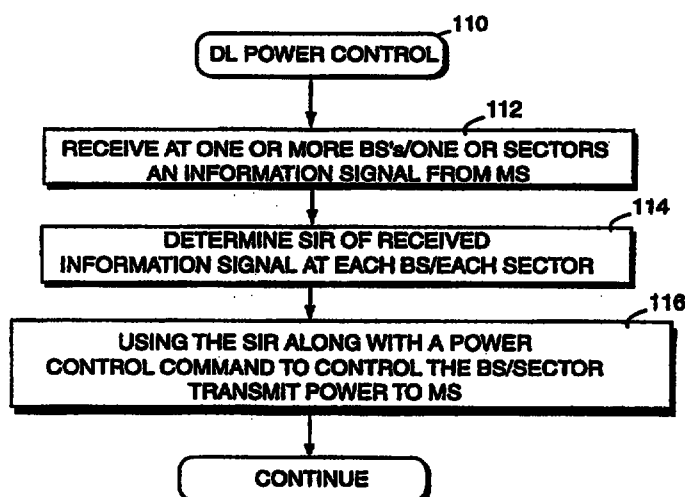




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04B 7/005	A1	(11) International Publication Number: WO 99/52226 (43) International Publication Date: 14 October 1999 (14.10.99)
(21) International Application Number: PCT/SE99/00491 (22) International Filing Date: 26 March 1999 (26.03.99) (30) Priority Data: 09/055,781 7 April 1998 (07.04.98) US (71) Applicant: TELEFONAKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-126-25 Stockholm (SE). (72) Inventors: BUTOVITSCH, Peter; Tranebergsvägen 39, S-167 45 Bromma (SE). THORNERG, Carl, Magnus; Homat Cathay 702, 3-4-34, Motoazabu, Minato-ku, Tokyo 106 (JP). SUNDELIN, Magnus; Kyrkvägen 20, S-182 74 Stocksund (SE). KNUTSSON, Jens; Mörbydalen 7, 1tr, S-182 52 Danderyd (SE). (74) Agent: ERICSSON RADIO SYSTEMS AB; Common Patent Dept., S-164 80 Stockholm (SE).	(81) Designated States: AE, 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, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, 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). 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.	

(54) Title: DOWNLINK POWER CONTROL IN A CELLULAR MOBILE RADIO COMMUNICATIONS SYSTEM



(57) Abstract

The transmit power of a base station transmission to a mobile station is advantageously controlled. The base station receives a signal from the mobile station and determines a signal-to-interference ratio (SIR) associated with the received signal. The base station controls its transmit power to the mobile station using the determined SIR value in conjunction with a transmit power control command received from the mobile station. When the mobile station is in the process of a soft handover involving two or more base stations, each of those base stations determines an SIR value associated with a signal received from the mobile station. Moreover, each of the base stations controls its respective power using both the power control command received from the mobile station and the SIR determined by that base station. Similarly, when the mobile station is in the process of softer handover involving two or more sectors of a single base station, the SIR associated with a signal received from the mobile station in each of those base station sectors is determined and used to control the respective power of each base station sector in conjunction with a power control command received from the mobile station.