US 20110230142A1

(19) **United States**

(12) **Patent Application Publication**

Young et al.

(10) **Pub. No.: US 2011/0230142 A1**

(43) **Pub. Date: Sep. 22, 2011**

(54) **METHOD AND SYSTEM FOR MULTI-DEVICE COMMUNICATION**

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(21) Appl. No.: **13/150,398**

(22) Filed: **Jun. 1, 2011**

Related U.S. Application Data

(63) Continuation of application No. 11/999,866, filed on Dec. 7, 2007, now Pat. No. 7,979,136.

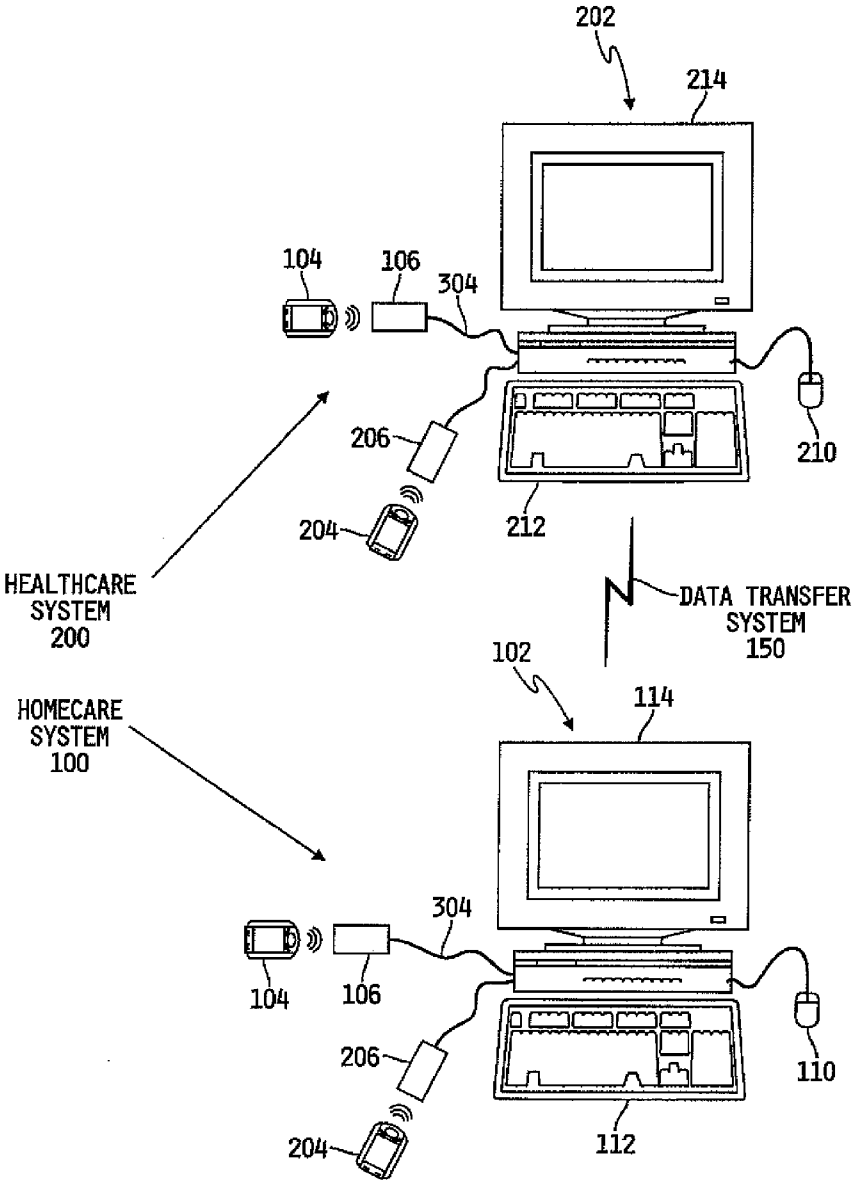
Publication Classification

(51) **Int. Cl.**
H04W 4/00 (2009.01)

(52) **U.S. Cl.** **455/66.1**

(57) **ABSTRACT**

A medical data system including a plurality of receivers configured to wirelessly receive medical data via a signal.



