(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 October 2006 (26.10.2006)

PCT

(10) International Publication Number
WO 2006/111974 A1

(51) International Patent Classification:
H04B 7/185 (2006.01)

(21) International Application Number:
PCT/IL2006/000490

(22) International Filing Date: 20 April 2006 (20.04.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
168149 20 April 2005 (20.04.2005) IL

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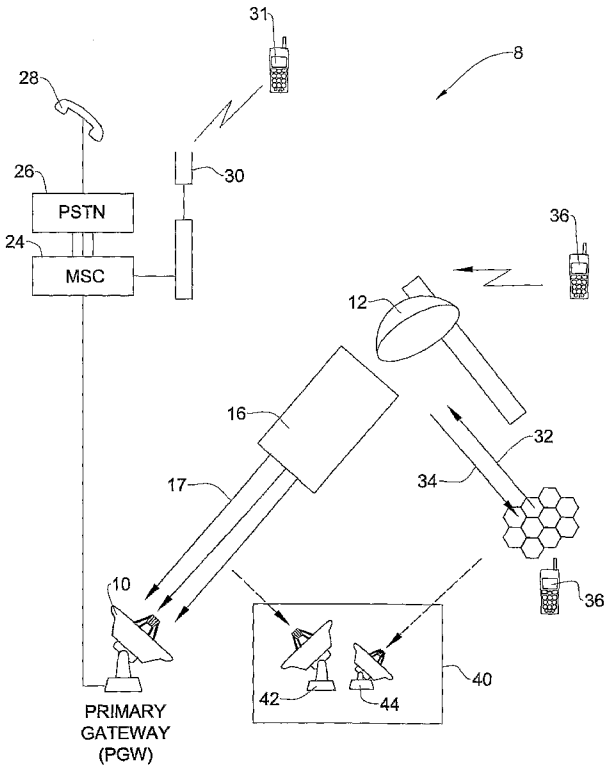
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

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

(54) **Title:** A SYSTEM AND METHOD FOR PROCESSING SATELLITE COMMUNICATION DATA



(57) **Abstract:** The present invention provides an apparatus and method for intercepting and monitoring communications between target mobiles and a main station of a satellite communication system, wherein communication between the mobiles and a satellite is achieved by using a first-band spot beams, chosen by the mobiles and wherein communication between the satellite and the main station is achieved by using a wideband second-band link, and wherein the satellite is operable to change the mapping scheme of the first-band frequencies to the second-band frequencies, the apparatus comprises: at least one RF second-band and at least one RF first-band receive antenna which transmits the received signals to at least one RF second-band and at least one first-band receiver respectively; an intermediate frequency RF distributor which receives signals from said RF second-band and RF first-band receivers and splits the transmission into groups of frequencies; a plurality of demodulators which are tuned to cover sequentially the first-band frequency spectrum, for extracting identification codes of target mobiles and decryption messages; a wide angle mapping unit which receives the second-band signals from said intermediate frequency distributor, analyses and maps the received frequencies according to their time occurrence, and correlates said frequencies with said first-band frequencies; means for recording and monitoring said communications.

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