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5,664,988 * 9/1997 Daniels et al. 342/372
5,917,302 * 2/1998 Ebdage 340/906

3 Claims, 12 Drawing Sheets

(12) **United States Patent**
Alumbaugh

Related U.S. Application Data

(60) Provisional application No. 60/068,775, filed on **Dec. 24, 1997.**

DX-0094

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'317 Patent

US0606481317

(12) **United States Patent**
 Maruyama et al. (10) Patent No.: US 6,748,317 B2
 (45) Date of Patent: *Jun. 9, 2004

(54) **PORTABLE TERMINAL WITH THE FUNCTION OF WALKING NAVIGATION**
 (75) Inventors: Kohiko Maruyama, Kōkoro (JP); Shigeru Shimizu, Kōkoro (JP); Toshihiro Sasaki, Fwoti (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.: 10424,755
 (22) Filed: May 5, 2003
 (65) **Prior Publication Data**
 US 2002/0106519 A1 (JP), 2002

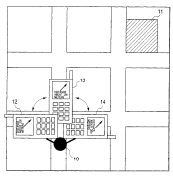
Related U.S. Application Data
 (63) Continuation of application No. 10/174,423, filed on Jun. 19, 2002, now Pat. No. 6,580,999, which is a continuation of application No. 09/103,843, filed on Dec. 11, 2000, now Pat. No. 6,376,876.

(69) **Foreign Application Priority Data**
 Jul. 12, 1999 (JP) 11-149310

(51) Int. Cl. G01C 21/00
 (52) U.S. Cl. 701/200, 701/201, 342/377, 342/378

(58) **Field of Search** 701/200, 201, 701/211, 212, 213, 340/988, 995, 342/377, 378, 379

20 Claims, 10 Drawing Sheets



(56) **References Cited**

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The '614 Patent - Alumbaugh Overview

US0605661414

(12) **United States Patent**
 Alumbaugh (10) Patent No.: US 6,266,614 B1
 (45) Date of Patent: *Jul. 24, 2001

(54) **TRAVEL GUIDE**
 (75) Inventor: Wendell Alumbaugh, 1301 Meadow Ridge Ct., Southlake, TX (US) 76092-8441
 (*) Notice: This patent issued on a continued prosecution application that under 37 CFR 1.53(a), and is subject to the twenty year priority term provisions of 35 U.S.C. 156(a).
 Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/043,099
 (22) Filed: Apr. 26, 1998

Related U.S. Application Data
 (60) Provisional application No. 40/968,770, filed on Dec. 26, 1997.
 (51) Int. Cl. G01C 21/04, G06G 7/78
 (52) U.S. Cl. 701/211, 342/377, 342/378, 342/379, 342/381, 407

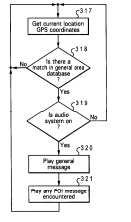
(58) **Field of Search** 701/211, 342/377, 342/378, 342/379, 342/381, 407

References Cited

U.S. PATENT DOCUMENTS

5,177,882 * 1/1993 Davis et al. 340/988
 5,968,948 * 9/1997 Daniels et al. 342/377
 5,973,302 * 2/1998 Edlage 340/996

3 Claims, 12 Drawing Sheets



(57) **ABSTRACT**

A travel guide device includes a GPS receiver for determining a present location. Access to a database of points-of-interest, indexed by GPS location, is provided to permit timely presentation of audio narration or visual display of information relevant to the point-of-interest. A running,

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'317 Patent Claim 1

US0001451702	
(15) United States Patent Moriyama et al.	(10) Patent No.: US 6,748,317 B2 (45) Date of Patent: Jun. 8, 2004
(50) PORTABLE TERMINAL WITH THE FUNCTION OF WALKING NAVIGATION	(50) References Cited
(75) Inventors: Kohkichi Moriyama, Kohkichi ITO, Shigeru Shimada, Kohkichi ITO, Toshichiro Sasaki, Iwaki ITO	U.S. PATENT DOCUMENTS 6,146,231 A 6/19/02 Ghosh et al. 6,528,588 A 6/19/02 Yoon et al. 6,090,026 A 5/20/02 Lantieri 6,143,626 A 6/20/02 Gendreau et al. 6,435,698 B1 8/20/02 Moriyama et al. 6,438,099 B1 * 6/20/02 Moriyama et al. 700,020
(73) Assignee: Hitachi, Ltd., Tokyo (JP)	FOREIGN PATENT DOCUMENTS JP 06-282761 03/04 JP 06-282760 03/04 * cited by examiner
(*) Note: 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 dis- claimer.	
(21) Appl. No.: 10424,755	Primary Examiner—Wood Brantley
(22) Filed: May 5, 2003	Attorney, Agent, or Firm—Manning, Stanger & Mahr, P.C.
(56) Prior Publication Data US 2003/0104761 A1 Oct. 16, 2003	ABSTRACT
Related U.S. Application Data	A portable terminal has a function of walking navigation. The direction of a destination is displayed by an indicating arrow that always points in the direction of the destination. In the navigation processing, the user enters data to select a route and/or set traveling conditions on the way screen. At first, the user gets the location information of the portable terminal, represented by a latitude/longitude or coordinates and an altitude, for example. Then, the user gets the direction information of the portable terminal, which is the direction of the tip of the portable terminal as determined by a compass, a gyro, or a clinometer. The location information and the direction information are set as terminal information for the traveling conditions. The system controls searching of the database and retrieves the information corresponding to the selected route, such as route guidance.
(30) Continuation of application No. 09/173,423, filed on Jan. 19, 2002, now Pat. No. 6,380,799, which is a continuation of application No. 09/113,624, filed on Jul. 11, 2000, now Pat. No. 6,046,676.	
(30) Foreign Application Priority Data	
Jul. 12, 1999 (JP) 11-097010	
(51) Int. Cl. ⁷ G01C 21/00	
(52) U.S. Cl. 700,200; 700,202; 342,357.01; 342,357.06	
(58) Field of Search 700,200; 700,202; 700,204; 700,210; 710, 711; 340,988; 995; 342,357.01; 357.06; 357.08	
	28 Claims, 10 Drawing Sheets

1. A portable terminal, comprising:
a device for getting location information denoting a present place of said portable terminal;
a device for getting a direction information denoting an orientation of said portable terminal;
an input device for inputting a destination; and
a display,
wherein
said display displays positions of said destination and said present place, and a relation of said direction and a direction from said present place to said destination, and
said display changes according to a change of said direction of said portable terminal orientation for walking navigation.

PX-0005

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'317 Patent Claim 1

1. A portable terminal, comprising:

a device for getting location information denoting a present place of said portable terminal;
a device for getting a direction information denoting an orientation of said portable terminal;
an input device for inputting a destination; and
a display,
wherein
said display displays positions of said destination and said present place, and a relation of said direction and a direction from said present place to said destination, and
said display changes according to a change of said direction of said portable terminal orientation for walking navigation.

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