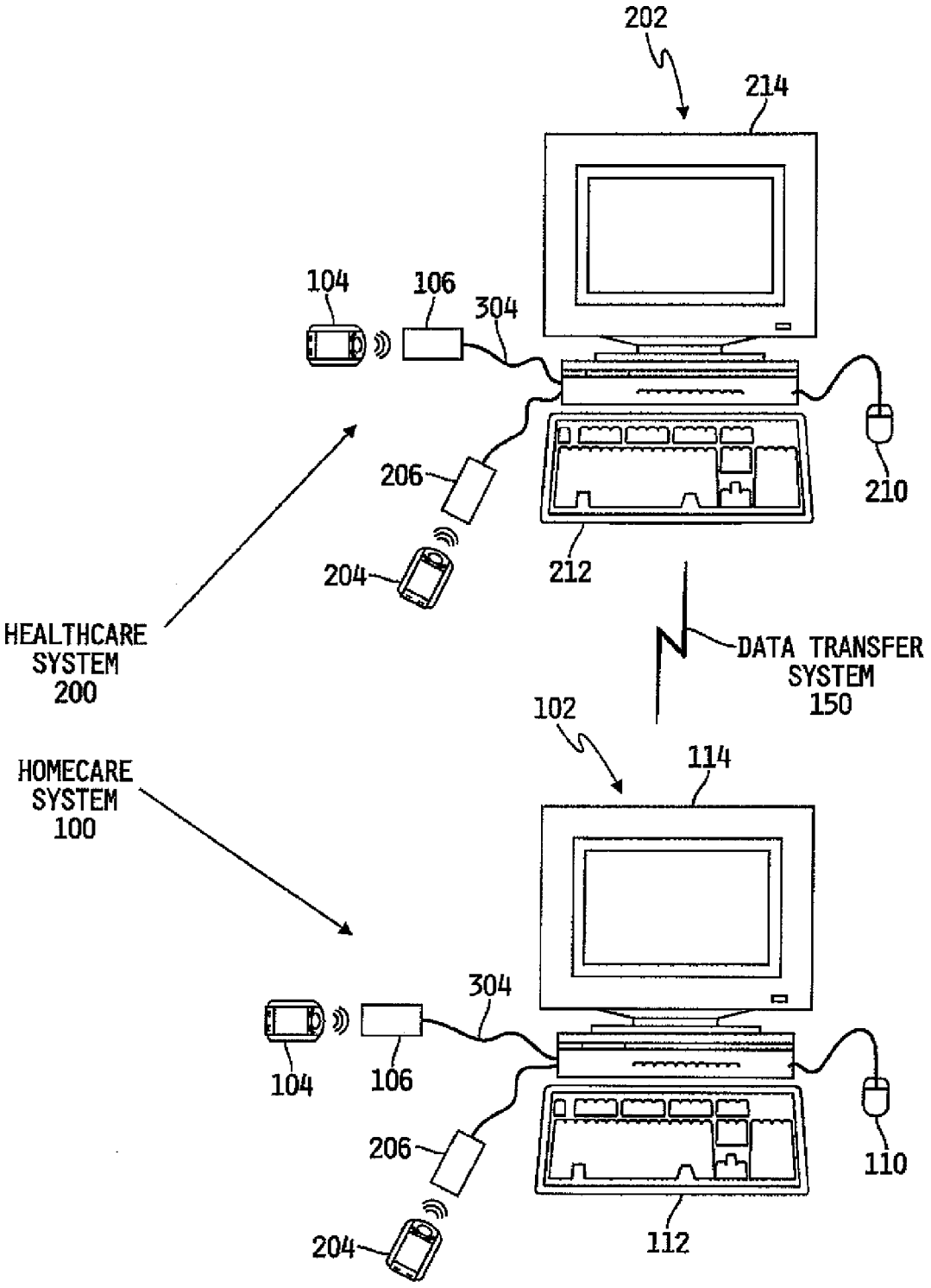

202
214
104
106
304
206
204
212
210
HEALTHCARE SYSTEM 200
DATA TRANSFER SYSTEM 150
102
114
HOMECARE SYSTEM 100
304
104
106
206
204
112
110

