

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 December 2007 (27.12.2007)

PCT

(10) International Publication Number
WO 2007/148190 A3

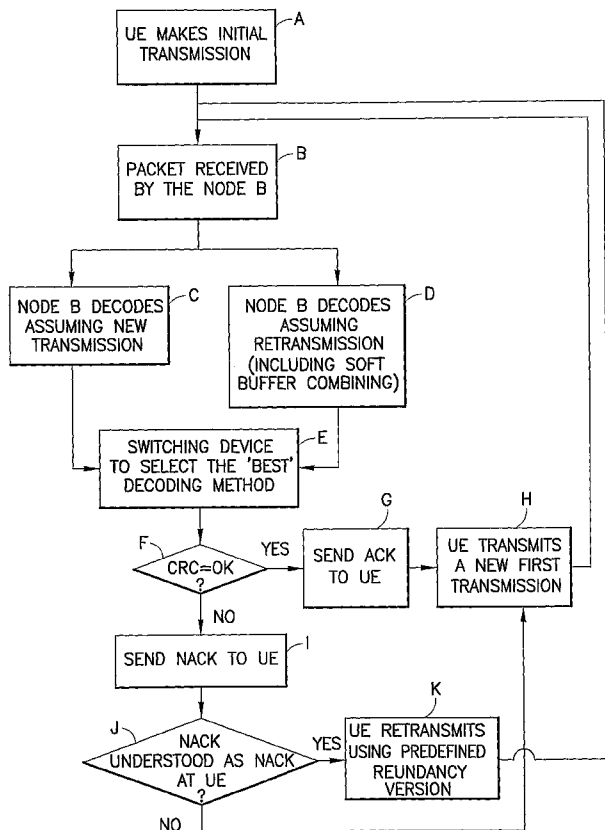
- (51) International Patent Classification:
H04L 1/18 (2006.01) H04L 1/16 (2006.01)
- (21) International Application Number:
PCT/IB2007/001614
- (22) International Filing Date: 15 June 2007 (15.06.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11/473,276 20 June 2006 (20.06.2006) US
- (71) Applicant (for all designated States except LC, US):
NOKIA SIEMENS NETWORKS OY [FI/FI]; Kara-
portti 3, FIN-02610 Espoo (FI).
- (71) Applicant (for LC only): NOKIA, INC. [US/US]; 6000
Connection Drive, Irving, TX 75039 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): FREDERIKSEN,
Frank [DK/DK]; Hornsbaekvej 4, DK-9270 Klarup (DK).
- (74) Agent: SMITH, Harry, F.; Harrington & Smith, PC, 4
Research Drive, Shelton, CT 06484-6212 (US).

(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, 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).

[Continued on next page]

(54) Title: APPARATUS, METHOD AND COMPUTER PROGRAM PRODUCT PROVIDING UPLINK H-ARQ USING LIMITED SIGNALING



(57) Abstract: Disclosed is a method, a computer program product and a device operable to receive a packet at a first network device from a second network device; to decode the received packet using a first decoding scheme defined for decoding a new transmission of a packet, and to also decode the received packet using a second decoding scheme defined for decoding a re-transmission of a packet and, in response to decoding, to determine whether the received packet is a new transmission of a packet or a re-transmission of a previous packet, without requiring an explicit signaling from the second network device for specifying the type of the packet.

WO 2007/148190 A3



Published:

— *with international search report*

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

10 April 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2007/001614

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

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)

IPC: H04L, H04Q, H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 0045544 A1 (QUALCOMM INC), 3 August 2000 (03.08.2000), page 3, line 27 - page 4, line 20, abstract --	1-40
A	US 20040223507 A1 (KUCHIBHOTLA, R ET AL), 11 November 2004 (11.11.2004), abstract --	1-40
A	EP 1381181 A1 (MOTOROLA, INC), 14 January 2004 (14.01.2004), paragraphs [0059]-[0062] -- -----	1-40

 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 application or patent 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

"&" document member of the same patent family

Date of the actual completion of the international search

16 January 2008

Date of mailing of the international search report

17-01-2008

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer

Anders Edlund /LR
Telephone No. +46 8 782 25 00

International patent classification (IPC)**H04L 1/18** (2006.01)**H04L 1/16** (2006.01)**Download your patent documents at www.prv.se**

The cited patent documents can be downloaded at www.prv.se by following the links:

- In English/Searches and advisory services/Cited documents (service in English) or
- e-tjänster/anförda dokument (service in Swedish).

Use the application number as username.

The password is **OJUOZVVBIIH**.

Paper copies can be ordered at a cost of 50 SEK per copy from PRV InterPat (telephone number 08-782 28 85).

Cited literature, if any, will be enclosed in paper form.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2007/001614

WO	0045544	A1	03/08/2000	AU	761463	B	05/06/2003
				AU	2976300	A	18/08/2000
				CA	2361075	A	03/08/2000
				CN	1359571	A,T	17/07/2002
				EP	1147636	A	24/10/2001
				JP	2002536874	T	29/10/2002
				US	6378099	B	23/04/2002

US	20040223507	A1	11/11/2004	AU	2004240078	A	25/11/2004
				CN	1864361	A	15/11/2006
				EP	1621026	A	01/02/2006
				FI	20051049	A	03/01/2006
				JP	2007500990	T	18/01/2007
				KR	20050122282	A	28/12/2005
				WO	2004102980	A	25/11/2004

EP	1381181	A1	14/01/2004	NONE			
----	---------	----	------------	------	--	--	--
