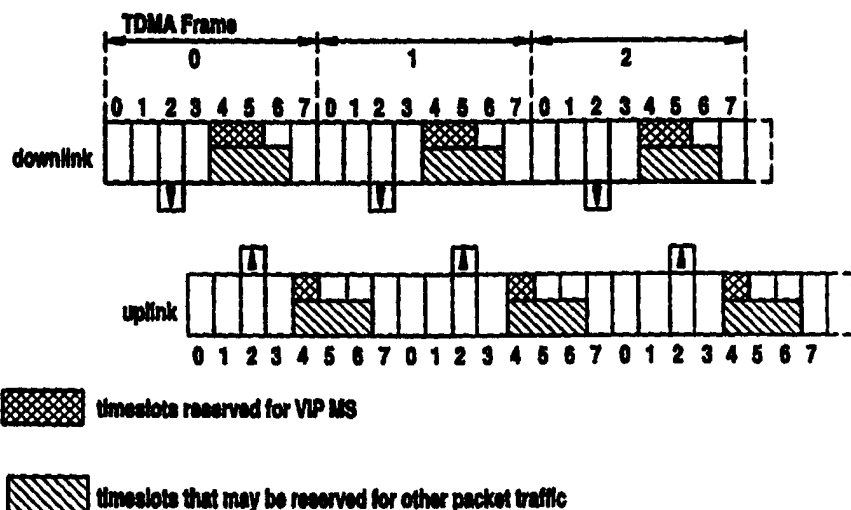




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04Q 7/22	A3	(11) International Publication Number: WO 98/24250 (43) International Publication Date: 4 June 1998 (04.06.98)
(21) International Application Number: PCT/SE97/01992 (22) International Filing Date: 27 November 1997 (27.11.97) (30) Priority Data: 08/755,572 27 November 1996 (27.11.96) US (71) Applicant: TELEFONAKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-126 25 Stockholm (SE). (72) Inventor: TURINA, Dalibor; Reduttvägen 14B, S-187 68 Täby (SE). (74) Agent: TELEFONAKTIEBOLAGET LM ERICSSON; Patent and Trademark Dept., S-126 25 Stockholm (SE).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 1 October 1998 (01.10.98)

(54) Title: METHOD AND APPARATUS FOR IMPROVING PERFORMANCE OF A PACKET COMMUNICATIONS SYSTEM

**(57) Abstract**

A communications system (10) is provided that uses a multiple access packet reservation type of protocol. The physical channels required for the packet transfers are specially allocated to one mobile station (16) (referred to as a "VIP MS"). The VIP MS (16) has the exclusive priority to use these allocated physical channels for packet data as needed. Consequently, the VIP MS (16) always has the negotiated bandwidth available for the packet transfers. Furthermore, since the VIP MS (16) is given the highest exclusive priority to access these physical channels ("VIP priority"), by allocating a reserved random access channel dedicated to the VIP MS (e.g., on one allocated uplink channel), the variable random access delays experienced by prior systems no longer exist. Since the VIP MS (16) is always scheduled first for transmissions on the downlink, and reserved access is provided for the VIP MS (16) on the uplink, only a constant delay period for the uplink and downlink is involved. In other words, the VIP MS (16) is guaranteed both a bandwidth for the packet transfers and a constant uplink and downlink delay.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/SE 97/01992

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 H04Q7/22

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 6 H04Q H04B

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 096, no. 010, 31 October 1996 & JP 08 154097 A (NIPPON TELEGR &TELEPH CORP <NTT>) see abstract	1,2,16, 19,25
A	WO 96 37079 A (QUALCOMM INC) 21 November 1996 see page 5, line 26 - page 6, line 6 see page 6, line 17 - line 30 see page 9, line 27 - page 10, line 2 see page 11, line 18 - line 29 see page 18, line 31 - page 19, line 13 see page 42, line 3 - page 43, line 24 --- -/--	1,2,16, 19,25

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

29 July 1998

Date of mailing of the international search report

05/08/1998

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INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	BIANCHI G ET AL: "DYNAMIC CHANNEL ALLOCATION PROCEDURES FOR PACKET DATA SERVICES OVER GSM NETWORKS" ISS '95. WORLD TELECOMMUNICATIONS CONGRESS. (INTERNATIONAL SWITCHING SYMPOSIUM), ADVANCED SWITCHING TECHNOLOGIES FOR UNIVERSAL TELECOMMUNICATIONS AT THE BEGINNING OF THE 21ST. CENTURY BERLIN, APR. 23 - 28, 1995, vol. 1, 23 April 1995, pages 246-250, XP000495573 VERBAND DEUTSCHER ELEKTROTECHNIKER (VDE) ET AL see page 246, right-hand column, paragraph 2 - page 247, right-hand column, paragraph 3 see page 248, left-hand column, line 44 - line 58 see page 249, right-hand column, paragraph 5 - page 250, left-hand column, line 3 ---	1,2,16, 19,25
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International Application No

PCT/SE 97/01992

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