FIG. 1

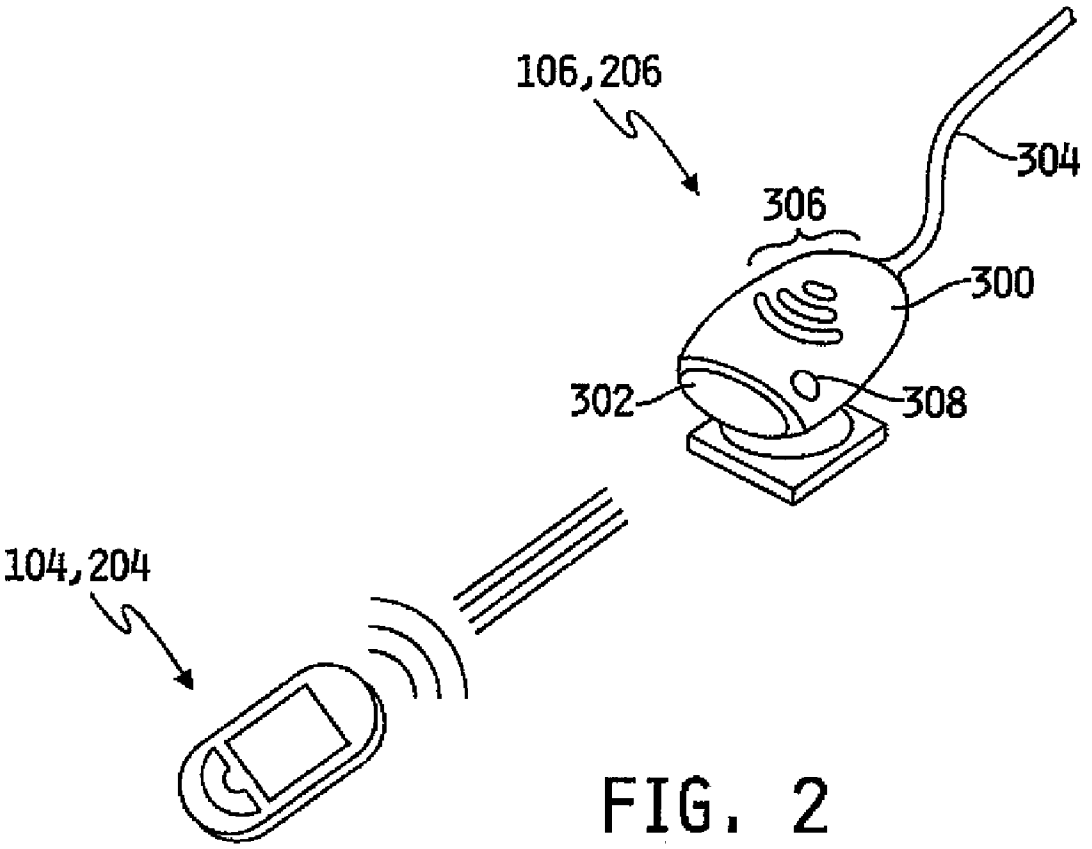


FIG. 2

METHOD AND SYSTEM FOR MULTI-DEVICE COMMUNICATION

PRIORITY

[0001] The present application is a continuation of U.S. patent application Ser. No. 11/999,866 (Publication 2009/0150175) titled METHOD AND SYSTEM FOR MULTI-DEVICE COMMUNICATION filed Dec. 7, 2007, the disclosure of which is hereby expressly incorporated by reference.

FIELD OF THE INVENTION

[0002] The present disclosure relates to a method and system for managing health data. More particularly, the disclosure relates a method and system for interfacing with a medical device.

BACKGROUND

[0003] Many fields of medical treatment and healthcare require monitoring of certain body functions, physical states and conditions, and patient behaviors. Thus, e.g., for patients suffering from diabetes, a regular check of the blood glucose level forms an essential part of the daily routine. The blood glucose level has to be determined quickly and reliably, often several times per day. Medical devices are used to facilitate the collection of medical information without unduly disturbing the lifestyle of the patient. A large number of medical devices for monitoring various body functions are commercially available. Also, medical treatment and healthcare may require monitoring of exercise, diet, meal times, stress, work schedules and other activities and behaviors.

[0004] To reduce the frequency of necessary visits to doctors, the idea of home care gained popularity over the recent years. Technological advancements in medicine led to the increased use of medical devices. Many of these medical devices, such as meters and medicine delivery devices, are able to collect and store measurements and other data for long periods of time. Other devices, such as computers, portable digital assistants (PDAs), and cell phones, have been adapted to medical uses by the development of software directed to the collection of healthcare data. These advancements led to the development of health management systems that enable collection and use of large numbers of variables and large amounts of healthcare data. While systems were traditionally developed for use in healthcare facilities and health management organizations including insurance companies and governmental agencies (HCP systems), increased technological sophistication by the populous at large led to the increased use of health management systems by patients, care givers, and others (patient systems) in addition to increased use by HCP systems. U.S. Pat. No. 7,103,578 and U.S. Published Application No. 2004/0172284 disclose two such methods and systems. Many of these systems are able to transfer data between them.

SUMMARY

[0005] The disclosure relates to a method and system for interfacing between a healthcare management system and medical devices. One embodiment of the system includes a medical data transmission system including a first dongle coupled to a first computing entity and configured to wirelessly receive medical data via a signal generated by a first medical device; and a second dongle coupled to the first computing entity and configured to wirelessly receive medical data via a signal generated by a second medical device; the second dongle being configured to wirelessly receive medical data simultaneously with the first dongle wirelessly receiving medical data.

