



(51) International Patent Classification:  
*H04W 8/26* (2009.01)

(21) International Application Number:  
PCT/IB2010/055711

(22) International Filing Date:  
10 December 2010 (10.12.2010)

(25) Filing Language: Turkish

(26) Publication Language: English

(30) Priority Data:  
2009/10014 30 December 2009 (30.12.2009) TR

(71) Applicant (for all designated States except US): **TURKCELL TEKNOLOJİ ARASTIRMA VE GELİSTİRME ANONİM ŞİRKETİ** [TR/TR]; Tubitak Marmara Araştırma Merkezi, Gebze Yerleşkesi, Teknoloji Serbest, Bolgesi, Gebze, 41470 Kocaeli (TR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CEVIKBAS, Rahmi Cem** [TR/TR]; Turkcell Teknoloji Arastirma Ve, Gelistirme Anonim Sirketi, Tubitak Marmara Arastirma Merkezi, Gebze Yerleskesi, Teknoloji Serbest Bolgesi, Gebze 41470 Kocaeli (TR). **SARDAG, Alp** [TR/TR]; Turkcell Teknoloji Arastirma Ve, Gelistirme Anonim Sirketi, Tubitak Marmara Arastirma Merkezi, Gebze Yerleskesi, Teknoloji Serbest Bolgesi, Gebze 41470 Kocaeli (TR).

(74) Agent: **TRITECH PATENT TRADEMARK CONSULTANCY INC.**; Resit Galip Cad. No. 111/30 Gaziosmanpasa, Cankaya, 06700 Ankara (TR).

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

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

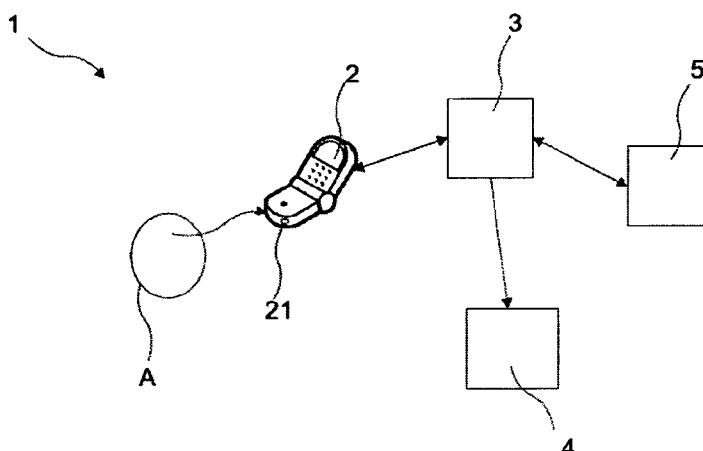
— with amended claims (Art. 19(1))

(88) Date of publication of the international search report:  
1 March 2012

Date of publication of the amended claims: 7 June 2012

(54) Title: A SYSTEM WHEREIN COSTS OF IDENTIFYING SIM CARDS TO GSM SYSTEMS IS REDUCED

Figure 1



(57) Abstract: The present invention relates to a system (1) which reduces costs of identifying SIM cards to GSM systems by using at least one device (2) having at least one SIM card (21) in which a SIM Tool Kit (STK) application is installed, at least one SIM card personalization center (3), at least one HLR (4) and CAS systems (5).

## AMENDED CLAIMS

received by the International Bureau on 20 February 2012 (20.02.2012)

1. A system (1) which reduces costs of identifying SIM cards to GSM systems; and employs at least one device (2) having at least one SIM card (21) in which a SIM Tool Kit (STK) application is installed, at least one  
5 SIM card personalization center (3), at least one HLR (4) and CAS systems (5); and **characterized in that** it operates with the steps of
- the device (2) adapted to receive the SIM card (21) from a subscriber and adapted to be switched on by the subscriber (101),
  - 10 - STK (SIM Tool Kit) application in the SIM card (21) reading the serial number of the SIM card (21) (102),
  - STK (SIM Tool Kit) application in the SIM card (21) enabling the device (2) to connect to the network by running the "PROVIDE LOCAL INFO" command in the device (2) with predetermined time  
15 intervals until the device (2) connects to the network (103),
  - after the device (2) is connected to the network, STK application sending the serial number of the SIM card (21) to the SIM card personalization center (3) by running the "SEND SHORT MESSAGE" command in the device (2) (104),
  - 20 - STK application continuing to send the serial number of the SIM card (21) to the SIM card personalization center (3) with predetermined time intervals until the SIM card personalization center (3) receives the sent message successfully (105),
  - SIM card personalization center (3) receiving from the CAS systems  
25 (5) the real MSISDN, real MSISDN profile, real authentication key and real IMSI number corresponding to the SIM card (21) by means of the SIM card (21) serial number transmitted thereto (106),
  - SIM card personalization center (3) carrying out the identifications concerning the real IMSI number corresponding to the SIM card (21)  
30 in HLR (4) (107),

- SIM card personalization center (3) transmitting the real IMSI number to the SIM card (21) and the SIM card (21) saving this number to a file in the memory (108),
- 5     - STK application replacing the dummy IMSI number with the real IMSI kept at the file in the memory (109),
- if the mobile device (2) of the subscriber (A) supports the "REFRESH" proactive command, STK application restarting the device (2) with this command (109),
- 10    - if the mobile device (2) of the subscriber (A) does not support the "REFRESH" proactive command, STK application giving a message to the subscriber, by means of the "DISPLAY TEXT" proactive command, to restart the mobile device (2) (110).