${\bf (19)}\ World\ Intellectual\ Property\ Organization$

International Bureau





(43) International Publication Date 30 May 2003 (30.05.2003)

PCT (10) International Publication Number WO 2003/044626 A3

(51) International Patent Classification:

 H04Q 7/00 (2006.01)
 H04J 3/24 (2006.01)

 H04L 12/28 (2006.01)
 G06F 13/00 (2006.01)

 H04B 1/00 (2006.01)
 G06F 15/16 (2006.01)

(21) International Application Number:

PCT/US2002/036361

(22) International Filing Date:

4 November 2002 (04.11.2002)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

09/992,289

19 November 2001 (19.11.2001) US

(71) Applicant: MOTOROLA, INC., A CORPORATION OF THE STATE OF DELAWARE [US/US]; 1303 East Algonquin Road, Schaumburg, IL 60196 (US).

(72) Inventors: KORUS, Michael F.,; 4210 Crimson Drive, Hoffman Estates, IL 60195 (US). LEWIS, Adam Cory,; 477 Chatham Circle, Buffalo Grove, IL 60089 (US).

- (74) Agents: DAVIS, Valerie M., et al.; MOTOROLA, INC., Intellectual Property Dept., 1303 East Algonquin Road, Schaumburg, IL 60196 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

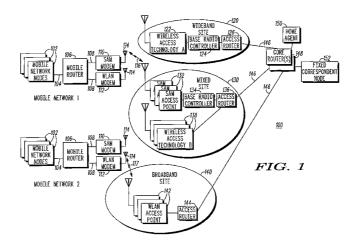
Published:

with international search report

(88) Date of publication of the international search report:

11 June 2009

(54) Title: METHOD AND APPARATUS FOR A MOBILE NODE TO MAINTAIN LOCATION PRIVACY FROM SELECTED CORRESPONDENT NODES



(57) Abstract: An IP mobility solution for mobile network(s) that combines features of IP multicast and mobile IPv6. The mobile network defines a mobile router (106) attached to one or more mobile network hosts (102). Upon movement of the mobile network from a home network to a foreign network, the mobile router obtains a multicast care of address on behalf of the attached mobile network hosts and creates a binding between the mobile subnet prefix and the multicast care of address. The mobile router communicates the binding information, via binding update messages, to a home agent (150) and to selected correspondent nodes (152) consistent with requested privacy attributes of the mobile network hosts. The privacy attributes allow the mobile network hosts to maintain the privacy of their care of address (and implicitly, their location) relative to certain correspondent nodes.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/36361

	A. CLASSIFICATION OF SUBJECT MATTER					
IPC(7) : H04Q 7/00; H04L 12/28; H04B 1/00; H04J 3/24; G06F 13/00, 15/16						
US CL : 370/ 331, 349, 402; 340/825.52; 709/238, 245						
According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED						
		- classification gymbols)				
Minimum documentation searched (classification system followed by classification symbols) U.S.: 370/331, 349, 402; 340/825.52; 709/238, 245						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Please See Continuation Sheet						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) West Search Tool						
C. DOC	UMENTS CONSIDERED TO BE RELEVANT					
Category *	Citation of document, with indication, where ap		Relevant to claim No.			
A	US 6,041,358 A (HUANG et al) 21 March 2000 (21	.03.2000), entire document	1-10			
A	US 6,195,705 B1 (LEUNG et al.) 21 February 2001 (02.21.2001), entire document		1-10			
A	US 5,025,491 A (TSUCHIYA et al.) 18 June 1991 (18.06.1991), entire document		1-10			
A	US 6,160,804 A (AHMED et al.) 12 December 2000 (12.12.2000), entire document		1-10			
A	US 5,442,633 A (PERKINS et al.) 15 August 1995 (15.08.1995), entire document		1-10			
A	US 5,572,528 A (SHUEN et al.) 05 November 1996 (05.11.1996), entire document		1-10			
A	DAS, Subir et al., Telecommunications-Enhanced Mobile IP Architecture for Fast Intradomain Mobility, IEEE Personal Communications, Vol. 7, Issue 4, August 2000, pages 50-58.		1-10			
A	KAN et al., QoS in Mobile IPv6, Proceedings. ICII 2001-Beiging, International Conference, Vol. 2, pages 492-497.		1-10			
			·			
	r documents are listed in the continuation of Box C.	See patent family annex.				
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be		"T" later document published after the inte date and not in conflict with the applic principle or theory underlying the inve	ation but cited to understand the			
of particular relevance "E" earlier application or patent published on or after the international filing date		"X" document of particular relevance; the considered novel or cannot be considered novel or cann	claimed invention cannot be red to involve an inventive step			
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		"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				
"O" document referring to an oral disclosure, use, exhibition or other means		being obvious to a person skilled in th	e art			
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent				
Date of the actual completion of the international search		Date of mailing of the international search report				
13 December 2002 (13.12.2002)		Authorized officer				
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks		Bull				
Box PCT		Pyenell Jones				
Washington, D.C. 20231 Facsimile No. (703)305-3230		Telephone No. 703-305-0630				

PCT/U	JS02/36	5361

INTERNATIONAL SEARCH REPORT

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A A	NORDMARK, ERIK et al., IP Routing for Wireless/Mobile Hosts (mobileip), The 40th IETF Meeting in Washington, DC., October 1997.	Relevant to claim No.		

INTERNATIONAL SEARCH REPORT
Continuation of B. FIELDS SEARCHED Item 2:
Zhigang Kan et al., QoS in Mobile IPv6, Info-tech and Info-net, 2001. Proceedings ICII 2001-Beijing. 2001 International Conference, Vol. 2, 2001, pages: 492-497
S. Das et al., TeleMIP: telecommunications-enhanced mobile IP architecture for intradomain mobility, IEEE Personal Communications, Vol. 7, Issue 4, August 2000, pages: 50-58.
Eric Nordmard et al., IP Routing for Wireless/Mobile Hosts (mobileip), 40th IETF Meeting in Washington, DC, Oct. 28, 1997
707770 4 (010 (
Form PCT/ISA/210 (second sheet) (July 1998)

PCT/US02/36361