## **EXHIBIT B**

US006807464B2

## (12) United States Patent

Yu et al.

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(45) Date of Patent: Oct. 19, 2004

### (54) SYSTEMS AND METHODS FOR DISTRIBUTING INFORMATION TO AN OPERATOR OF A VEHICLE

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 49 days.

(21) Appl. No.: 10/040,321

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(65) Prior Publication Data

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(51) Int. Cl.<sup>7</sup> ...... G06F 17/00; G01C 21/26

(56) References Cited

### U.S. PATENT DOCUMENTS

5,172,785	A	*	12/1992	Takahashi 180/271
5,214,793	A	#	5/1993	Conway et al 455/500
5,973,616	A	*	10/1999	Grebe et al 340/825.69
5,990,898	A	*	11/1999	Urano 345/426
6,223,844	<b>B</b> 1	#	5/2001	Greenhill et al 180/65.3
6,232,874	<b>B1</b>	鲸	5/2001	Murphy 340/426.19
6,246,948	<b>B1</b>	*		Thakker 701/93
6,246,954	<b>B</b> 1		6/2001	Berstis et al 701/117
6,317,058	B1	排	11/2001	Lemelson et al 340/910

6,442,473	B1 *	8/2002	Berstis et al 701/117
6,470,267	B1 *	10/2002	Nozaki 701/209
6,473,790	B1 *	10/2002	Tagi 709/216
6,515,596	B2 *	2/2003	Awada 340/905
6,516,273	B1 *	2/2003	Pierowicz et al 701/301
6,526,350	B2 *	2/2003	Sekiyama 701/209
6,587,755	B1 *	7/2003	Smith et al 701/1
6,611,229	B2 *	8/2003	Muramatsu et al 342/357.07
2002/0027511	A1 *	3/2002	Horita et al 340/988

### FOREIGN PATENT DOCUMENTS

DE 4142091 \* 8/1993 ...... G08G/1/0962

### OTHER PUBLICATIONS

"Developing Traveler Information Systems Using the National ITS Architecture," U.S. Department of Transportation Intelligent Transportation Systems Joint Program Office, Sections 1 and 2 (Aug. 1998).

"Developing Traffic Signal Control Systems Using the National ITS Architecture," U.S. Department of Transportation Intelligent Transportation Systems Joint Program Office, Section 1 (Feb. 1998).

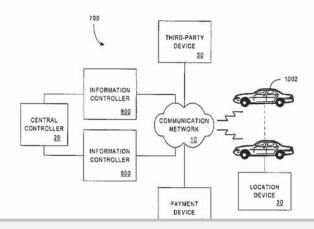
(List continued on next page.)

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### (57) ABSTRACT

Systems and methods are provided to facilitate a distribution of information. According to one embodiment, vehicle control information is determined, the vehicle control information being dependent on time in formation, operator information, and/or vehicle information. For example, an intersection control signal may be determined. The vehicle control information is then transmitted to an automobile device, which in turn arranges for the vehicle control information to be provided to an operator. For example, a graphical representation of an intersection control signal may be displayed on an automobile's windshield.

### 22 Claims, 13 Drawing Sheets





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### OTHER PUBLICATIONS

"Traveler Information Services (TIS) Executive Summary," Loral AeroSys IBI Group (Dec. 15, 1995).

"Electronic Highways," Racerchicks.com (2000), (month is not available).

"GM's OnStar to Offer Personalized Traffic Info," Info-World (Nov. 13, 2000).

"Webraska's 'Anti-Traffic Jam' Mobile Phone WAP Services to be Offered by KPN Telecom in the Netherlands,"

Webraska Mobile Technologies Press Release (Oct. 12, 1999).

David J. Mulholland, "Intelligent Transportation Systems: A Traffic Incident Management Tool," International Association of Chiefs of Police (Apr. 13, 2001).

"Dashboard Display that Tells You the Right Speed Limit," GSM Services, Europolitan (Jan. 25, 2000).

\* cited by examiner-



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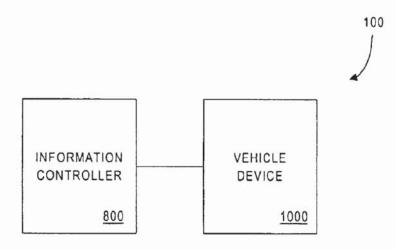


FIG. 1



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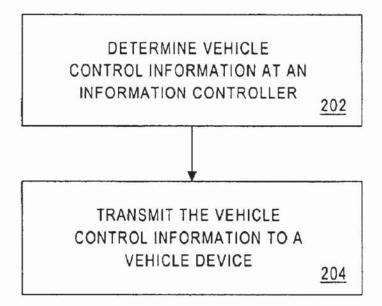


FIG. 2



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