[0006] In another embodiment, a computer readable medium is provided. The computer readable medium including operating instructions thereon such that when interpreted by a processor cause the processor to perform the step of simultaneously wirelessly downloading medical information from a first and second medical data devices.

[0007] In another embodiment, a medical data transmission system is provided. The system including a first transceiver configured to wirelessly receive medical data from a first medical device via a first data signal; the first transceiver emitting a first beacon signal detectable by the first medical device, and a second transceiver configured to wirelessly receive medical data from a second medical device via a second data signal; the second transceiver emitting a second beacon signal detectable by the second medical device.

DESCRIPTION OF THE DRAWINGS

[0008] For more complete understanding of the present disclosure, reference is established to the following drawings in which:

[0009] FIG. **1** shows an embodiment of a health management system comprising a healthcare system and a homecare system; and

[0010] FIG. **2** is a perspective view of a dongle that is part of the systems of FIG. **1**.

[0011] Corresponding reference characters indicate corresponding parts throughout the several views. Although the drawings represent embodiments of various features and components according to the present invention, the drawings are not necessarily to scale and certain features may be exaggerated in order to better illustrate and explain the present invention. The exemplification set out herein illustrates embodiments of the invention, and such exemplifications are not to be construed as limiting the scope of the invention in any manner.

DETAILED DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[0012] For the purposes of promoting an understanding of the principles of the disclosure, reference will now be made to the embodiments illustrated in the drawings, which are described below. The embodiments disclosed below are not intended to be exhaustive or limit the disclosure to the precise form disclosed in the following detailed description. Rather, the embodiments are chosen and described so that others skilled in the art may utilize their teachings. It will be understood that no limitation of the scope of the invention is thereby intended. The disclosure includes any alterations and further modifications in the illustrated devices and described methods and further applications of the principles of the disclosure which would normally occur to one skilled in the art to which the disclosure relates.

[0013] Concepts described below may be further explained in one of more of the co-filed patent applications entitled HELP UTILITY FUNCTIONALITY AND ARCHITECTURE (Atty Docket: ROCHE-P0033), METHOD AND SYSTEM FOR GRAPHICALLY INDICATING MULTIPLE DATA VALUES (Atty Docket: ROCHE-P0039), SYSTEM AND METHOD FOR DATABASE INTEGRITY

CHECKING (Atty Docket: ROCHE-P0056), METHOD AND SYSTEM FOR DATA SOURCE AND MODIFICATION TRACKING (Atty Docket: ROCHE-P0037), PATIENT-CENTRIC HEALTHCARE INFORMATION MAINTENANCE (Atty Docket: ROCHE-P0043), EXPORT FILE FORMAT WITH MANIFEST FOR ENHANCED DATA TRANSFER (Atty Docket: ROCHE-P0044), GRAPHIC ZOOM FUNCTIONALITY FOR A CUSTOM REPORT (Atty Docket: ROCHE-P0048), METHOD AND SYSTEM FOR SELECTIVE MERGING OF PATIENT DATA (Atty Docket: ROCHE-P0065), METHOD AND SYSTEM FOR PERSONAL MEDICAL DATA DATABASE MERGING (Atty Docket: ROCHE-P0066), METHOD AND SYSTEM FOR WIRELESS DEVICE COMMUNICATION (Atty Docket: ROCHE-P0034), METHOD AND SYSTEM FOR SETTING TIME BLOCKS (Atty Docket: ROCHE-P0054), METHOD AND SYSTEM FOR ENHANCED DATA TRANSFER (Atty Docket: ROCHE-P0042), COMMON EXTENSIBLE DATA EXCHANGE FORMAT (Atty Docket: ROCHE-P0036), METHOD OF CLONING SERVER INSTALLATION TO A NETWORK CLIENT (Atty Docket: ROCHE-P0035), METHOD AND SYSTEM FOR QUERYING A DATABASE (Atty Docket: ROCHE-P0049), METHOD AND SYSTEM FOR EVENT BASED DATA COMPARISON (Atty Docket: ROCHE-P0050), DYNAMIC COMMUNICATION STACK (Atty Docket: ROCHE-P0051), SYSTEM AND METHOD FOR REPORTING MEDICAL INFORMATION (Atty Docket: ROCHE-P0045), METHOD AND SYSTEM FOR MERGING EXTENSIBLE DATA INTO A DATABASE USING GLOBALLY UNIQUE IDENTIFIERS (Atty Docket: ROCHE-P0052), METHOD AND SYSTEM FOR ACTIVATING FEATURES AND FUNCTIONS OF A CONSOLIDATED SOFTWARE APPLICATION (Atty Docket: ROCHE-P0057), METHOD AND SYSTEM FOR CONFIGURING A CONSOLIDATED SOFTWARE APPLICATION (Atty Docket: ROCHE-P0058), METHOD AND SYSTEM FOR DATA SELECTION AND DISPLAY (Atty Docket: ROCHE-P0011), METHOD AND SYSTEM FOR ASSOCIATING DATABASE CONTENT FOR SECURITY ENHANCEMENT (Atty Docket: ROCHE-P0041), METHOD AND SYSTEM FOR CREATING REPORTS (Atty Docket: ROCHE-P0046), METHOD AND SYSTEM FOR CREATING USER-DEFINED OUTPUTS (Atty Docket: ROCHE-P0047), DATA DRIVEN COMMUNICATION PROTOCOL GRAMMAR (Atty Docket: ROCHE-P0055), and HEALTHCARE MANAGEMENT SYSTEM HAVING IMPROVED PRINTING OF DISPLAY SCREEN INFORMATION (Atty Docket: ROCHE-P0031), the entire disclosures of which are hereby expressly incorporated herein by reference. It should be understood that the concepts described below may relate to diabetes management software systems for tracking and analyzing health data, such as, for example, the Accu-Chek® 360○ product provided by Roche Diagnostics. However, the concepts described herein may also have applicability to apparatuses, methods, systems, and software in fields that are unrelated to healthcare. Furthermore, it should be understood that references in this patent application to devices, meters, monitors, pumps, or related terms are intended to encompass any currently existing or later developed apparatus that includes some or all of the features attributed to the referred to apparatus, including but not limited to the Accu-Chek® Active, Accu-Chek® Aviva, Accu-Chek® Compact, Accu-Chek® Compact Plus, Accu-Chek® Integra, Accu-Chek® Go, Accu-Chek® Performa, Accu-Chek® Spirit, Accu-Chek® D-Tron Plus, and Accu-Chek® Voicemate Plus, all provided by Roche Diagnostics or divisions thereof.

