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First inventor	Shin
Title of invention	Methods, systems, and devices for facilitating a health protection protocol
Assignee (if any)	--
Contact information	N/A

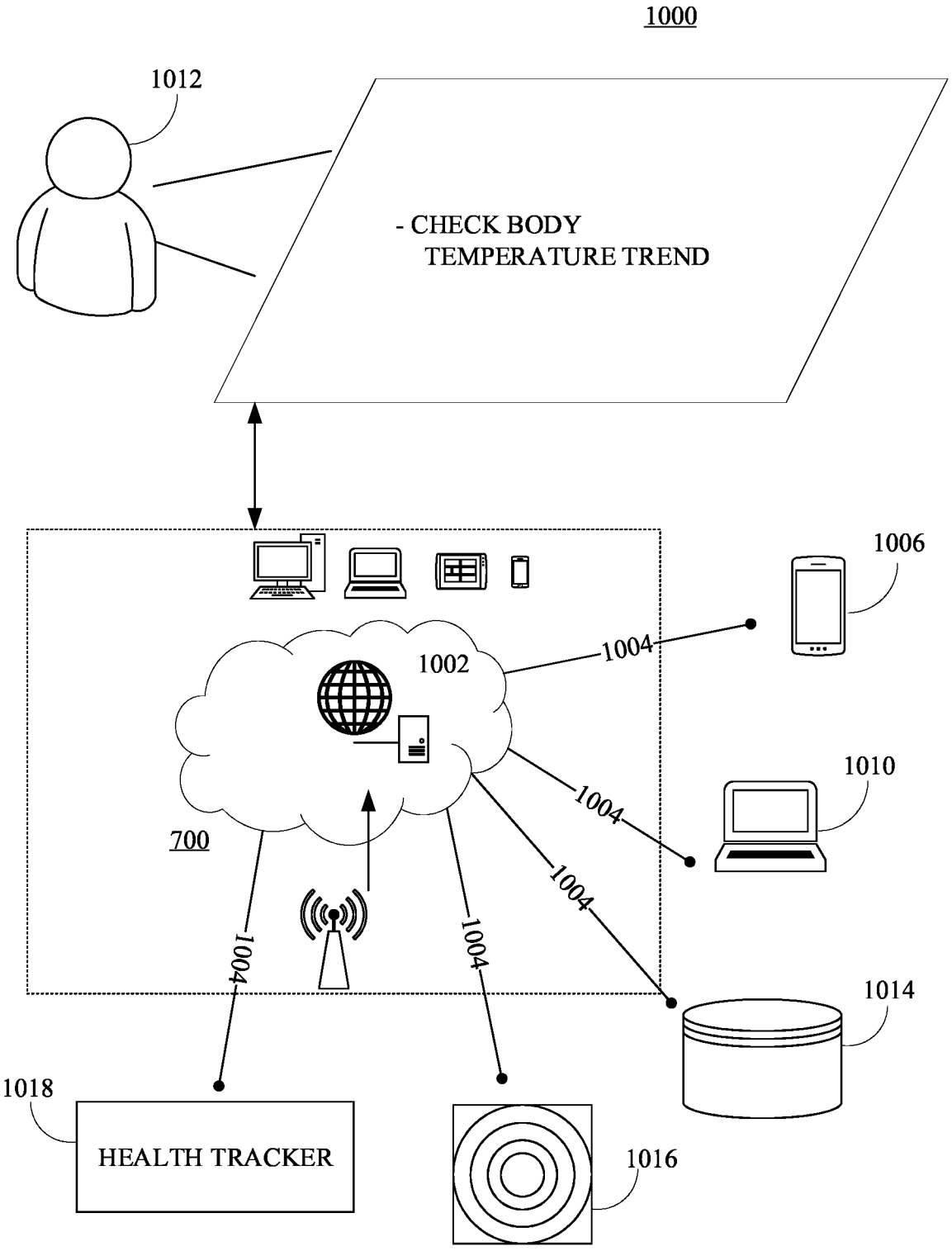
1000
1012
- CHECK BODY TEMPERATURE TREND
1006
1004
1002
1010
700
1004
1004
1004
1014
1018
HEALTH TRACKER
1016

