



(43) International Publication Date
27 September 2012 (27.09.2012)

- (51) International Patent Classification:
G06F 17/40 (2006.01) *H04W 92/02* (2009.01)
- (21) International Application Number:
PCT/SG2012/000092
- (22) International Filing Date:
21 March 2012 (21.03.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/454,872 21 March 2011 (21.03.2011) US
- (71) Applicants (for all designated States except US): **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG). **SINGAPORE TECHNOLOGIES DYNAMICS PTE LTD** [SG/SG]; 249 Jalan Boon Lay, Singapore 619523 (SG).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **LIM, Hock Beng** [SG/SG]; Nanyang Technological University, c/o Nanyang Innovation & Enterprise Office (NIEO), Blk 1, Unit 213, Innovation Centre, 16 Nanyang Drive, Singapore 637722 (SG). **IQBAL, Mudasser** [PK/SG]; Nanyang Technological University, c/o Nanyang Innovation & Enterprise Office (NIEO), Blk 1, Unit 213, Innovation Centre, 16 Nanyang Drive, Singapore 637722 (SG). **YANG, Daiqin** [CN/SG]; Nanyang Technological University, c/o Nanyang Innovation & Enterprise Office (NIEO), Blk 1, Unit 213, Innovation Centre, 16 Nanyang Drive, Singapore 637722 (SG). **OBAID, Talha** [PK/SG]; Nanyang Technological University, c/o Nanyang Innovation & Enterprise Office (NIEO), Blk 1, Unit 213, Innovation Centre, 16 Nanyang Drive,

Singapore 637722 (SG). **NG, Teng Jie** [SG/SG]; Nanyang Technological University, c/o Nanyang Innovation & Enterprise Office (NIEO), Blk 1, Unit 213, Innovation Centre, 16 Nanyang Drive, Singapore 63772 (SG).

(74) Agent: **VIERING, JENTSCHURA & PARTNER LLP**; P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

(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, QA, RO, RS, RU, RW, 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.

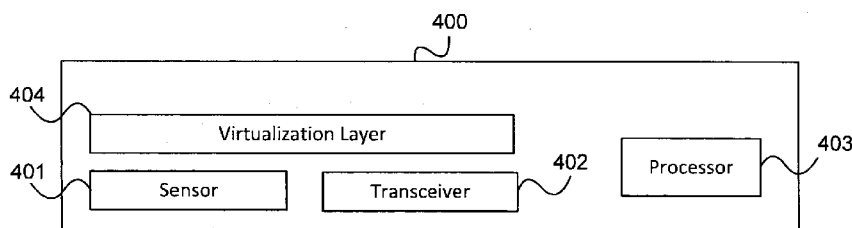
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, 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))

(54) Title: SENSOR DEVICE

FIG 4



(57) Abstract: According to an embodiment, a sensor device is provided comprising a sensor; a transceiver; a processor configured to run an application; and a virtualization layer which comprises an application programming interface encapsulating application layer features of the sensor device and which is configured to provide to the application, via at least one service access point, a service to communicate with another sensor device by means of the transceiver, a service to control the sensor and a service to discover a sensor device network, have the sensor device leave a sensor device network and/or have the sensor device join a sensor device network.

