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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
3 January 2003 (03.01.2003)

PCT

(10) International Publication Number
WO 03/001681 A2

(51) International Patent Classification[7]: H04B

(21) International Application Number: PCT/IB02/02407

(22) International Filing Date: 25 June 2002 (25.06.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/300,674 25 June 2001 (25.06.2001) US
60/301,078 26 June 2001 (26.06.2001) US

(71) Applicant: NOKIA CORPORATION [FI/FI]; Keilalahdentie 4, FIN-02140 Espoo (FI).

(71) Applicant *(for LC only)*: NOKIA INC. [US/US]; 6000 Connection Drive, Irving, TX 75039 (US).

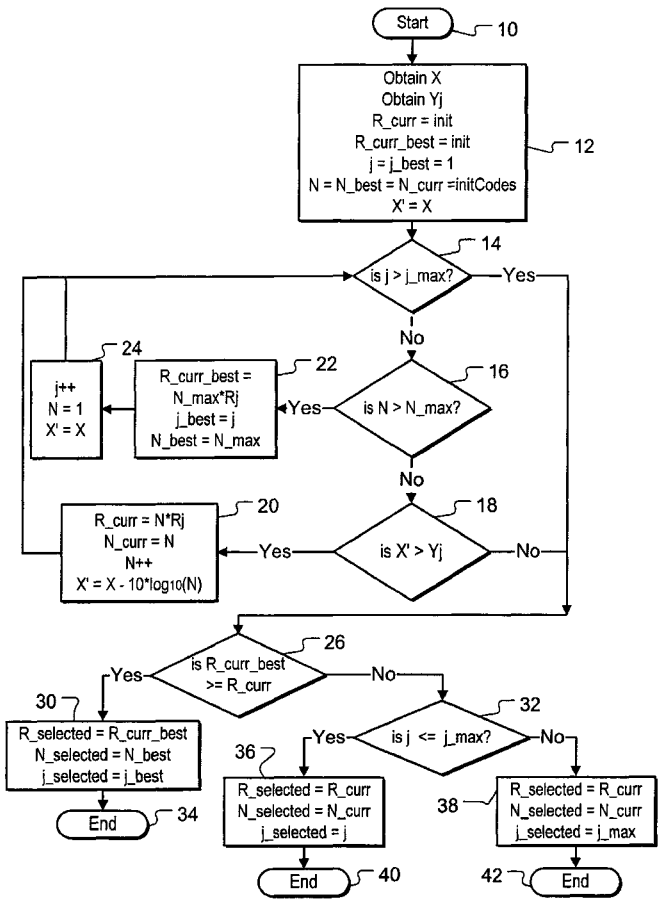
(72) Inventors: KWAN, Raymond; Harustie 3 C 37, FIN-00980 Helsinki (FI). POUTIAINEN, Eeva; Temppelikatu 19 D 41, FIN-00100 Helsinki (FI). HAMALAINEN, Seppo; Punaltukuntie 6-8A3, FIN-02670 Espoo (FI). MALKAMAKI, Esa; Riippakoivuntie 17 B, FIN-02130 Espoo (FI).

(74) Agents: MAGUIRE, Francis, J. et al.; Ware, Fressola, Van der Sluys & Adolphson LLP, 755 Main Street, PO Box 224, Monroe, CT 06468 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: OPTIMIZATION OF MCS AND MULTICODE WITH TFCI SIGNALING



(57) Abstract: A two-dimensional optimization between adaptive modulation and coding and multi-code transmission targets the best bit rate at which highest useable modulation and coding set or scheme (MCS) achieves a maximum allowed number of channelization codes or less. The optimized MCS and number of channelization codes at a best bit rate is communicated from a transmitter to a receiver with power information using a transport format combination indicator (TFCI).

WO 03/001681 A2

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that 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.