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(21) International Application Number: ✓ PCT/US98/01759 (22) International Filing Date: ✓ 29 January 1998 (29.01.98) (30) Priority Data: 08/790,206 ✓ 5 February 1997 (05.02.97) ✓ US (71) Applicant: INTERWAVE COMMUNICATIONS INTERNATIONAL, LTD. [US/US]; Suite 108, 656 Bair Island Boulevard, Redwood City, CA 94063-2704 (US). ✓ (72) Inventors: TU, Jerome, C.; 2222 Villanova Road, San Jose, CA 95130 (US). CHAO, Pi-Hui; 813 Shell Boulevard #1011, Foster City, CA 94401 (US). ✓ (74) Agents: CASERZA, Steven, F. et al.; Flehr, Hohbach, Test, Albritton & Herbert LLP, Suite 3400, 4 Embarcadero Center, San Francisco, CA 94111-4187 (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, GM, GW, 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, GM, 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>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: METHOD AND APPARATUS FOR PROVIDING INTELLIGENT CELLULAR HANDOFF ✓ (57) Abstract A cellular network includes a receiver configured to receive inbound information from a mobile station. A correlator is coupled to the receiver and configured to correlate the inbound information against expected information to generate a correlator signal. An interpolator is coupled to the correlator and configured to interpolate the correlator signal to generate an interpolator signal. A memory is coupled to the interpolator and configured to store the interpolator signal. A processor is coupled to the memory and configured to process the interpolator signal to determine a position of the mobile station. Additional embodiments track the position of the mobile station based on cellular handoff and mobile station-position over time. The cellular network can transfer the mobile station from the microcellular network to the macrocellular network if the mobile station is moving rapidly. The cellular network can transfer the mobile station from the macrocellular network to the microcellular network if the mobile station is moving slowly. Advantages of the invention include the ability to reduce control traffic among the network elements including the BTS, BSC and MSC. As a result, the inventive network can handle more telephone calls and can organize the calls more efficiently than in traditional cellular networks.		