FIG. 1

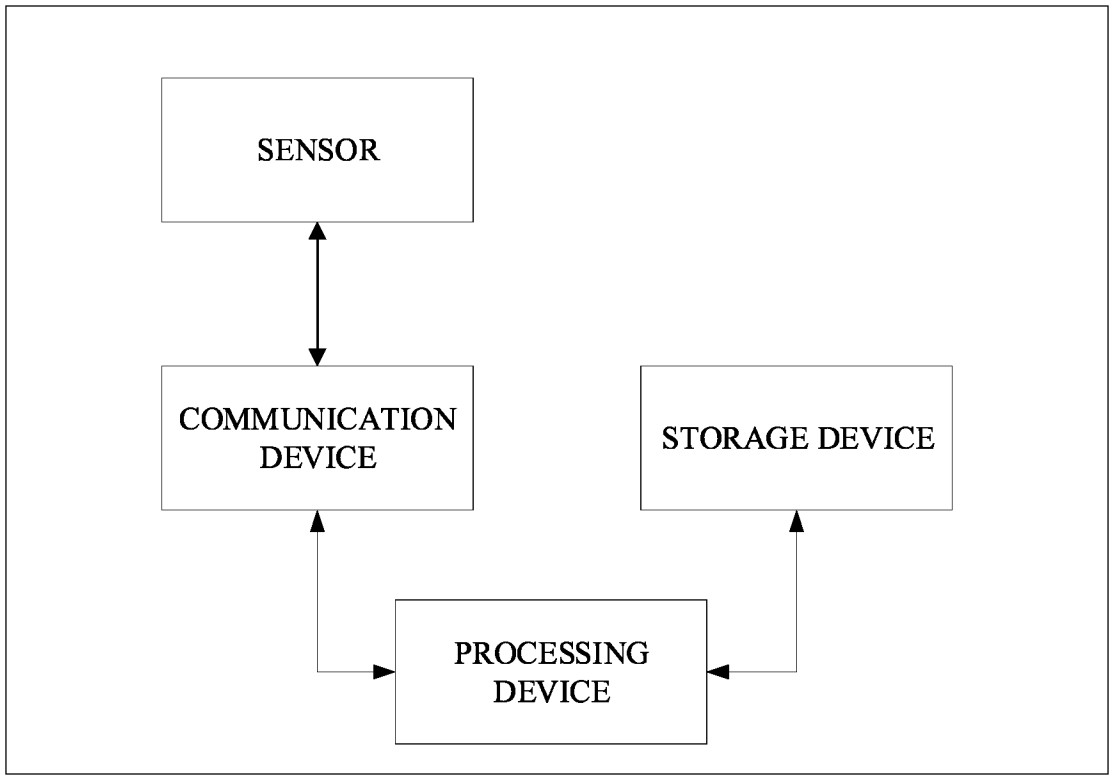
SENSOR
COMMUNICATION DEVICE
STORAGE DEVICE
PROCESSING DEVICE

FIG. 2

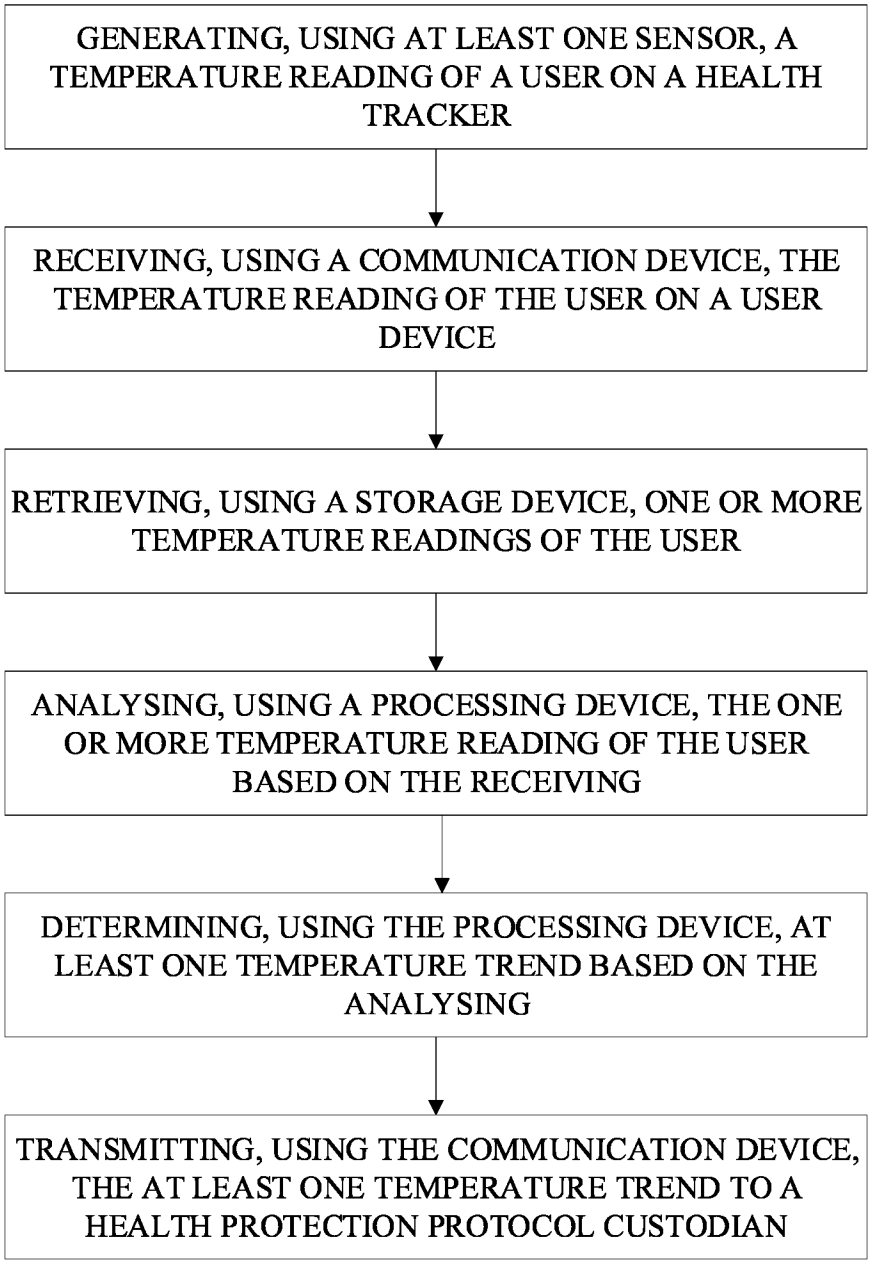
GENERATING, USING AT LEAST ONE SENSOR, A TEMPERATURE READING OF A USER ON A HEALTH TRACKER
RECEIVING, USING A COMMUNICATION DEVICE, THE TEMPERATURE READING OF THE USER ON A USER DEVICE
RETRIEVING, USING A STORAGE DEVICE, ONE OR MORE TEMPERATURE READINGS OF THE USER
ANALYSING, USING A PROCESSING DEVICE, THE ONE OR MORE TEMPERATURE READING OF THE USER BASED ON THE RECEIVING
DETERMINING, USING THE PROCESSING DEVICE, AT LEAST ONE TEMPERATURE TREND BASED ON THE ANALYSING
TRANSMITTING, USING THE COMMUNICATION DEVICE, THE AT LEAST ONE TEMPERATURE TREND TO A HEALTH PROTECTION PROTOCOL CUSTODIAN

FIG. 3

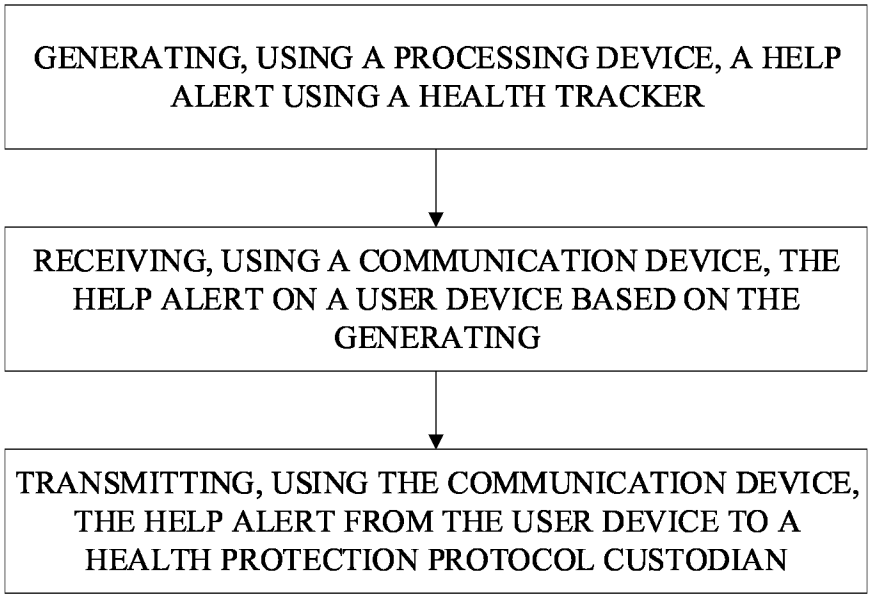
GENERATING, USING A PROCESSING DEVICE, A HELP ALERT USING A HEALTH TRACKER
RECEIVING, USING A COMMUNICATION DEVICE, THE HELP ALERT ON A USER DEVICE BASED ON THE GENERATING
TRANSMITTING, USING THE COMMUNICATION DEVICE, THE HELP ALERT FROM THE USER DEVICE TO A HEALTH PROTECTION PROTOCOL CUSTODIAN

FIG. 4

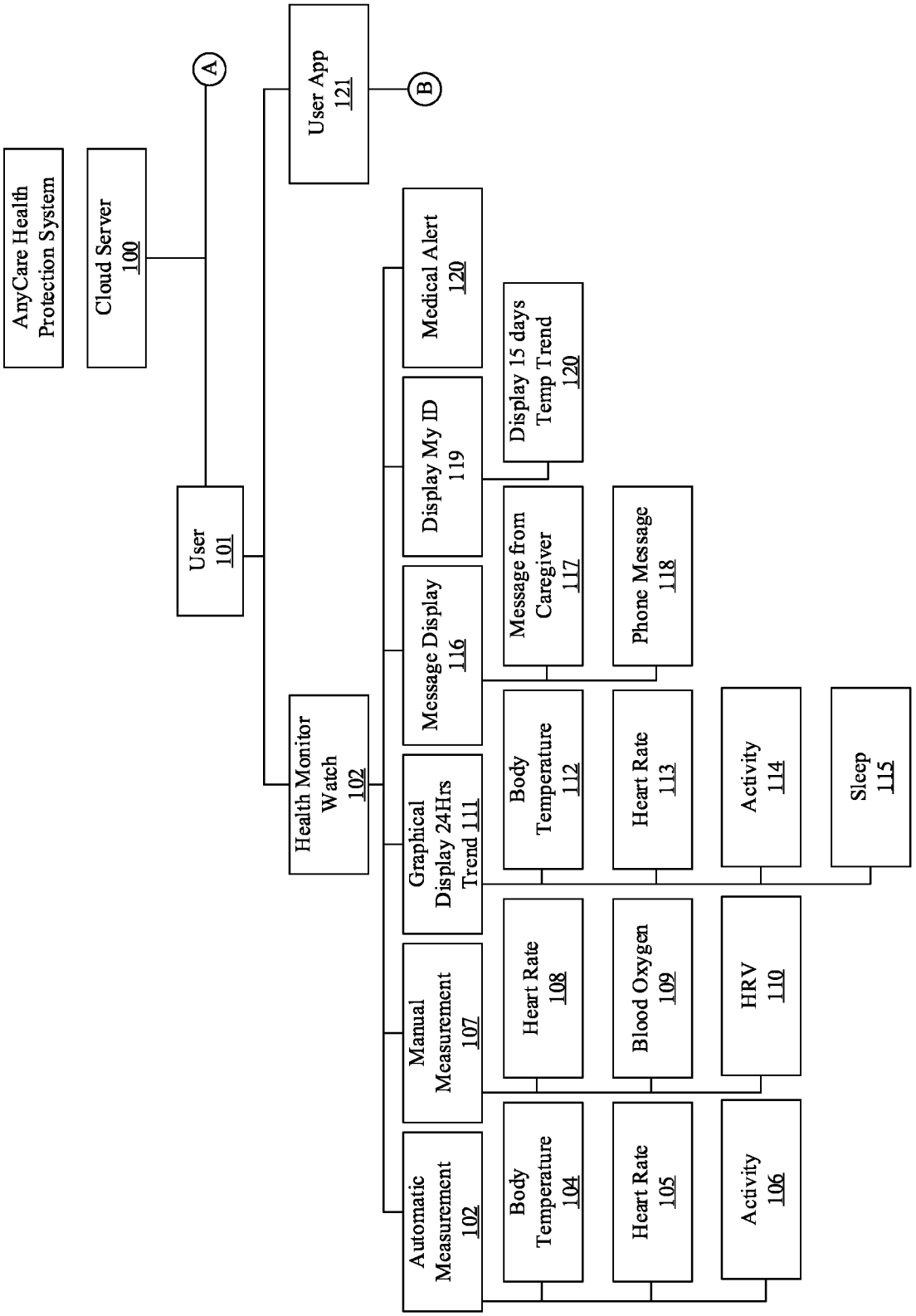
AnyCare Health Protection System
Cloud Server 100
A
User 101
User App 121
B
Health Monitor Watch 102
Medical Alert 120
Display My ID 119
Display 15 days Temp Trend 120
Message Display 116
Message from Caregiver 117
Phone Message 118
Graphical Display 24Hrs Trend 111
Body Temperature 112
Heart Rate 113
Activity 114
Sleep 115
Automatic Measurement 102
Manual Measurement 107
Heart Rate 108
Blood Oxygen 109
HRV 110
Body Temperature 104
Heart Rate 105
Activity 106

