



(51) International Patent Classification:

H04W 48/18 (2009.01) *H04L* 12/56 (2006.01)
H04W 88/04 (2009.01) *H04B* 7/15 (2006.01)
H04W 40/12 (2009.01) *G06F* 1/16 (2006.01)

(21) International Application Number:

PCT/US2012/021007

(22) International Filing Date:

11 January 2012 (11.01.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/006,769 14 January 2011 (14.01.2011) US

(71) Applicant (for all designated States except US): **COVIDIEN LP** [US/US]; 15 Hampshire Street, Mansfield, MA 02048 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GAINES, Robert B.** [US/US]; 1010 Marions Cove Drive, Lake St. Louis, MO 63367 (US). **WIESNER, Joel D.** [US/US]; 1110 Tree-shade Drive, St. Peters, MO 63376 (US). **BREITWEISER, Kenneth M.** [US/US]; 1725 Fosterberg Road, Brighton, IL 62012 (US). **HOLSTE, John** [US/US]; RR1 Box 215, Hamburg, IL 62045-9700 (US).

(74) Agents: **WINSOR, Lisa E.** et al.; Covidien LP, 15 Hampshire Street, Mansfield, MA 02048 (US).

(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))
- with amended claims (Art. 19(1))

[Continued on next page]

(54) Title: WIRELESS RELAY MODULE FOR REMOTE MONITORING SYSTEMS

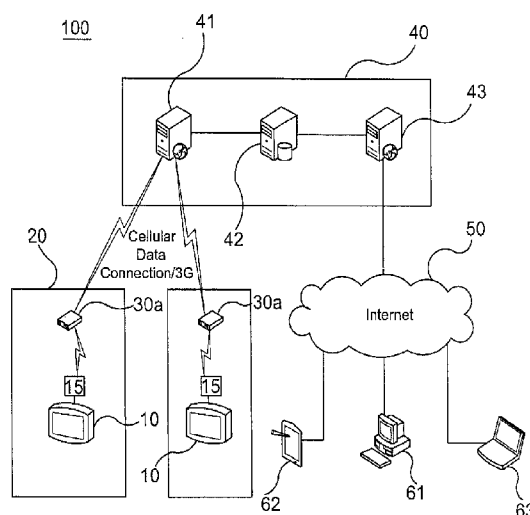


FIG.1

(57) Abstract: A wireless relay module for networked communications between a series of medical devices and a remote monitoring device. An interface circuit coupled to each medical device communicates with the wireless relay module via a wireless relay network. The relay module communicates with the remote monitoring device over an internet-accessible wireless communication network, and includes a receiver coupled to the wireless relay network, a first transmitter coupled to the wireless relay network, a second transmitter coupled to the internet-accessible wireless communications network; and a controller. The controller determines a status of the internet-accessible wireless communications network. When the status indicates that the internet-accessible wireless communications network is accessible, the second transmitter is selected for transmitting medical device data. When the internet-accessible wireless communications network is not accessible, the first transmitter is selected for transmitting the data to another wireless relay module.





(88) Date of publication of the international search report: 8 November 2012
Date of publication of the amended claims: 10 January 2013