[0014] The terms "network," "local area network," "LAN," "wide area network," or "WAN" mean two or more computers which are connected in such a manner that messages may be transmitted between the computers. In such computer networks, typically one or more computers operate as a "server", a computer with large storage devices such as hard disk drives and communication hardware to operate peripheral devices such as printers or modems. Other computers, termed "workstations", provide a user interface so that users of computer networks can access the network resources, such as shared data files, common peripheral devices, and inter-workstation communication. The computers have at least one processor for executing machine instructions, and memory for storing instructions and other information. Many combinations of processing circuitry and information storing equipment are known by those of ordinary skill in these arts. A processor may be a microprocessor, a digital signal processor ("DSP"), a central processing unit ("CPU"), or other circuit or equivalent capable of interpreting instructions or performing logical actions on information. Memory includes both volatile and non-volatile memory, including temporary and cache, in electronic, magnetic, optical, printed, or other format used to store information. Users activate computer programs or network resources to create "processes" which include both the general operation of the computer program along with specific operating characteristics determined by input variables and its environment.

[0015] Turning now to the figures, FIG. **1** depicts an exemplary embodiment of a homecare system **100** and healthcare system **200** connected via a WAN **150** for monitoring data. Systems **100**, **200** each comprise a computing device, shown here in the form of computers **102**, **202** having processing units, system memory, display devices **114**, **214**, and input devices **112**, **212**, **110**, **210**, **106**, **206**. Healthcare computer **202** may be, but is not necessarily, acting as a server. Likewise, homecare computer **102** may be, but is not necessarily, acting as a client. Furthermore, while only two computers **102**, **202** are shown, many more computers may be part of the overall system.

[0016] While standard input devices such as mice **110**, **210** and keyboards **112**, **212** are shown, systems **100**, **200** may comprise any user input device. By example, infrared (IR) dongles **106**, **206** are coupled to each of computers **102**, **202**. IR dongles **106**, **206** are configured to send and receive IR transmissions from health management devices **104**, **204**. Computers **102**, **202** include software applications configured to receive data from health management devices **104**, **204** via IR dongles **106**, **206** or otherwise. While the use of IR and IR dongles **106**, **206** is disclosed herein for the transmission of data between health management devices **104**, **204** and computers **102**, **202**, any other method of wireless transmission is also envisioned, including but not limited to RF. Systems **100**, **200** include health management software (not shown) configured to receive medical information from one or more of input devices **112**, **212**, **110**, **210**, **106**, **206**. Health management devices **104**, **204** are described herein as meters, but could also be PDA's, therapeutic pumps, combinations thereof, or other devices that store medical data thereon. Medical information may include blood glucose values, A1c values, Albumin values, Albumin excretion values, body

mass index values, blood pressure values, carbohydrate values, cholesterol values (total, HDL, LDL, ratio) creatinine values, fructosamine values, HbA1 values, height values, insulin dose values, insulin rate values, total daily insulin values, ketone values, microalbumin values, proteinuria values, heart rate values, temperature values, triglyceride values, weight values, and any other medical information that is desired to be known.