FIG. 5

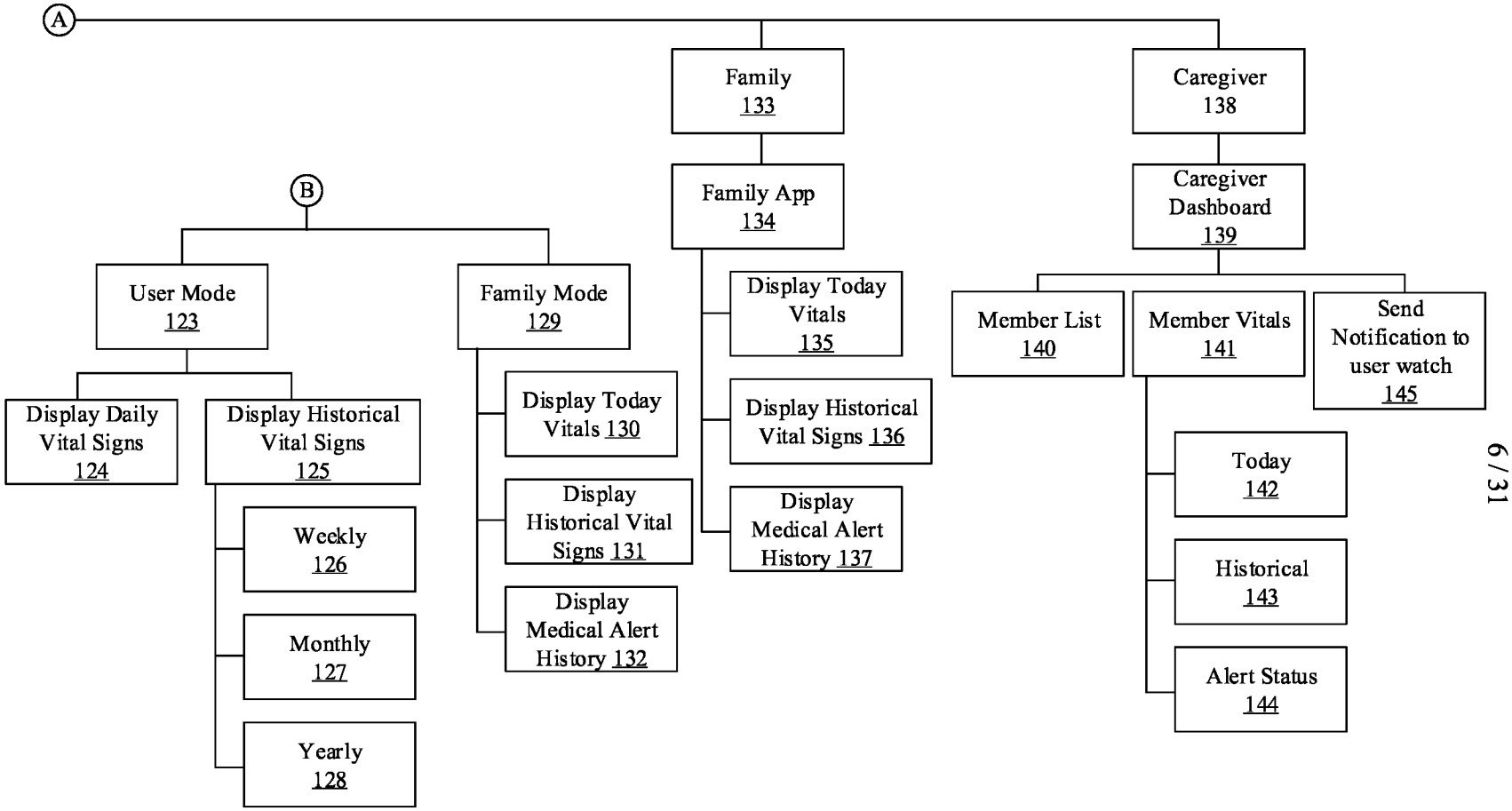
A
B
User Mode
123
Display Daily
Vital Signs
124
Display Historical
Vital Signs
125
Weekly
126
Monthly
127
Yearly
128
Family Mode
129
Display Today
Vitals 130
Display
Historical Vital
Signs 131
Display
Medical Alert
History 132
Family
133
Family App
134
Display Today
Vitals
135
Display Historical
Vital Signs 136
Display
Medical Alert
History 137
Caregiver
138
Caregiver
Dashboard
139
Member List
140
Member Vitals
141
Send
Notification to
user watch
145
Today
142
Historical
143
Alert Status
144

FIG. 6

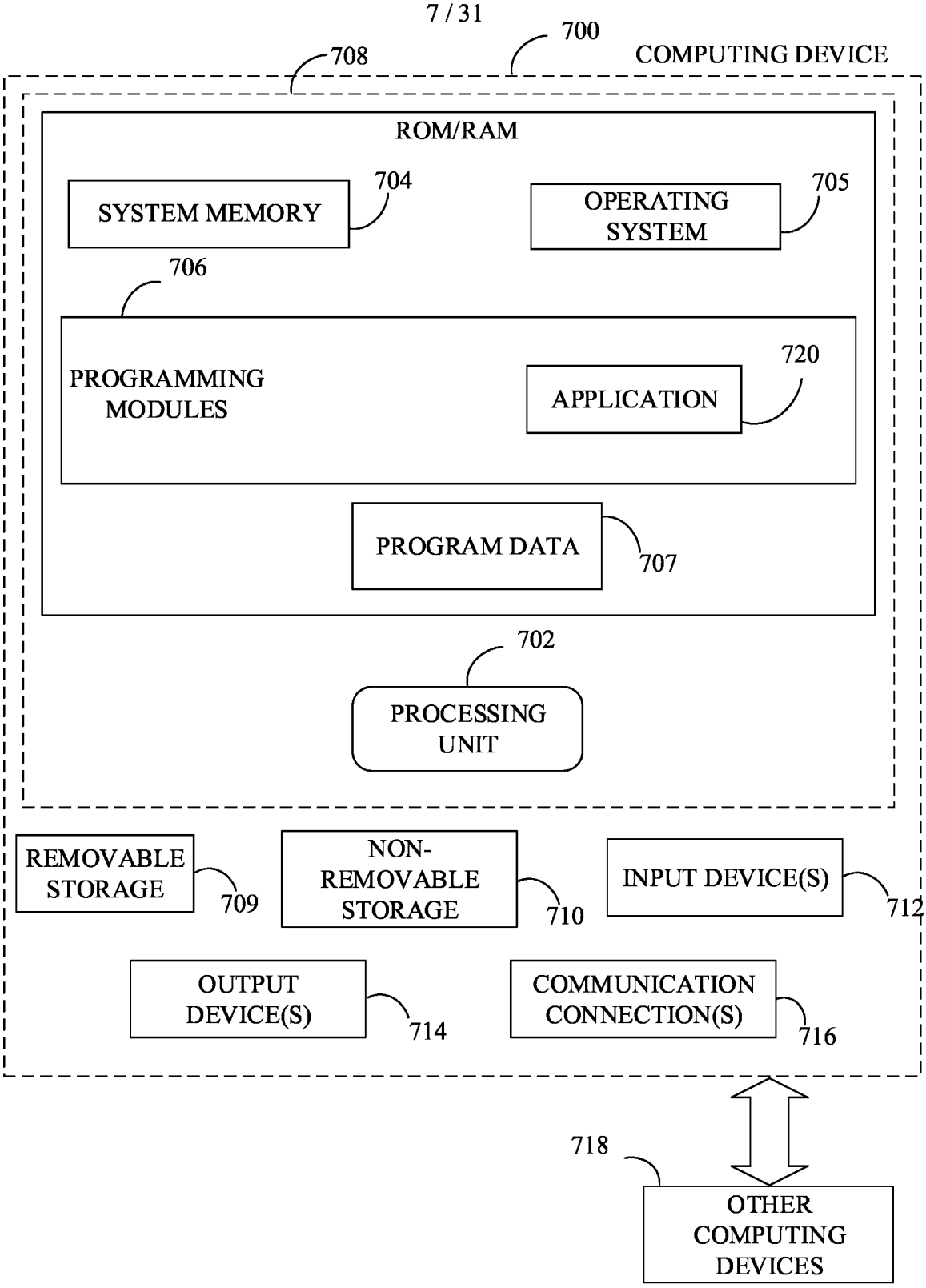
700
COMPUTING DEVICE
708
ROM/RAM
SYSTEM MEMORY
704
OPERATING SYSTEM
705
706
PROGRAMMING MODULES
720
APPLICATION
PROGRAM DATA
707
702
PROCESSING UNIT
REMOVABLE STORAGE
709
NON-REMOVABLE STORAGE
710
INPUT DEVICE(S)
712
OUTPUT DEVICE(S)
714
COMMUNICATION CONNECTION(S)
716
718
OTHER COMPUTING DEVICES

