

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 April 2008 (03.04.2008)

PCT

(10) International Publication Number
WO 2008/038231 A3

(51) International Patent Classification:

H04L 12/56 (2006.01)

(21) International Application Number:

PCT/IB2007/053902

(22) International Filing Date:

26 September 2007 (26.09.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/847,367 27 September 2006 (27.09.2006) US

(71) Applicant (for all designated States except US): **NOKIA CORPORATION** [FI/FI]; Keilalahdentie 4, FI-02150 Espoo (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HONGISTO, Jukka** [FI/FI]; Revontulentie 2 o 47, FI-00740 Helsinki (FI). **BAGGSTRÖM, Stefan** [FI/FI]; Hussankatu 44, FI-33580 Tampere (FI). **PELKONEN, Mari-Jaana**

[FI/FI]; Rautiaisentie 4 a, FI-02660 Espoo (FI). **IISAKKILA, Kaisu** [FI/FI]; Manttyviita 5 D 20, FI-02110 Espoo (FI). **HWANG, Woonhee** [KR/FI]; Juhanintie 6 A, FI-02180 Espoo (FI).

(74) Agents: **LESON, Thomas J.A.** et al.; Bavariaring 4-6, 80336 Munich (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, 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,

[Continued on next page]

(54) Title: METHOD, SYSTEM, AND DEVICES FOR INFORMING A TERMINAL ABOUT FAILURE IN RESOURCE RESERVATION

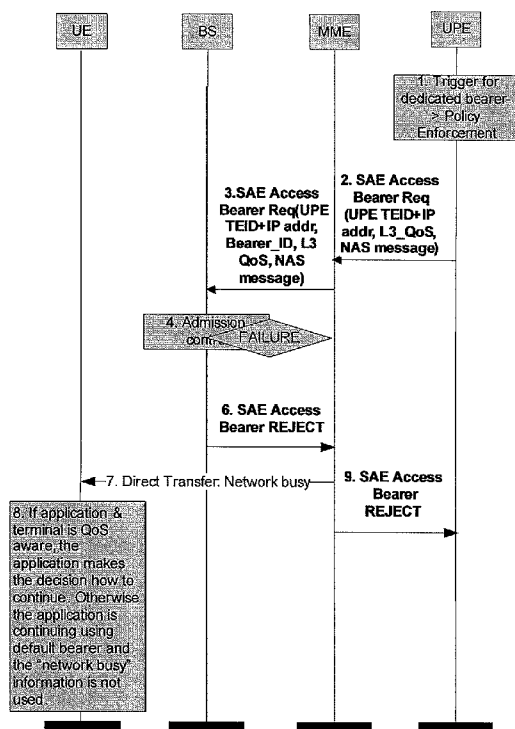


FIG. 5

(57) Abstract: In an embodiment, a network decides on quality of service, QoS, to be used for information flow between the network and a terminal, and on whether the terminal is to be informed on an unsuccessful resource reservation needed for providing the quality of service. The network informs the terminal depending on the decision result. An application running in the terminal, such as a QoS aware application, is provided with information about failure in resource reservation, and a session setup is canceled, or a default QoS is used, or session parameters are renegotiated, in response to the information about failure.



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, MT, 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).

— *before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments*

Published:

— *with international search report*

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

14 August 2008

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2007/053902

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04L12/56

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)

H04L

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/227871 A1 (HSU RAYMOND T [US] ET AL) 11 December 2003 (2003-12-11) abstract paragraph [0012] - paragraph [0013] paragraph [0055] - paragraph [0062] paragraph [0066]	5-15, 22-36, 38
A	ERICSSON: "Operator Controlled QoS" 3GPP TSG SA WG2, XX, XX, vol. SA2#50, no. S2-060049, 16 January 2006 (2006-01-16), page 5pp, XP007901697 the whole document	1-38

☒ 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.
- *G* document member of the same patent family

Date of the actual completion of the international search

4 June 2008

Date of mailing of the international search report

12/06/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Peeters, Dirk

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2007/053902

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ERICSSON: "Impacts of mechanisms for operator controlled QoS in a GPRS IP-CAN (Release 7)" 3GPP TSG SA WG2, XX, XX, vol. SA2#51, no. S2-060676, 13 February 2006 (2006-02-13), page 5pp, XP007901698 the whole document	1-38
A	----- LUDWIG R; EKSTROM H; WILLARS P; LUNDIN N: "An Evolved 3GPP QoS Concept" VEHICULAR TECHNOLOGY CONFERENCE SPRING 2006, [Online] 10 May 2006 (2006-05-10), pages 388-392, XP002482553 Retrieved from the Internet: URL: http://ieeexplore.ieee.org/iel5/11096/35441/01682842.pdf?tp=&isnumber=&arnumber=1682842 > [retrieved on 2008-06-02] abstract "Requirement b)" paragraph [0III] penultimate paragraph page 390, left-hand column paragraph [00VI]	1-38
A	----- WO 01/28160 A (NORTEL NETWORKS LTD [CA]; SEN SANJOY [US]; BHARATIA JAYSHREE A [US]; M) 19 April 2001 (2001-04-19) abstract page 6, line 1 - page 7, line 16 page 8, line 3 - line 27 page 12, line 18 - line 28 page 14, line 13 - page 15, line 19	6-15, 23-36
A	----- WO 2006/094446 A (HUAWEI TECH CO LTD [CN]; LIU ENHUI [CN]) 14 September 2006 (2006-09-14) abstract & EP 1 858 211 A (HUAWEI TECH CO LTD [CN]) 21 November 2007 (2007-11-21) abstract paragraph [0001] - paragraph [0024] paragraph [0101] - paragraph [0110] & ITU WG3: "Revision 1 of TR-RACS, FGNGN-OD-00074" ITU-T INTERNAL DOCUMENT, INTERNATIONAL TELECOMMUNICATION UNION, GENEVA, CH, 3 December 2004 (2004-12-03), pages 1-22, XP002424686 paragraph [06.1] paragraph [8.1.3] -/--	1-38

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2007/053902

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	& "NGN Functional Architecture; Resource and Admission Control Subsystem (RACS); Release 1; Draft ETSI ES 2XX XXX" ETSI STANDARDS, LIS, no. V 1.1.0, 1 December 2004 (2004-12-01), XP014023277 ISSN: 0000-0001 paragraph [05.3] paragraph [5.4.1.1] paragraph [5.4.1.2] paragraph [5.4.1.6] Annex A	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2007/053902

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003227871 A1	11-12-2003	US 2004008632 A1	15-01-2004
WO 0128160 A	19-04-2001	AU 7088200 A	23-04-2001
		DE 60031435 T2	29-03-2007
		EP 1226683 A2	31-07-2002
WO 2006094446 A	14-09-2006	CN 1832449 A	13-09-2006
		EP 1858211 A1	21-11-2007
EP 1858211 A	21-11-2007	WO 2006094446 A1	14-09-2006
		CN 1832449 A	13-09-2006