

**Invalidity of U.S. Patent No. 6,748,317 by
U.S. Patent No. 6,067,502 to Hayashida (“Hayashida”)**

I have provided below a claim chart comparing the disclosures of Hayashida to the '317 Asserted Claims, as well as U.S. Patent No. 6,067,502 to Hayashida and JPH10-197277 to Maruyama et al. (“Maruyama”).

Hayashida was filed August 21, 1997 and issued May 23, 2000. Hayashida therefore qualifies as prior art with regard to the '317 Patent under 35 U.S.C. § 102(e) (pre-AIA).

Maruyama was published on July 31, 1998 and therefore qualifies as prior art with regard to the '317 Patent under 35 U.S.C. § 102(a).

U.S. Patent No. 6,748,317	Hayashida
<i>Claim 1</i>	
1[P]. A portable terminal, comprising:	<p>To the extent the preamble is limiting, Hayashida discloses a portable terminal comprising a “carrying-type navigation device.”</p> <p><i>This invention is related to a map display device to guiding and searching a movement route of a vehicle based on a map information, especially a navigation device. This invention is related with the improvement of the display of the map information. Hayashida at 1:5-8.</i></p> <p><i>Then this navigation processing can be also executed by this computer device if the device which can detect the present position by GPS reception device and this information memory part 37 are connected with the <u>carrying-type navigation computer device</u>. Moreover this invention can be applied as the vehicle of the car and the navigation device of the shipping, the aircraft and the submarine which is used for the navigation may be a chart and a submarine map and a map in addition to the road map. <u>Moreover again this invention may be applied to the carrying-type navigation device</u> in addition to the navigation device which is attached to the movement bodies such as the car. In other words, this invention may be applied to the small navigation device which can</i></p>

	<p><i>accompanied by the human and which is used in a cycling, a travel, a mountaineering, a hike, a fishing or so on.</i> <i>Hayashida at 76:5-20.</i></p>
<p>[1(a)] a device for getting location information denoting a present¹ place of said portable terminal;²</p>	<p>Under the Court’s construction of this limitation, Hayashida discloses the full location information denoting a present place of said portable terminal using a wireless or cellular antenna, a GPS, a PHS, or the like; a data receiver; and a CPU for analyzing received data; or equivalents thereof. For example, Hayashida discloses a device for getting present position detector 20, including GPS receiver unit 25 and beacon receiver 26 to perform the claimed function of getting location information denoting a present place of said portable terminal.</p> <p><i>FIG. 1 illustrates the overall circuitry of the navigation device. A central processor 1 controls the operation of the whole navigation device. The central processor 1 is comprised with a CPU 2, a flash memory 3, a RAM 5, a ROM 4, a sensor input interface 7, a communication interface 8, an image (picture) processor 9, a image (picture) memory 10, a voice processor 11 and a clock generator 6. <u>The CPU 2 and the devices through up to the clock generator 6 are connected together through a CPU local bus 15, and the data are exchanged among these devices.</u></i> <i>Hayashida at 2:46-55.</i></p> <p><i>The sensor input interface 7 comprises an A/D converter circuit or a buffer circuit. The sensor input interface 7 receives analog or digital sensor data from the sensors 21 to 24 of a present position detector 20. The present position</i></p>

¹ Based on Plaintiff’s Infringement Contentions and subsequent claim limitations referring to a present place, Defendant has argued that this should mean “present.”

² The Court construed this element as:

“**Function:** getting location information denoting a present place of said portable terminal

“**Structure:** a wireless or cellular antenna, a GPS, a PHS, or the like; a data receiver; and a CPU for analyzing received data; or equivalents thereof”

detector 20 includes an absolute direction sensor 21, a relative direction sensor 22, a distance sensor 23 and a vehicle speed sensor 24. Hayashida at 7:24-30.

An I/O data bus 28 is connected to the communication interface 8 of the CPU processor 1. To the I/O data bus 28 are connected the **GPS receiver unit 25, the beacon receiver unit 26 and the data transmitter/receiver unit 27** and the **present position detector 20**. To the I/O data bus 28 are further connected a touch switch 34 and a printer 35 of the input/output unit 30, and an information memory unit 37. That is, a variety of data are exchanged between the external accessory equipment and the CPU local bus 15 through the communication interface 8.