FIG. 7

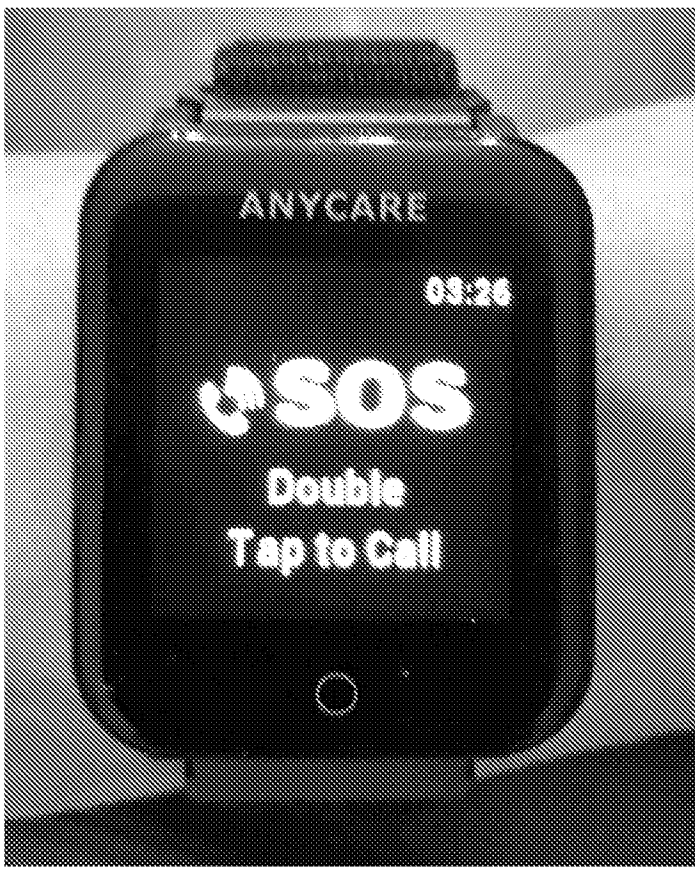

FIG. 8

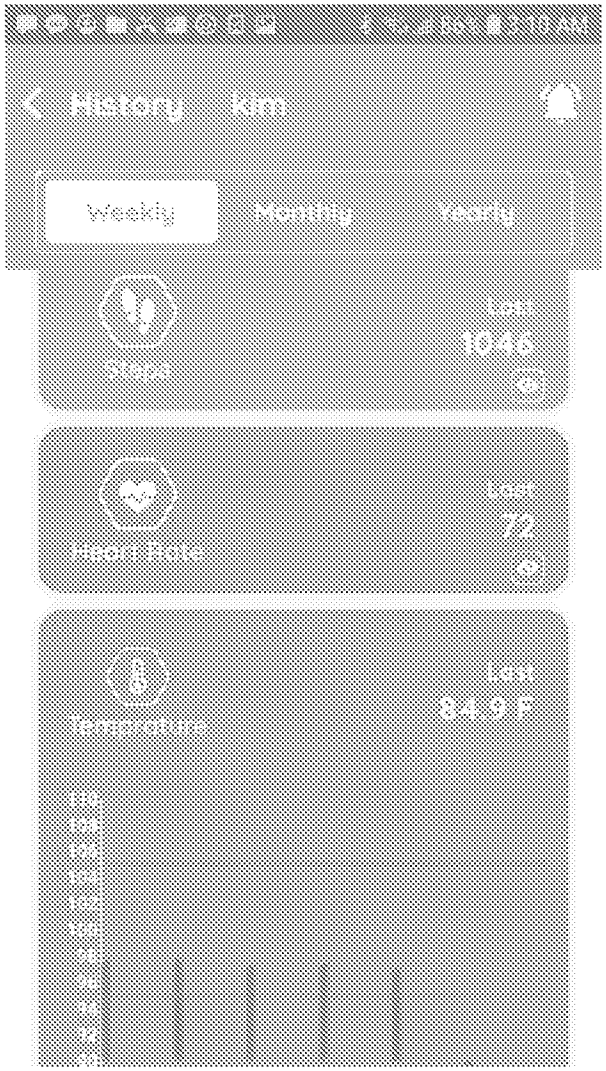
History
kim
Weekly
Monthly
Yearly
Steps
Last
1045
Heart Rate
Last
72
Temperature
Last
84.9 F

FIG. 9

2:03 PM
Change Mode
Please Select Mode.
You are currently on user mode.

FIG. 10

FIG. 11

FIG. 12

FIG. 13

FIG. 14

FIG. 15

FIG. 16

FIG. 17

FIG. 18

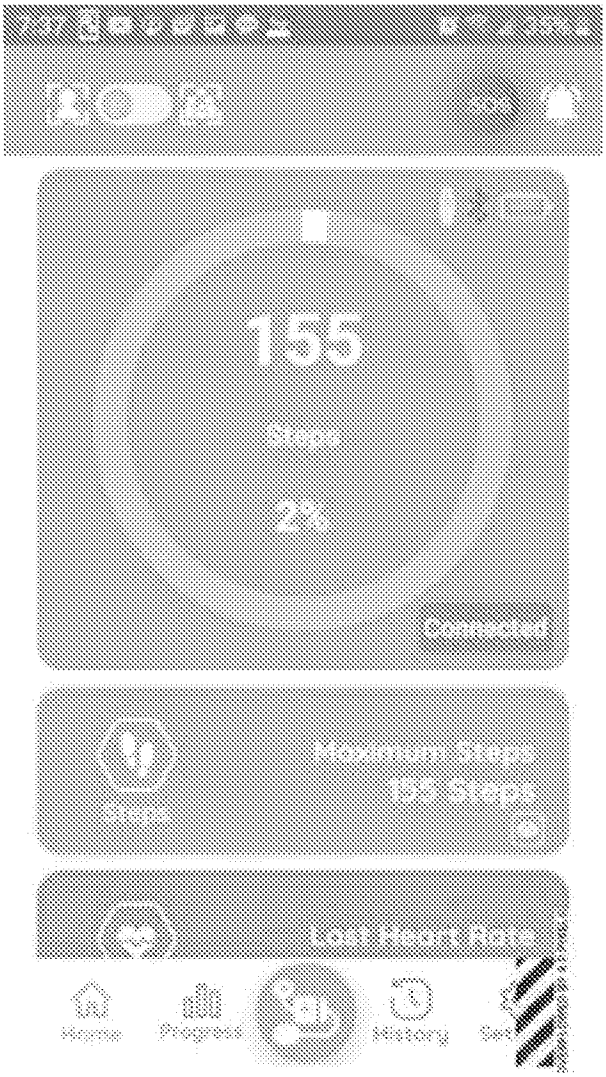
155
Steps
2%
Maximum Steps
195 Steps
Last Heart Rate
Home
Progress
History

FIG. 19

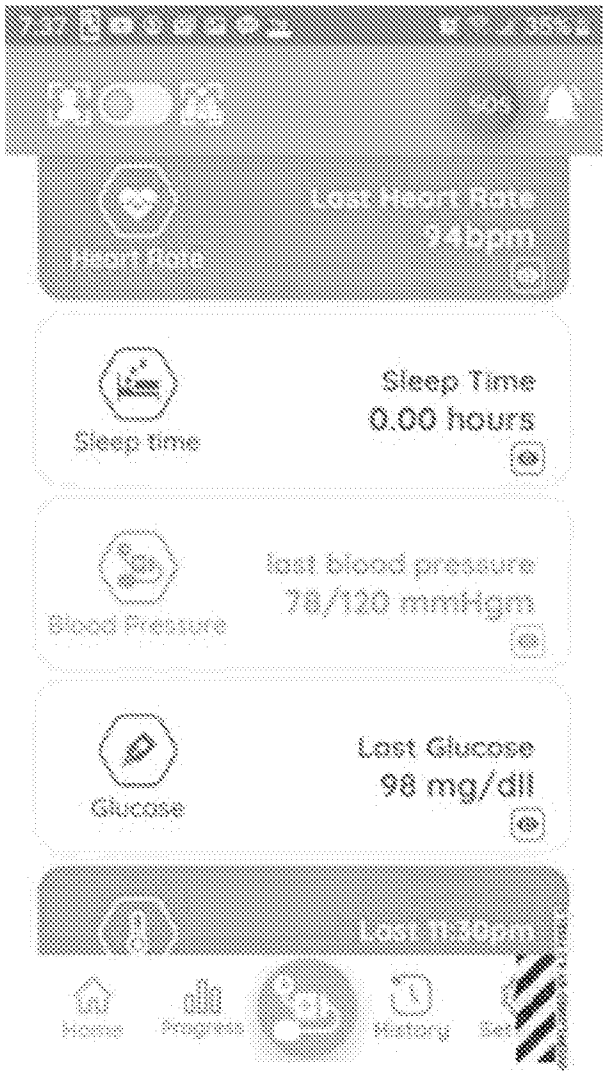
Heart Rate
Last Heart Rate
74 Bpm
Sleep time
Sleep Time
0.00 hours
Blood Pressure
last blood pressure
78/120 mmHgm
Glucose
Last Glucose
98 mg/dl
Last 11:30pm
Home
Progress
History