[0017] IR dongle **106**, **206**, shown in FIG. **2**, includes housing **300**, IR transmission window **302**, and interface cable **304**. Housing **300** is sized and shaped to contain IR producing and receiving circuitry therein. IR transmission window **302** is disposed on one side of housing **300** and allows the transmission of IR signals therethrough. Interface cable **304**, shown as a USB cable, allows IR dongle **106**, **206** to functionally couple to computers **102**, **202**. Housing **300** also includes reception indicator **306** and communication indicator **308** thereon. Reception indicator **306** provides an indication of reception and the strength of the signal being received from any health management device **104** within range. Reception indicator **306** further allows a user to adjust the positioning of health management device **104**, **204** and receive feedback, such as, for example, the display of more or fewer reception "bars," to effect suitable positioning for data transfer. Communication indicator **308** provides an indication of when data is being transmitted between IR dongle **106**, **206** and health management device **104**, **204**.

[0018] Health management device **104**, **204** may include a housing having an IR window, an "IR detected" LED, and a "good link" LED. IR window of health management device **104**, **204** is similar to the IR transmission window **302** and permits transmission of IR signals therethrough. The "IR detected" LED is similar to reception indicator **306** and provides an indication of whether a compatible dongle **106**, **206** is detected within range. The "good link" LED is similar to communication indicator **308** and indicates that the IR signal from dongle **106**, **206** is suitable for sustaining or is transacting data transfer. While indicators **306**, **308** and the LED indicators are described as being present on both dongle **106**, **206** and health management device **104**, **204**, embodiments are envisioned wherein indicators would only be present on one of dongle **106**, **206** and health management device **104**, **204**.

[0019] In use, dongle **106**, **206**, when not transmitting data, emits a beacon. The beacon is a repetitive link command that is sent out until either a successful IR link is established with health management device **104**, **204** or the software running on computer **102**, **202** is shut down. Although the software is described herein for operation on computer **102**, **202** (e.g., desktop, laptop or tablet), it should be understood that the principles of the invention may be embodied in software for operation on various devices, including but not limited to personal digital assistants ("PDAs"), infusion pumps, blood glucose meters, cellular phones, or integrated devices including a glucose measurement engine and a PDA or cellular device. Furthermore, dongle **106**, **206** may have an instance of the software running on itself. Dongle **106**, **206** may be integrated into computer **102**, **202** or any other device.

[0020] Whenever health management device **104**, **204** is turned on and not transmitting with dongle **106**, **206**, the IR communication portion of health management device **104**, **204** is in a listening mode. Health management device **104**, **204** is listening for the beacon from dongle **106**, **206**. Listening mode is a mode of reduced power draw relative to a data transmission mode to prolong battery life while still being able to detect dongle **106**, **206**. Listening involves periodic scanning for or otherwise attempting to sense the presence of the beacon. Upon "hearing" the beacon, health management device **104**, **204** recognizes the beacon and wakes up to an active state. Transition from listening mode to the active state in one present embodiment of the invention takes less than five seconds. Health management device **104**, **204** then emits data necessary for a handshaking protocol in which health management device **104**, **204** and dongle **106**, **206** exchange data to ensure that a proper device **104**, **106**, **204**, **206** is on the receiving end of their respective transmissions, to ensure that the other device is prepared to communicate, and to coordinate the start of data transfer.

[0021] Once handshaking indicates that proper devices are present, health management device **104**, **204** commences sharing any information that is desired to be shared with dongle **106**, **206**. When the data exchange is being effected, communication indicator **308** and the "good link" LED are illuminated to indicate that a proper link has been established. Accordingly, a user is provided with visual feedback that health management device **104**, **204** is suitably positioned and that data transfer is occurring. When a user sees communication indicator **308** and/or the "good link" LED turn off, the user knows that communication has completed and that health management device **104**, **204** can be moved away from dongle **106**, **206** without fear that such moving will negatively impact data transmission. Embodiments are envisioned where communication indicator **308** and the "good link" LED flash as data is exchanged.