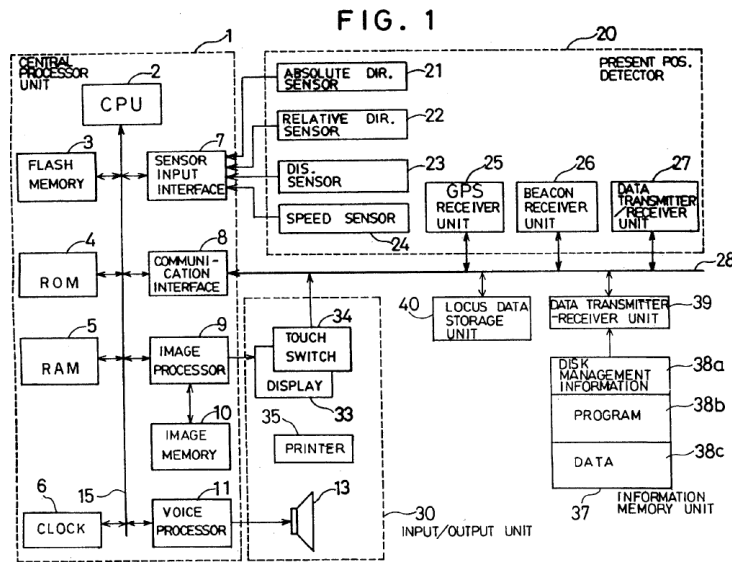
The present position detector 20 outputs data for detecting the present position of the car. In other words, the absolute direction sensor 21 detects the absolute direction. The relative direction sensor 22 detects the relative direction with respect to the absolute direction. Furthermore, the distance sensor 23 detects the distance travelled. The vehicle speed sensor 24 detects the running speed of the car. The GPS receiver unit 25 receives GPS (Global Positioning System) signals to detect position data such as longitude and latitude of the car. The GPS signals are microwaves transmitted from a plurality of satellites orbiting round the earth.

Similarly the beacon receiver unit 26 receives beacon from a data communication system such as VICS (Vehicle Information and Communication System) or the like, and the received data and the corrected data of GPS are output to the I/O data bus 28.

The data transmitter/receiver unit 27 exchanges a variety of information relative to the present position or the road conditions near the car relative to the car with a directional present position information offering system or the ATIS (advanced traffic information service), etc. by utilizing a cellular phone, FM multiplex signals or a telephone circuit. These information are used as a detection

information of the car position or a support information of movement. The beacon receiver unit 26 and the data transmitter/receiver unit 27 may be provided. As for this data sending and the data transmitter/receiver unit, a radio receiver, a television receiver, a carrying telephone, a pager or the radio communication machine are used.

Hayashida at 7:50-8:21.



Id. at Fig. 1.

FIG. 3 illustrates some of a group of data stored in the RAM 5. The present position data MP represent the present position of the vehicle and are determined by a present position detector 20. The absolute direction data ZD represent the south-north direction relying upon the terrestrial magnetism and are determined based upon the data from an absolute direction sensor 21. The relative direction angle data $D\theta$ represent an angle of the direction in which the vehicle is moving.

	<p><i>is traveling with respect to the absolute position data ZD and are found upon the data from a relative direction sensor 22.</i></p> <p><i>The traveled distance data ML represent a distance traveled by the vehicle are found based on the data from a distance sensor 23. The present position data PI are related to the present position and are input from a beacon receiver 26 or the data transmitter-receiver 27. The VICS data VD and ATIS data AD are input from the beacon receiver 26 or the data transmitter-receiver 27. The VICS data VD are used for correcting an error in the position of the vehicle detected by a GPS receiver 25. The ATIS data AD are used for determining traffic regulations and traffic jamming in the areas.</i></p> <p><i>Hayashida at 10:55-11:8.</i></p> <p><i>Then a processing for detecting the present position (step SA2) and subsequent processing are executed. The processing for detecting the present position (step SA2) detects the geographical coordinates (latitude, longitude, altitude, etc.) of an overland moving body, i.e., of a vehicle mounting a navigation device. That is, a GPS receiver 25 receives signals from a plurality of satellites orbiting around the earth, detects coordinate positions of the satellites, times at which the electromagnetic waves are emitted from the satellites and the time at which the electromagnetic waves are received by the GPS receiver 25, and calculates the distances to the satellites. The coordinates of the present position of the vehicle is calculated from the distances to the satellites, to determine the present position of the vehicle. The thus found geographical coordinates of the vehicle are stored in the RAM 5 as present position data MP. The present position data MP are often corrected by the data input through a beacon receiver 26 or the data transmitter/receiver 27.</i></p> <p><i>Hayashida at 13:16-33; see also id. at Fig. 5.</i></p>
<p>[1(b)] a device for getting a direction information</p>	<p>Under the Court’s construction of this limitation, Hayashida discloses the following direction information denoting an orientation of said portable terminal using a compass, gyroscope, and/or sensor such as a clinometer in conjunction with a C</p>

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