(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 2 March 2006 (02.03.2006)

(10) International Publication Number WO 2006/023841 A3

- (51) International Patent Classification: *G08G 1/095* (2006.01) *G08G 1/07* (2006.01)
- (21) International Application Number:

PCT/US2005/029762

English

- (22) International Filing Date: 18 August 2005 (18.08.2005)
- (25) Filing Language:
- (26) Publication Language: English
- (30) Priority Data: 60/602,769 18 August 2004 (18.08.2004) U
- (71) Applicant (for all designated States except US): CALIFORNIA INSTITUTE OF TECHNOLOGY [US/US]; 1200 East California Boulevard, Mail Stop 201-85, Pasadena, CA 91125 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): BACHELDER, Aaron, D. [US/US]; 22 Carnelian, Irvine, CA 92614 (US).
- (74) Agent: CHANG, Josephine, E.; Christie, Parker & Hale, LLP, P.O. Box 7068, Pasadena, CA 91109-7068 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

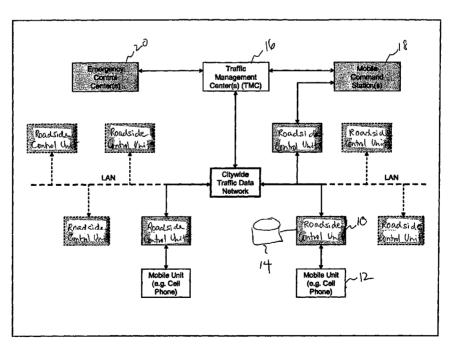
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 21 December 2007

[Continued on next page]

(54) Title: ROADSIDE-BASED COMMUNICATION SYSTEM AND METHOD



(57) Abstract: A roadside-based communication system providing backup communication between emergency mobile units (12) and emergency command centers (20). In the event of failure of a primary communication, the mobile units (12) transmit wireless messages to nearby roadside controllers (10) that may take the form of intersection controllers (62a). The intersection controllers (62a) receive the wireless messages, convert the messages into standard digital streams, and transmit the digital streams along a city wide network to a destination intersection or command center.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/29762

A. CLASSIFICATION OF SUBJECT MATTER IPC: G08G 1/095(2006.01);G08G 1/07(2006.01)				
USPC: 340/907,909,902,904 According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) U.S.: 340/907, 909, 902, 904, 906, 916, 924; 455/344, 403, 404.1, 95, 96; 701/117				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST				
	JMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where ap	ppropriate, of the relevant passages	Relevant to claim No.	
A	US 5,633,629 (HOCHSTEIN) 27 May 1997		1-16	
A	US 2007/0040700 (BACHELDER) 22 February 2007.		1-16	
	,			
		•		
·	:			
Further documents are listed in the continuation of Box C.		See patent family annex.	•	
* S			blished after the international filing date or priority nflict with the application but cited to understand the	
	t defining the general state of the art which is not considered to be of	principle or theory underlying the inves		
particular relevance "E" earlier application or patent published on or after the international filing date		"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone		
	t which may throw doubts on priority claim(s) or which is cited to the publication date of another citation or other special reason (as)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art		
"O" documen	t referring to an oral disclosure, use, exhibition or other means			
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family .		
Date of the actual completion of the international search		Date of mailing of the international search report		
24 July 2007	(24.07.2007)	26 0CT 2007		
		Authorized officer		
Mail Stop PCT, Attn: ISA/US Commissioner for Patents		Authorized officer Daniel J Wu Coarlan		
P.O. Box 1450 Alexandria, Virginia 22313-1450		Telephone No. (571) 272-2600		
Facsimile No. (571) 273-3201				

Form PCT/ISA/210 (second sheet) (April 2005)