FIG. 20

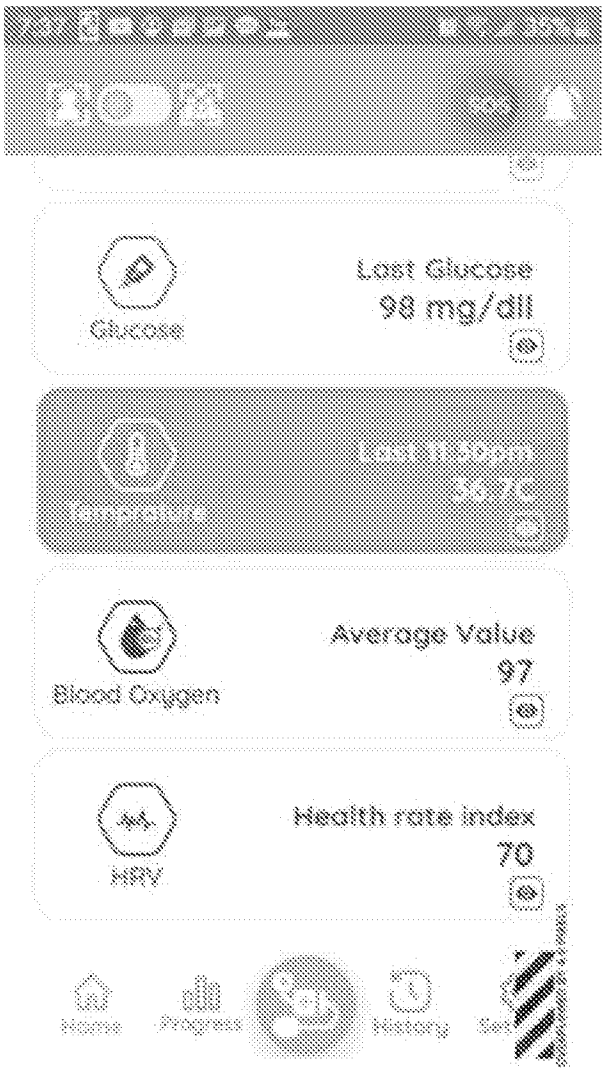
Glucose
Last Glucose
98 mg/dl
Average Value
97
Blood Oxygen
HRV
Health rate index
70
Home
Progress
History

FIG. 21

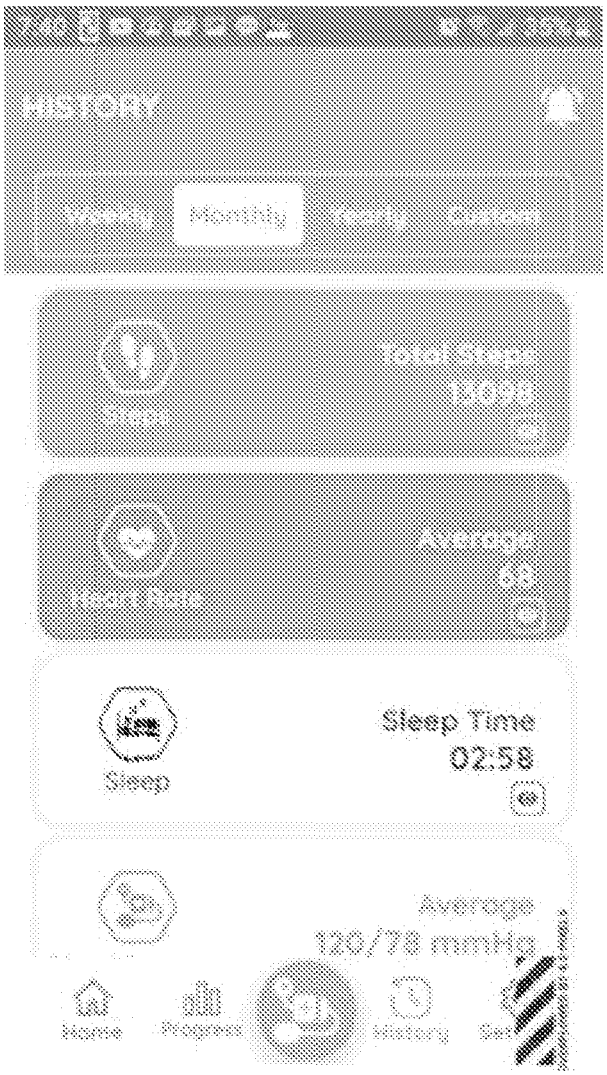
HISTORY
Weekly
Monthly
Yearly
Carousel
Steps
Total Steps
13,093
Heart Rate
Average
68
Sleep
Sleep Time
02:58
Average
120/78 mmHg
Home
Progress
History

FIG. 22

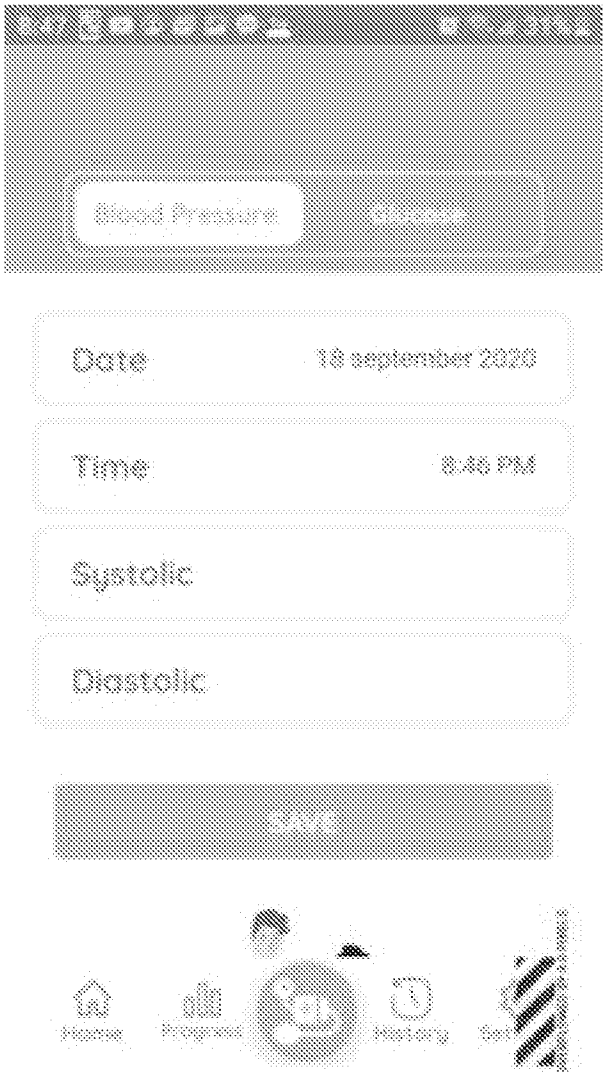
Blood Pressure
Date
18 september 2020
Time
8:46 PM
Systolic
Diastolic
SAVE

