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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 November 2012 (22.11.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/159019 A4

(51) International Patent Classification:
A61B 5/00 (2006.01)

(21) International Application Number:
PCT/US2012/038549

(22) International Filing Date:
18 May 2012 (18.05.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/519,251 19 May 2011 (19.05.2011) US

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(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, 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**: TRIGGERING RECHARING AND WIRELESS TRANSMISSION OF REMOTE PATIENT MONITORING DEVICE

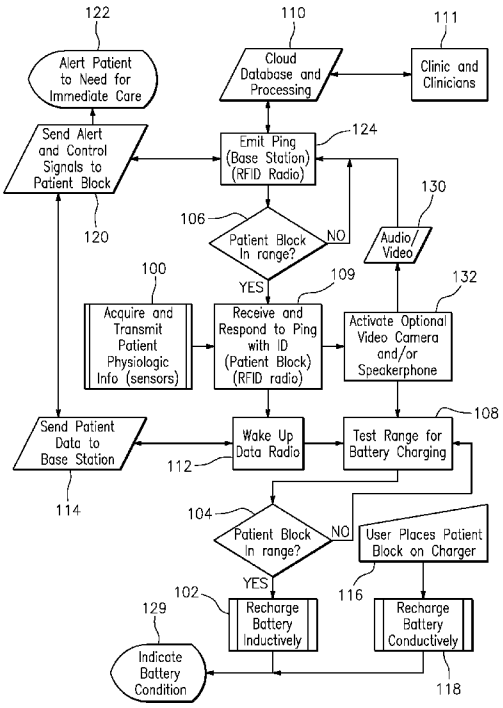

FIG. 1

(57) **Abstract**: Applicant has disclosed a convenient method of automatic identification, communication with, and battery life extension and automatic recharging for a medical telemetry device, worn by a patient. Applicant's preferred method in its broadest sense comprises: once a patient puts the medical telemetry device into or near a base unit for charging, the device automatically starts communicating physiological data via the Internet to clinicians and/or remote servers for analysis.

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(88) Date of publication of the international search report: 10 January 2013

Date of publication of the amended claims: 14 February 2013

AMENDED CLAIMS
received by the International Bureau on 19 December 2012

CLAIMS

1. A method comprising:

a. preserving battery power on a medical telemetry device, worn by a patient, by switching off power of a battery operated RF circuit, when the telemetry device is not transmitting physiological data of the patient;

b. periodically transmitting an RFID pulse from a powered base station;

c. receiving an RFID pulse on a RFID radio in the medical telemetry device, when the telemetry device is within range to communicate with the base station, and subsequently;

i. responding automatically to the received RFID pulse, when the telemetry device is within range to communicate with the base station, by transmitting from the RFID radio identifying information from the medical telemetry device;

ii. switching on power of the RF circuit in the medical telemetry device, when the telemetry device is within range to communicate with the base station, to enable communicating by the medical telemetry device with the base station; and

iii. upon switching on the power of the RF circuit, transmitting physiological data of the patient from the medical telemetry device for remote analysis;

d. determining whether the medical telemetry device is within 10 meters of the base station; and

e. upon determining the medical telemetry device is within 10 meters of the base station, initiating wireless inductive charging by the base station of a rechargeable battery of the medical telemetry device.

2. The method of Claim 1 wherein the inductive charging of the rechargeable battery takes place while the medical telemetry device is worn by the patient.

3. A method comprising:

a. transmitting a wireless signal from a powered base station;

b. receiving a wireless signal from the powered base station on an electrical circuit in a medical telemetry device worn by a patient;

c. responding to the received signal by transmitting, from a battery operated electrical circuit, identifying information about the medical telemetry device;

d. switching on battery power for the electrical circuit to enable communicating by the medical telemetry device with the base station;

e. upon switching on battery power for the electrical circuit, transmitting physiological data of the patient from the medical telemetry device to the base station;

f. after the base station receives the transmitted physiological data, transmitting the physiological data from the base station via the Internet for remote analysis;

g. determining whether the medical telemetry device is within range of the base station for wireless inductive charging; and

h. upon determining the medical telemetry device is within range of the base station for wireless inductive charging, initiating wireless inductive charging of a battery of the medical telemetry device while the device is worn by the patient.

4. The method of Claim 3 further comprising communicating alerts to the patient indicating a need for immediate medical attention.

5. The method of Claim 4 further comprising observing the patient via a video camera over the Internet.

6. A method of identifying, triggering recharging, and triggering communicating with a medical telemetry device, worn by an ambulatory patient, comprising:

a. preserving battery power on a medical telemetry device, worn by an ambulatory patient, by switching off power of a battery powered RF circuit in the medical telemetry device when the telemetry device is not transmitting physiological data of the patient;

b. periodically transmitting a RFID pulse from a powered base station;

c. receiving a RFID pulse on a RFID device in the medical telemetry device, when the ambulatory patient is within a communication range in which the medical telemetry device can communicate with the base station, and subsequently:

i. responding automatically to the received pulse by transmitting from the RFID device identifying information about the medical telemetry device;

ii. switching on power of a battery operated RF circuit to enable communicating by the medical telemetry device with the base station;

iii. upon switching on the power of the RF circuit, transmitting patient data, from the medical telemetry device, via the Internet for remote analysis;

iv. connecting the telemetry device to a battery charger of the base station; and

v. upon connecting the telemetry device to the battery charger, periodically recharging a rechargeable battery of the medical telemetry device.

7. The method of Claim 6 further comprising communicating alerts to the patient indicating a need of immediate medical attention.

8. A method of identifying, triggering recharging, and triggering communicating with a medical telemetry device, worn by a patient, comprising:

a. preserving battery power on a medical telemetry device, worn by a patient, by switching off power to a battery operated RF circuit, when the telemetry device is not transmitting physiological data of the patient;

b. periodically transmitting an RFID pulse from a base station;

c. determining whether the medical telemetry device is within range of the base station for wireless inductive charging; and

d. upon determining the medical telemetry device is within range of the base station for wireless inductive charging, performing the following steps:

i. receiving an RFID pulse on a RFID radio in the medical telemetry device;

ii. responding to the received RFID pulse by transmitting from the RFID radio identifying information from the medical telemetry device;

iii. switching on the battery operated RF circuit in the medical telemetry device to enable communicating by the medical telemetry device with the base station;

iv. upon switching on the power of the RF circuit, transmitting physiological data of the patient from the medical telemetry device for remote analysis; and

v. initiating wireless inductive charging by the base station of a battery of the medical telemetry device.