

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 August 2002 (22.08.2002)

PCT

(10) International Publication Number
WO 02/065664 A2

(51) International Patent Classification⁷: **H04B 7/00**

(21) International Application Number: PCT/US02/05171

(22) International Filing Date: 14 February 2002 (14.02.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/788,259 15 February 2001 (15.02.2001) US

(71) Applicant: **QUALCOMM INCORPORATED** [US/US];
5775 Morehouse Drive, San Diego, CA 92121-1714 (US).

(72) Inventors: **TIEDEMANN, Edward, G., Jr.**; 656 Barretts
Mill Road, Concord, MA 01742 (US). **CHEN, Tao**; 5415
Harvest Run Drive, San Diego, CA 92130 (US). **JAIN,**
Avinash; 11143 Caminito Alvarez, San Diego, CA 92126
(US).

(74) Agents: **WADSWORTH, Philip, R.** et al.; Qualcomm In-
corporated, 5775 Morehouse Drive, San Diego, CA 92121-
1714 (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, VN,
YU, ZA, ZM, ZW.

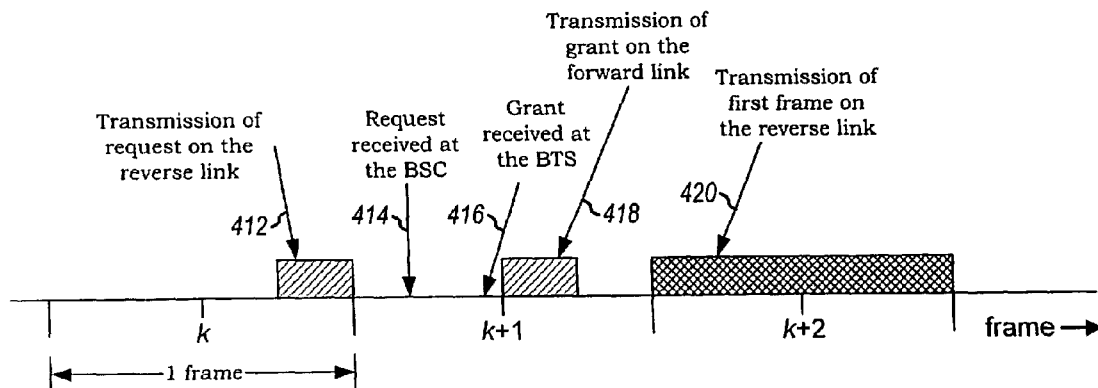
(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,
GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).

Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: REVERSE LINK CHANNEL ARCHITECTURE FOR A WIRELESS COMMUNICATION SYSTEM



(57) Abstract: A channel structure and mechanisms that support effective and efficient allocation and utilization of the reverse link resources. In one aspect, mechanisms are provided to quickly assign resources (e.g., a supplemental channel) as needed, and to quickly de-assign the resources when not needed or to maintain system stability. The reverse link resources may be quickly assigned and de-assigned via short messages (412, 418) exchanged on control channels on the forward and reverse links. In another aspect, mechanisms are provided to facilitate efficient and reliable data transmission. A reliable acknowledgment/negative acknowledgment scheme and an efficient retransmission scheme are provided. Mechanisms are also provided to control the transmit power and/or data rate of the remote terminals to achieve high performance and avoid instability.



WO 02/065664 A2