FIG. 23

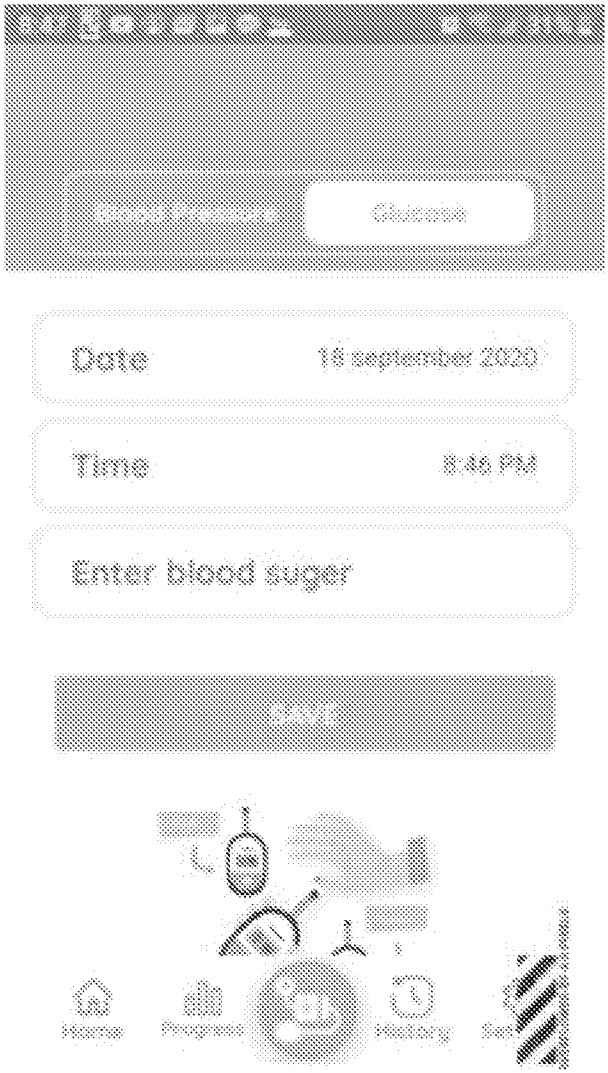
Glucose
Date
16 september 2020
Time
8:46 PM
Enter blood suger
SAVE

FIG. 24

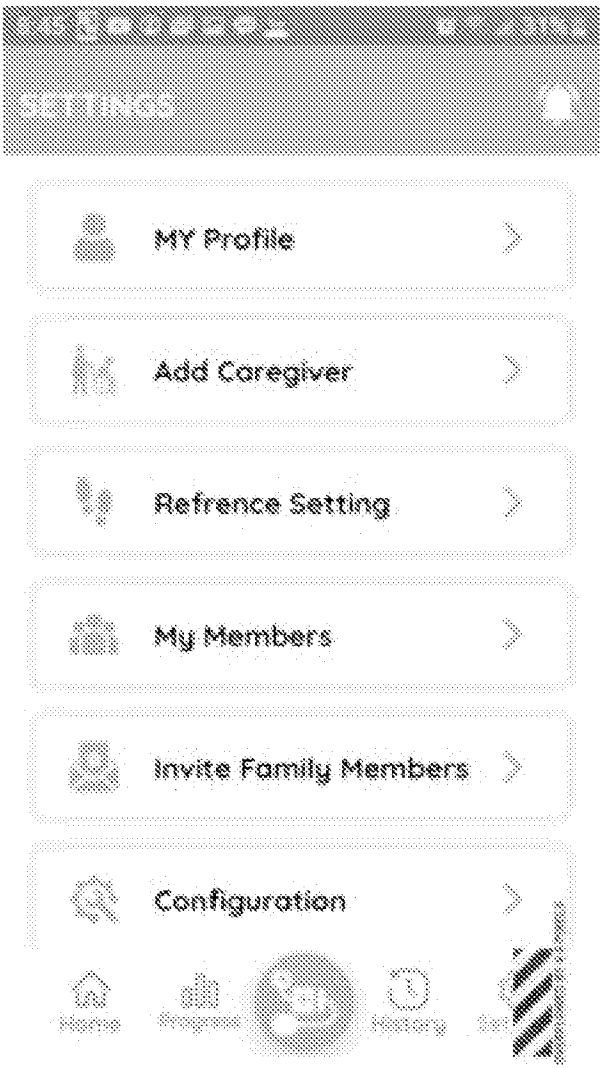
SETTINGS
MY Profile
Add Caregiver
Refrence Setting
My Members
Invite Family Members
Configuration

FIG. 25

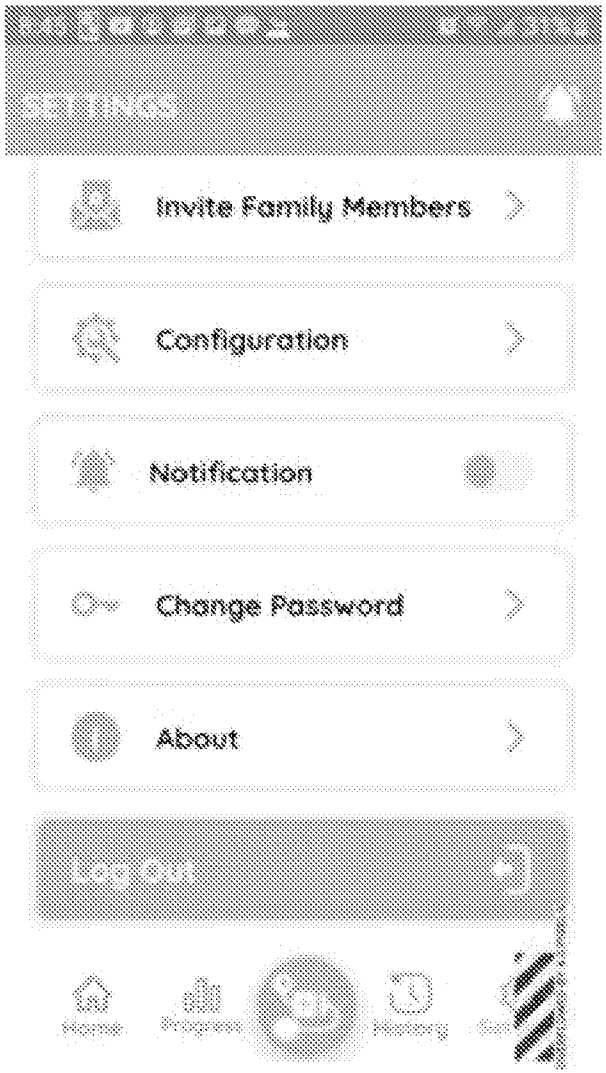
SETTINGS
Invite Family Members
Configuration
Notification
Change Password
About
Log Out

FIG. 26

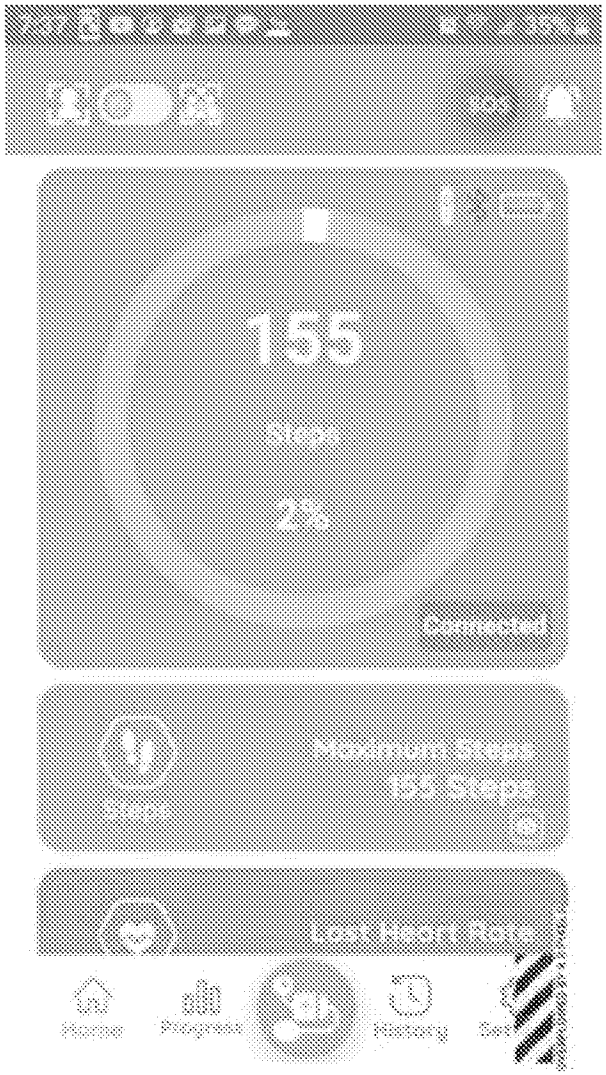
155
Steps
2%
Connected
Maximum Steps
155 Steps
Steps
Last Heart Rate
Home
Progress
History

