

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
13 November 2008 (13.11.2008)

PCT

(10) International Publication Number  
**WO 2008/137328 A3**

- (51) International Patent Classification:  
*H04Q 7/38* (2006.01)
- (21) International Application Number:  
PCT/US2008/061291
- (22) International Filing Date: 23 April 2008 (23.04.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
11/742,134 30 April 2007 (30.04.2007) US
- (71) Applicant (for all designated States except US): **MO-TOROLA, INC.** [US/US]; 1303 East Algonquin Road, Schaumburg, IL 60196 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **NARASIMHA, Murali** [IN/US]; 450 Thistle Lane, Lake Zurich, IL 60047 (US). **KUCHIBHOTLA, Ravi** [IN/US]; 1093 Smithfield Court, Gurnee, IL 60031 (US).
- (74) Agents: **CUNNINGHAM, Gary, J., et al.**; 600 North U.S. Highway 45, Libertyville, IL 60048 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

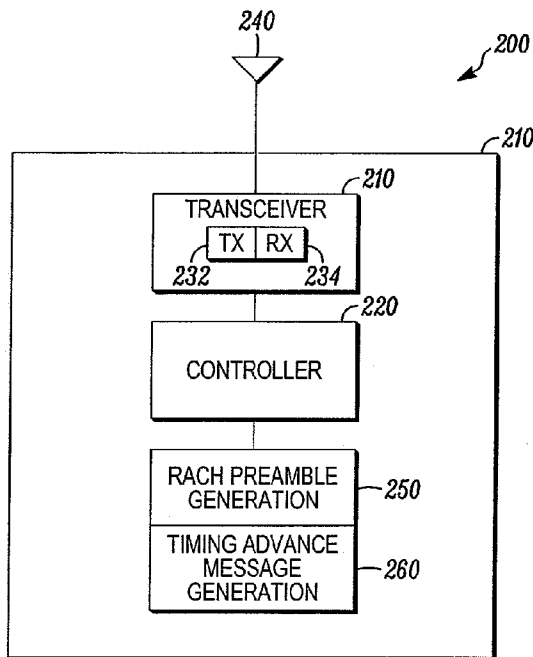


FIG. 2

(57) Abstract: A method and apparatus for handover in a wireless communication system. A handover indication can be received from a source base station ( 120) that is connected with a mobile station (110). The handover indication can include a random access channel preamble. The random access channel preamble can include a temporary mobile equipment identifier. The random access channel preamble can be received from the mobile station. A timing advance message can be sent in response to receiving random access channel preamble. The timing advance message can be addressed by the random access channel preamble and a source base station identifier. The connection with the mobile station can be switched from the source base station to a target base station ( 130).

WO 2008/137328 A3



**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:**  
29 January 2009

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/061291

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. H04Q7/38

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)  
H04Q

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 practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NOKIA: "Non contention based Handover" ERICSSON, TSG-RAN WG2 MEETING #56BIS, SORENTO ITALY,, vol. R2-070011, 15 January 2007 (2007-01-15), pages 1-4, XP003023806 the whole document	1-21
X	FUJITSU: "Random Access for less-contention-based handover" 3GPP TSG-RAN-WG1 MEETING #46BIS, 3GPP TSG-RAN-WG2 MEETING #55, SEOUL, KOREA,, vol. R1-062893, R1-062886, 9 October 2006 (2006-10-09), pages 1-9, XP003022788 the whole document	1-21
	----- -/-- -----	

Further 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 of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*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)
- \*O\* document 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

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*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
- \*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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

2 December 2008

Date of mailing of the international search report

09/12/2008

Name and mailing address of the ISA/  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer

López Pérez, Mariano

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/061291

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2008/038093 A (NOKIA CORP [FI]; NOKIA INC [US]; ZHU YUAN [CN]) 3 April 2008 (2008-04-03) paragraph [0011] - paragraph [0013] paragraph [0027] - paragraph [0040] paragraph [0057] - paragraph [0059]	1-21
P, X	WO 2008/024788 A (QUALCOMM INC [US]; MALLADI DURGA PRASAD [US]; DAMNJANOVIC ALEKSANDAR [ ]) 28 February 2008 (2008-02-28) paragraph [0026] paragraph [0055] - paragraph [0057] paragraph [0070] - paragraph [0074] paragraph [0087] - paragraph [0097]	1-21
P, X	ERICSSON: "On the details of the dedicated preamble at intra-LTE handover" 3GPP TSG-RAN WG2 #59, ATHENS, GREECE,, vol. R2-073238, 20 August 2007 (2007-08-20), pages 1-3, XP003023805 the whole document.	1-21
E	US 2008/267131 A1 (KANGUDE SHANTANU [US] ET AL) 30 October 2008 (2008-10-30) paragraph [0009] paragraph [0023] - paragraph [0031]	1-21
A	EP 1 045 607 A (CIT ALCATEL [FR]) 18 October 2000 (2000-10-18) paragraph [0010] paragraph [0017] - paragraph [0018] paragraph [0021] - paragraph [0029] paragraph [0036] - paragraph [0040] paragraph [0045] paragraph [0047] - paragraph [0052]	1,8,15
E	EP 1 959 708 A (IND TECH RES INST [CN]) 20 August 2008 (2008-08-20) paragraph [0009] - paragraph [0014] paragraph [0035] - paragraph [0043] paragraph [0045] - paragraph [0047] paragraph [0049] - paragraph [0050] paragraph [0052] - paragraph [0055]	1-21

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/061291

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
WO 2008038093	A	03-04-2008	NONE	
WO 2008024788	A	28-02-2008	US 2008273610 A1	06-11-2008
US 2008267131	A1	30-10-2008	NONE	
EP 1045607	A	18-10-2000	AU 2256000 A CN 1273496 A DE 19916991 A1 JP 2000333234 A	19-10-2000 15-11-2000 19-10-2000 30-11-2000
EP 1959708	A	20-08-2008	NONE	