[0022] During all times that the beacon is received by health management device **104**, **204**, the "IR detected" LED is illuminated. During all times that dongle **106**, **206** detects health management device **104**, **204**, reception indicator **306** is illuminated. Reception indicator **306** includes the illumination of one or more "bars" or other intensity indicators to indicate the strength of the received signal. A greater number of illuminated bars indicates a stronger signal. Similarly, the "IR detected" LED can illuminate in more than one color. Red illumination of the "IR detected" LED indicates a poor signal. Yellow illumination of the LED indicates a medium strength signal. Green illumination of the LED indicates a high strength signal. Alternatively, the LED may be binary such that there is only one illumination color. In such embodiments, illumination indicates a satisfactory signal and a lack of illumination indicates a lack of a satisfactory signal. Suitable location of health management device **104**, **204** in the present embodiment includes line of sight positioning such that IR signals can travel between health management device **104**. **204** and dongle **106**, **206** via IR transmission window **302** and the IR window of device **104**, **204**. Embodiments are also envisioned where instead of, or along with, visual indices **308**, **306**, audio indices are provided. Such audio indices could be, for example, a first beep to indicate the start of data transmission, multiple beeps to indicate completion of data transmission, and multiple beeps that change in frequency to indicate the strength of signal being received. Such audio indices provide the functionality of visual indices **308**, **306** to visually impaired users. Similarly, other sensory indicators (e.g., vibration) are envisioned.

[0023] Software runs on computers **102**, **202** and waits for detection of health management device **104**, **204** via dongle **106**, **206**. The software includes a first module that is loaded automatically on startup and runs in the background to oper-

ate dongle **106**, **206** and receive indications of the presence of health management device **104**, **204**. For each computing device on which the first module is running, the first module simultaneously scans the ports the computing device looking for dongles **106**, **206**. In addition to being able to support multiple dongles **106**, **206**, multiple dongles **106**, **206** can be simultaneously discovered by the first module.

[0024] Upon detection of health management device **104**, **204**, the first module invokes a related second module that is suitable for receiving and displaying data therefrom. The second module either automatically accepts and downloads data from health management device **104**, **204** or it prompts a user to ask if data from health management device **104**, **204** should be downloaded. In embodiments where the data is automatically downloaded, it should be appreciated that such downloading occurs without any user interaction with computers **102**, **202**. In this automatic embodiment, the first module is loaded automatically on startup of computers **102**, **202** and downloading occurs upon detection of health management device **104**, **204**. Thus, downloading from health management device **104**, **204** is effected with zero manipulation of and zero input to (e.g., zero "clicks" of a mouse) computers **102**, **202**, provided they are running. In another embodiment, the first module may be configured to request user authorization/verification of the pending download of data (e.g., via a single "click" of a mouse). The second module can also be configured such that reports of the newly downloaded data are presented automatically. Accordingly, computers **102**, **202** are able to produce reports with zero clicks and zero interaction with input devices **110**, **112**, **210**, **212**. In addition to zero-click downloads to computers **102**, **202**, downloads may be similarly performed to other devices such as printers, faxes, or e-mail messages. Output devices such as printers and faxes may be configured to automatically produce a hardcopy or report of the downloaded data.

[0025] Once first health management device **104** is detected by, for example, first dongle **106**, the first module continues to scan for additional (second) health management device **204** via second dongle **206** or via dongle **106** if dongle **106** is able to support multiple devices **104**, **204**. Upon detection of second health management device **204**, the handshaking occurs and the second software module either automatically accepts and downloads data from health management device **204** or it prompts a user to ask if data from health management device **204** should be downloaded. Accordingly, a plurality of health management devices **104**, **204** can simultaneously interface with the software. Furthermore, while the detection of health management devices **104**, **204** has been described in a serial fashion, the software searches all attached dongles **106**, **206** simultaneously and is able to effect interfacing with multiple health management devices **104**, **204** in parallel.

[0026] More specifically, when the first module is active, a Connect application programming interface (Connect API) is used. The Connect API scans all supported and utilized transports, such as dongles **106**, **206**, in parallel in order to search for connected devices. When the Connect API is called, a Connect package is responsible for determining all of the available transports on which to scan for a device. After doing so, each transport is searched in parallel for devices.

[0027] A Device Scan List determines the search order. The Device Scan List is composed of multiple search contexts. Each context is used to detect a different type of device. For example, a RocheACContext detects Active-Compact meters, RocheMeterContext detects all Roche meters, and RocheSpiritContext detects the Spirit pump. At run time, only one context is active at any given instance. The Device Search Order Scan List determines the order in which the contexts attempt to detect a device. If the context fails to detect anything, the next context is attempted. Each context creates and configures a protocol stack and triggers a discovery event for a found compatible device **104**, **204**.

[0028] As devices **104**, **204** are detected, information is retrieved from each device **104**, **204** (e.g., serial number, model number, device name). If the transport, for example dongle **106**, on which device **104** is detected can support more than one connecting device **104**, **204** then the Connect Package continues scanning dongle **106**, otherwise, the scanning process is halted on dongle **106** and continued on other connected dongles **206**.

