4401480-5
IPOS

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
H04Q 7/22, H04B 7/26

A2

(11) International Publication Number: WO 98/19481

(43) International Publication Date: 7 May 1998 (07.05.98)

(21) International Application Number: PCT/US97/19677

(22) International Filing Date: 27 October 1997 (27.10.97)

(30) Priority Data:
741,320 29 October 1996 (29.10.96) US

(71) Applicant: QUALCOMM INCORPORATED [US/US]; 6455 Lusk Boulevard, San Diego, CA 92121 (US).

(72) Inventor: ZEHAVI, Ephraim; 15A Watson Street, 34751 Haifa (IL).

(74) Agents: OGROD, Gregory, D. et al.; Qualcomm Incorporated, 6455 Lusk Boulevard, San Diego, CA 92121 (US).

(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
Without international search report and to be republished upon receipt of that report.

1 PD
1 Appl.
1 Inv.

(54) Title: METHOD AND APPARATUS FOR PROVIDING HIGH SPEED DATA COMMUNICATIONS IN A CELLULAR ENVIRONMENT

(57) Abstract

A method and apparatus for transmitting digital data in a cellular environment. Adjacent cells of the cellular system (1 and 2A–2F) are prevented from simultaneously transmitting data. Because the noise from transmission of adjacent cells is a primary source of interference, the transmission rate of power limited base stations (1–3) can be dramatically increased when the noise from adjacent cells is eliminated. The transmissions to each subscriber station (6) are made at a fixed transmission power level. However, the data rate of transmitted signals differs from one subscriber station (6) to another depending the path loss differences. In a first exemplary embodiment, the data rate of transmissions to a subscriber station (6) is determined by selecting an encoding rate for the transmitted signal while holding the symbol rate constant. In a second exemplary embodiment, the data rate of transmission to a subscriber station (6) is determined by selecting a modulation format for the transmitted signal which directly changes the symbol rate of transmission to a subscriber station (6).

