



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04B 7/005		A1	(11) International Publication Number: WO 99/31819
			(43) International Publication Date: 24 June 1999 (24.06.99)
(21) International Application Number: PCT/SE98/02292		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, 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, GM, KE, LS, MW, SD, SZ, UG, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 11 December 1998 (11.12.98)			
(30) Priority Data: ① 60/069,511 ✓ 15 December 1997 (15.12.97) ✓ US ✓ ② 60/090,236 ✓ 22 June 1998 (22.06.98) ✓ US ✓ ③ 09/189,629 ✓ 10 November 1998 (10.11.98) ✓ US ✓			
(71) Applicant: TELEFONAKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-126 25 Stockholm (SE).			
(72) Inventors: BUTOVITSCH, Paul, Peter, Tranebergsvägen 39, S-167 45 Bromma (SE); ANDERSSON, Peter, Sorögatan 45, 4tr, S-164 47 Kista (SE).		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
(74) Agent: ERICSSON RADIO SYSTEMS AB; Common Patent Dept., S-164 80 Stockholm (SE).		3 PDS. IPC: H04B 7/005 1 appl. IPR 6/7/99 2 Invs.	

(54) Title: BASE STATION TRANSMIT POWER CONTROL IN A CDMA CELLULAR TELEPHONE SYSTEM ✓

(57) Abstract

A power control method in accordance with the present invention synchronizes the transmit power levels at the base stations currently serving a mobile station and an initial transmit power level of a new target base station being added in a diversity handover situation. At the beginning of the handover, a radio network controller orders the serving base stations to measure their respective transmit powers to the mobile station. Each serving base station then measures its transmit power to the mobile station and reports the power level measurements to the radio network controller. An initial transmit power setting is determined for the target base station, and new transmit power settings are determined for the serving base stations synchronized for example to a particular time (t_0). At or about synchronizing time t_0 , the target base station transmits to the mobile station at the initial power setting, and at or about the same time, the serving base stations preferably also adjust their transmit powers toward the new values. Alternatively, the serving base stations transmit at their respective new values at or about time t_0 . In a preferred embodiment of the present invention, the serving base station power adjustment is performed gradually.