FIG. 27

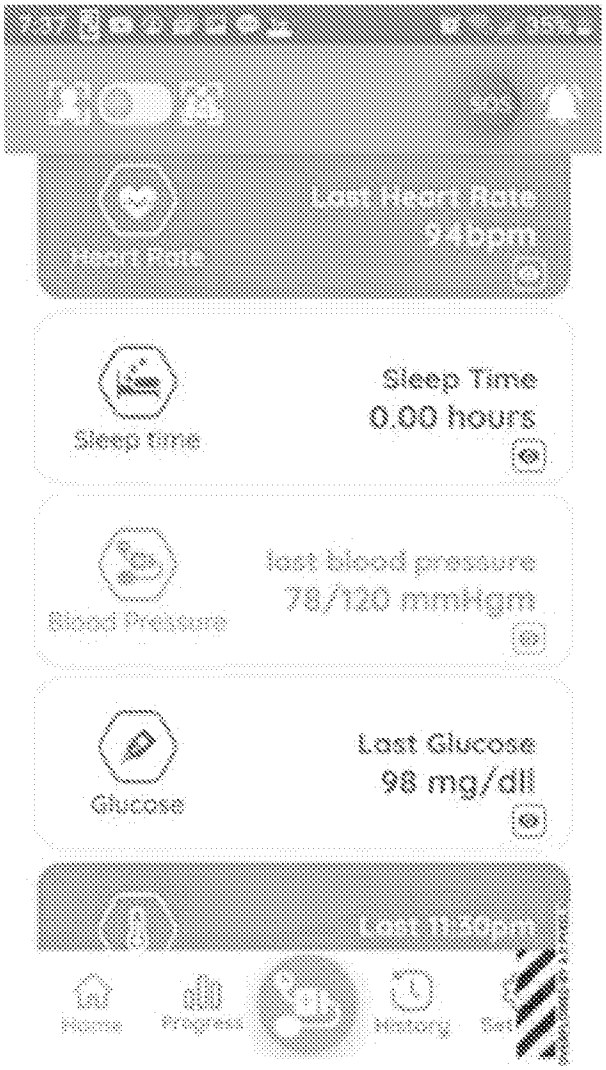
Heart Rate
Last Heart Rate
Sleep time
Sleep Time
0.00 hours
Blood Pressure
last blood pressure
78/120 mmHgm
Glucose
Last Glucose
98 mg/dl
Home
Progress
History

FIG. 28

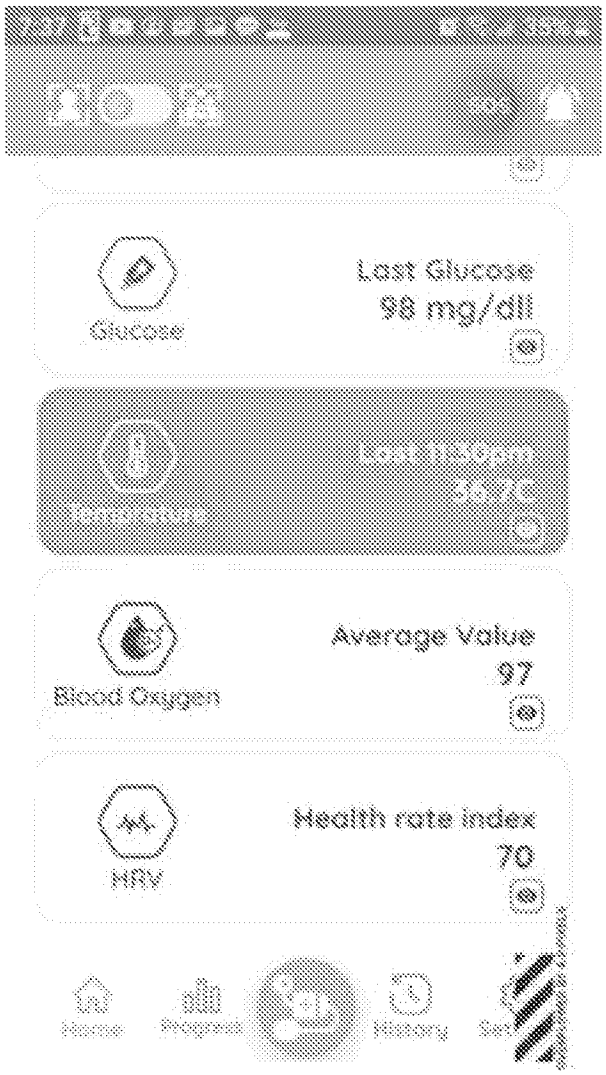
Glucose
Last Glucose
98 mg/dll
Blood Oxygen
Average Value
97
HRV
Health rate index
70
Home
Progress
History

FIG. 29

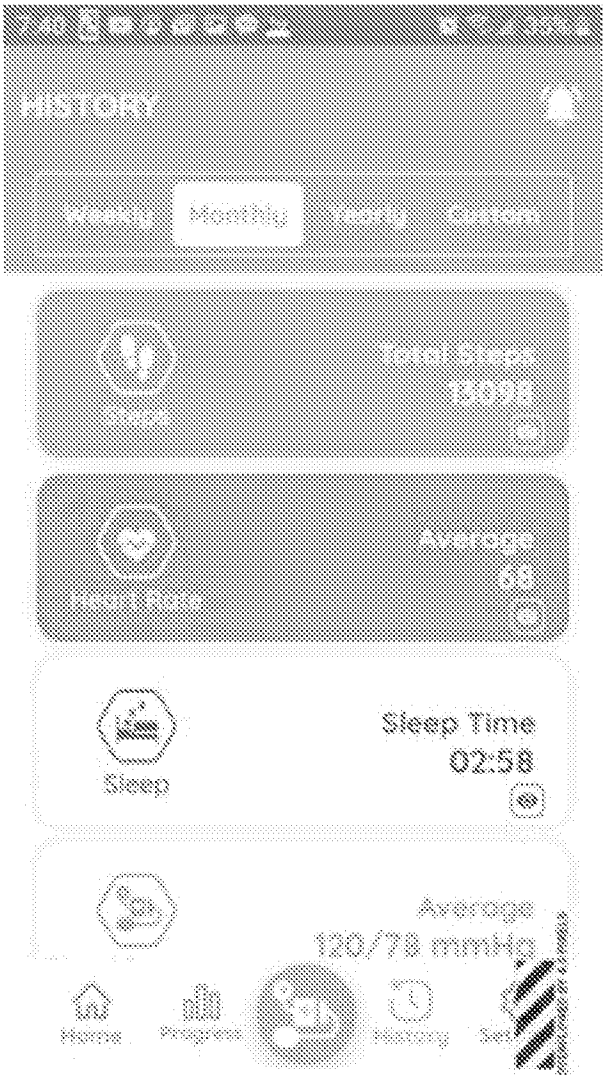
HISTORY
Weekly
Monthly
Yearly
Custom
Steps
Total Steps
15098
Heart Rate
Average
68
Sleep
Sleep Time
02:58
Average
120/78 mmHg
Home
Progress
History

FIG. 30

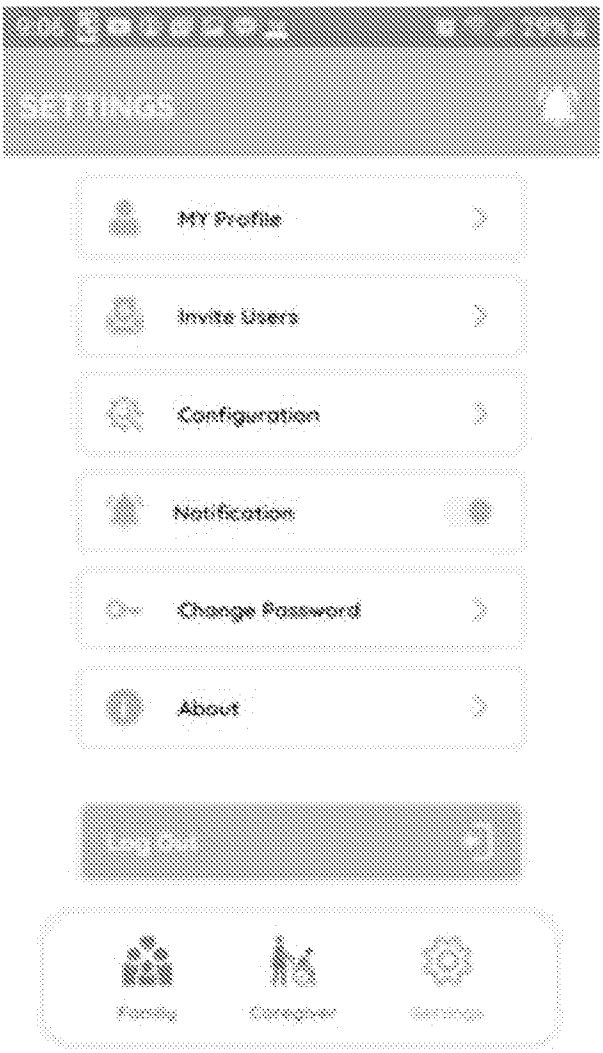
SETTINGS
MY Profile
Invite Users
Configuration
Notification
Change Password
About

FIG. 31

METHODS, SYSTEMS, AND DEVICES FOR FACILITATING A HEALTH PROTECTION PROTOCOL

FIELD OF THE INVENTION

The present invention relates generally to a field of data processing. More specifically, the present invention is methods, systems, and devices for facilitating a health protection protocol.