[0029] As devices **104**, **204** are found, an interface to them is returned to the requesting application. This interface can be used to send commands to device **104**, **204** in a common application protocol. When a command is sent to device **104**, **204** it is translated from the software command to device-specific command as it is passed through layers of the related protocol stack.

[0030] Once connected, data can be downloaded from the connected device **104**, **204** and stored in a database within one or both of homecare system **100** and healthcare system **200**. While the present disclosure has shown computers **102**, **202** having only first and second dongles **106**, **206**, it should be appreciated that embodiments are envisioned with more than two dongles **106**, **206**.

[0031] Additionally, while this invention has been described as having an exemplary design, the present invention may be further modified within the spirit and scope of this disclosure. This application is therefore intended to cover any variations, uses, or adaptations of the invention using its general principles. Further, this application is intended to cover such departures from the present disclosure as come within known or customary practice in the art to which this invention pertains.

1. A medical data transmission system including:

a first transceiver coupled to a first computing entity at a first port and configured to detect the presence of and wirelessly receive data via a signal generated by a first medical device;

a second transceiver coupled to the first computing entity at a second port and configured to detect the presence of and wirelessly receive data via a signal generated by a second medical device; and

software running on the first computing entity, the software including:

a first module automatically invoked when either of the first and second transceivers has detected one of the first and second medical devices, the module being configured to execute one of automatic downloading of patient related medical data from the detected medical device and prompting a user to authorize downloading of patient related medical data from the detected medical device, and

a second module automatically invoked when patient related medical data is downloaded from the detected medical device to the first computing entity, the second module creating a report containing the downloaded data and presenting the report via the first computing entity.

2. The system of claim 1, wherein multiple instances of the first module are run in response to the first transceiver detecting the first medical device contemporaneously with the second transceiver detecting the second medical device.

3. The system of claim 1, wherein the software further includes a third module that determines an appropriate communication protocol upon detection of one of the first and second medical devices by one of the first and second transceivers.

4. The system of claim 3, wherein third module includes a prioritization list that defines an order in which differing communication protocols are used in an attempt to communicate with the detected medical device.

5. The system of claim 1, wherein invoking the second module also causes activation of an externally perceptible indicator of data transmission on the transceiver receiving the downloaded data.

6. The system of claim 5, wherein the indicator of data transmission is activated concurrently with the data transmission.

7. The system of claim 1, wherein the software further includes a fourth module that detects a signal strength between transceivers and medical devices, the fourth module requiring a threshold signal strength to exist before permitting invocation of the first module.

8. The system of claim 2, wherein at least one of the first and second dongles includes an emitter that emits a beacon to be detected by the first and second medical devices such that when the beacon is detected by the first medical device, the first medical device attempts to engage in a handshaking operation with the dongle that is emitting the detected beacon.

9. A medical data transmission system including:

a first transceiver coupled to a first computing entity at a first port and configured to wirelessly receive data via a signal generated by a first medical device;

a second transceiver coupled to the first computing entity at a second port and configured to wirelessly receive data via a signal generated by a second medical device; and

a database into which data from the first medical device and the second medical device are simultaneously written.

10. The system of claim 9, wherein the data from the first medical device and the second medical device are written into the database contemporaneously with the receiving of the signals generated by the first and second medical devices.

11. The system of claim 9, wherein the transceivers are dongles.

12. A computer readable medium, including operating instructions thereon such that when interpreted by a processor cause the processor to perform the step of:

simultaneously wirelessly downloading medical information from a first and second medical data devices and contemporaneously writing medical information from both of the first and second medical data devices to a common database.

11. The computer readable medium of claim 10, wherein the downloading of medical information from the first and second medical data devices is performed via first and second dongles, respectively.

12. The computer readable medium of claim 10, wherein the operating instructions further cause the emitting of a beacon from a medical device interface.

13. The computer readable medium of claim 10, wherein the operating instructions further cause the processor to perform the step of:

wirelessly detecting the presence of a medical device capable of wireless communication.

14. A computer readable medium, including operating instructions thereon such that when interpreted by a processor cause the processor to perform the step of:

simultaneously scanning multiple ports of a computing entity in search of at least one transceiver for downloading medical information from a first medical data device.

15. The computer readable medium of claim 14, wherein the step of simultaneous scanning includes searching for at least one wireless transceiver.

16. The computer readable medium of claim 14, wherein the processor further performs the steps of: emitting a first beacon from a first transceiver, and emitting a second beacon from a second transceiver.

17. The computer readable medium of claim 14, wherein the processor further performs the step of simultaneously downloading medical information from multiple ports.

18. The computer readable medium of claim 17, wherein the processor further performs the step of simultaneously writing medical data received from multiple ports to a common database.

* * * * *