

(51) International Patent Classification:
H04W 24/00 (2009.01)(21) International Application Number:
PCT/IN2013/000372(22) International Filing Date:
17 June 2013 (17.06.2013)

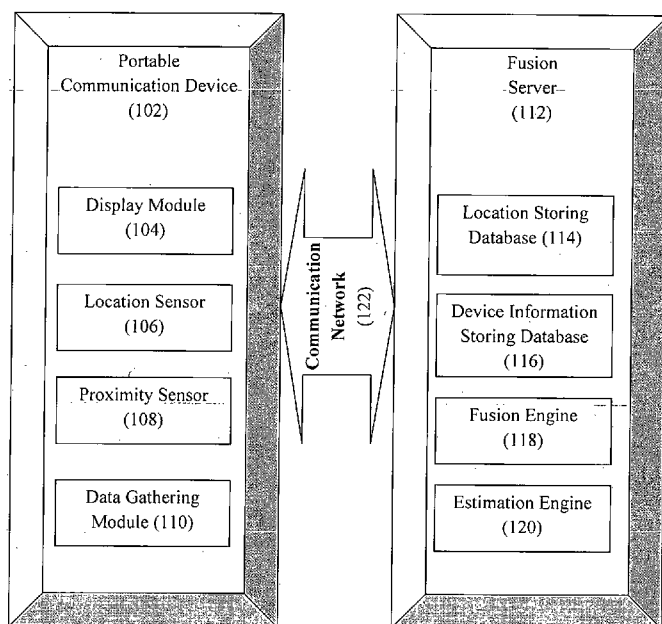
(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2287/MUM/2012 9 August 2012 (09.08.2012) IN(71) Applicant: **TATA CONSULTANCY SERVICES LIMITED** [IN/IN]; Nirmal Building, 9th Floor, Nariman Point, Mumbai 400021, Maharashtra (IN).(72) Inventors: **GHOSE, Avik**; Tata Consultancy Services Limited, Plot A2, M2 & N2, Sector V, Block GP, Salt Lake Electronics, Complex Kolkata - 700091, West Bengal, 700091 Kolkata (IN). **DUTTA CHOUDHURY, Anirba**; Tata Consultancy Services Limited, Plot A2, M2 & N2, Sector V, Block GP, Salt Lake Electronics, Complex Kolkata - 700091, West Bengal, 700091 Kolkata (IN). **BHAUMIK, Chirabrata**; Tata Consultancy Services Limited, Plot A2, M2 & N2, Sector V, Block GP, Salt Lake Electronics, Complex Kolkata - 700091, West Bengal,700091 Kolkata (IN). **PAL, Arpan**; Tata Consultancy Services Limited, Plot A2, M2 & N2, Sector V, Block GP, Salt Lake Electronics, Complex Kolkata - 700091, West Bengal, 700091 Kolkata (IN).(74) Agents: **GUPTA, Priyank** et al.; Legasxs Partners, B-105, ICC Trade Towers, Senapati Bapat Road, Maharashtra, 411016 Pune (IN).(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, BN, 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, 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, PA, 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, 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,

[Continued on next page]

(54) Title: A SYSTEM AND METHOD FOR MEASURING THE CROWDEDNESS OF PEOPLE AT A PLACE



(57) Abstract: A method, system and apparatus for determining crowdedness at a location, using a first portable communication device having a proximity sensor, wherein the location of a first user is determined using the first portable communication device having an application installed on a memory module thereof, wherein the application is configured to connect to a location sensor embedded in the first portable communication device. The method and system further comprises of sensing and identifying a second portable communication device in vicinity of the first user, followed by transmitting a media access control address (MAC address) of the identified second portable communication device to a remote fusion server. Further removing redundancies pertaining to the identified second portable communication device based on the MAC address received by the remote fusion server using a fusion algorithm to determine the crowdedness- at-the determined location.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG). **Published:**

Declarations under Rule 4.17:

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*