BACKGROUND OF THE INVENTION

In recent times, there has been increase in outbreaks in the form of epidemics and pandemics which have affected millions of people worldwide. For example, the recent Coronavirus disease 2019 (COVID-19) has a global death-to-case ratio (which reflects the number of deaths divided by the number of diagnosed cases within a given time interval) as 2.6% (1,207,284/46,937,042) as of 3 November 2020, according to recent statistics. Also, mortality rates associated with the COVID-19 are highly correlated to age. In those younger than 50 years, the risk of death is less than 0.5%, while in those older than 70 it is more than 8%. According to Centers for Disease Control and Prevention (CDC) analysis, the risk of death by age groups in the United States is 0.003%, 0.02%; 0.5% and 5.4% for the age groups 0–19, 20–49, 50–69, and 70 or over, respectively. Researchers have continuously been devising various methodologies to curb the effects resulting from such outbreaks. An individual affected with such an outbreak generally develops a rise in the body temperature as a first symptom, and an early detection of any such symptom may help curbing the spread of the outbreak. People who have been made to stay away from their families owing to the outbreaks may want to take care of the elderly members of their families, which are at a greater risk to catch the infections than most of the other age groups.

Existing techniques for facilitating a health protection protocol are deficient with regard to several aspects. For instance, current technologies do not provide trends for various parameters such as, temperature, heart rate, etc., which can be used as a certificate for confirming the well-being of an individual of the past few days at various instances. Furthermore, current technologies do not facilitate for providing medical assistance in an emergency situation instantly by gestures. Moreover, current technologies do not facilitate combination of periodic monitoring of the various parameters of members in a community in real-time by an administrator who can take necessary actions as and when required.

Therefore, there is a need for improved methods, systems, and devices for facilitating a health protection protocol that may overcome one or more of the above-mentioned problems and/or limitations.

SUMMARY OF THE INVENTION

This summary is provided to introduce a selection of concepts in a simplified form, that are further described below in the Detailed Description. This summary is not intended to identify key features or essential features of the claimed subject matter. Nor is this summary intended to be used to limit the claimed subject matter's scope.

According to some embodiments, a method to facilitate a health protection protocol, in accordance with some embodiments. Further, the health protection protocol may be referred to as AnyCARE health protection (AHP) system. Further, the health protection protocol may include a health tracker (may be referred to as AnyCARE TAP health tracker), a software application, and a data visualization interface (such as, a dashboard). Further, the health tracker, in an instance, may monitor one or more parameters of a body of a user. Further, the user, in an instance, may wear the health tracker on a wrist. Further, the software application (may be referred to as a user application) may be downloaded on a user device. Further, a software application programming interface (or software API), in an instance, may display at least one trend corresponding to each parameter of the one or more parameters on the user device. Further, the at least one trend, in an instance, may include current trends and historical trends. Further, a second software application (may be referred to as a family application) may be downloaded on the user device. Further, the data visualization interface may display the at least one trend on at least one device associated with at least one health protection protocol custodian.

Accordingly, the method may include a step of generating, using at least one sensor, a temperature reading of the user on the health tracker. Further, the method may include a step of receiving, using a communication device, the temperature reading of the user on the user device. Further, the method may include a step of retrieving, using a storage device, the one or more temperature readings of the user. Further, the method may include a step of analyzing, using a processing device, the one or more temperature readings of the user. Further, the method may include a step of determining, using the processing device, at least one temperature trend based on the analyzing.

Further, a custom firmware may be implemented on the health tracker configured for performing one or more tasks related to the health tracker. Further, the health tracker, in an instance, may display one or more second details corresponding to the user based on the custom firmware implemented on the health tracker. Further, the custom firmware, in an instance, may configured to display a certificate of one or more days based on the determining of the at least one trend using the processing device.

Both the foregoing summary and the following detailed description provide examples and are explanatory only. Accordingly, the foregoing summary and the following detailed description should not be considered to be restrictive. Further, features or variations may be provided in addition to those set forth herein. For example, embodiments may be directed to various feature combinations and sub-combinations described in the detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate various embodiments of the present disclosure. The drawings contain representations of various trademarks and copyrights owned by the Applicants. In addition, the drawings may contain other marks owned by third parties and are being used for illustrative purposes only. All rights to various trademarks and copyrights represented herein, except those belonging to their respective owners, are vested in and the property of the applicants. The applicants retain and reserve all rights in their trademarks and copyrights included herein, and grant permission to reproduce the material only in connection with reproduction of the granted patent and for no other purpose.

Furthermore, the drawings may contain text or captions that may explain certain embodiments of the present disclosure. This text is included for illustrative, non-limiting, explanatory purposes of certain embodiments detailed in the present disclosure.

FIG. 1 is an illustration of an online platform consistent with various embodiments of the present disclosure.

FIG. 2 is a block diagram representation of a system to facilitate a health protection protocol, in accordance with some embodiments.

FIG. 3 is flowchart of a method to facilitate the health protection protocol, in accordance with some embodiments.

FIG. 4 is a flowchart of a method to facilitate the health protection protocol in case of an emergency, in accordance with some embodiments.

FIG. 5 is a portion view of an exemplary representation of a system structure associated with the health protection protocol, in accordance with some embodiments.

FIG. 6 is a portion view of the exemplary representation of the system structure associated with the health protection protocol, in accordance with some embodiments.

FIG. 7 is a block diagram of a computing device for implementing the methods disclosed herein, in accordance with some embodiments.

FIG. 8 is an exemplary representation of a health tracker displaying an SOS feature to facilitate the health protection protocol, in accordance with some embodiments.

FIG. 9 is a front view of a screen associated with a software application to facilitate the health protection protocol, in accordance with some embodiments.

FIG. 10 is a front view of a screen displaying a pop-up window for switching between at least two modes associated with the software application, in accordance with some embodiments.

FIG. 11 is an exemplary representation of the health tracker displaying a home screen to facilitate the health protection protocol, in accordance with some embodiments.

FIG. 12 is an exemplary representation of the health tracker displaying daily body temperature statistics, in accordance with some embodiments.

FIG. 13 is an exemplary representation of the health tracker displaying daily heart rate statistics, in accordance with some embodiments.

FIG. 14 is an exemplary representation of the health tracker displaying daily exercise level statistics, in accordance with some embodiments.

FIG. 15 is an exemplary representation of the health tracker displaying blood oxygen statistics, in accordance with some embodiments.

FIG. 16 is an exemplary representation of the health tracker displaying heart rate variability (HRV) statistics, in accordance with some embodiments.

FIG. 17 is an exemplary representation of the health tracker displaying daily sleep status statistics, in accordance with some embodiments.

FIG. 18 is an exemplary representation of the health tracker displaying a medical alert, in accordance with some embodiments.

FIG. 19 is a front view of a screen associated with the software application displaying a number of steps taken by a user in a user mode, in accordance with some embodiments.

FIG. 20 is a front view of a screen associated with the software application displaying last recorded one or more parameters in the user mode, in accordance with some embodiments.

FIG. 21 is a portion view of a screen associated with the software application displaying the last recorded one or more parameters in the user mode, in accordance with some embodiments.

FIG. 22 is a front view of a screen associated with the software application displaying the recorded one or more parameters in the user mode, in accordance with some embodiments.

FIG. 23 is a front view of a screen associated with the software application displaying one or more detail fields corresponding to at least one parameter (such as, blood pressure) of the one or more parameters in the user mode, in accordance with some embodiments.

FIG. 24 is a front view of a screen associated with the software application displaying the one or more detail fields corresponding to the at least one parameter (such as, glucose) of the one or more parameters in the user mode, in accordance with some embodiments.

FIG. 25 is a front view of a screen associated with the software application displaying one or more tabs of a navigational menu (such as, a navigational menu in "settings" associated with a software API) in the user mode, in accordance with some embodiments.

FIG. 26 is a portion view of a screen associated with the software application displaying the one or more tabs of the navigational menu in the user mode, in accordance with some embodiments.

FIG. 27 is a front view of a screen associated with the software application displaying a number of steps taken by a community member of at least one community of members in a family mode, in accordance with some embodiments.

FIG. 28 is a front view of a screen associated with the software application displaying last recorded one or more parameters in the family mode, in accordance with some embodiments.

FIG. 29 is a portion view of a screen associated with the software application displaying last recorded one or more parameters in the family mode, in accordance with some embodiments.

FIG. 30 is a front view of a screen associated with the software application displaying recorded one or more parameters in the family mode, in accordance with some embodiments.

FIG. 31 is a portion view of a screen associated with the software application displaying one or more tabs of a navigational menu in a family mode, in accordance with some embodiments.

DETAIL DESCRIPTIONS OF THE INVENTION

As a preliminary matter, it will readily be understood by one having ordinary skill in the relevant art that the present disclosure has broad utility and application. As should be understood, any embodiment may incorporate only one or a plurality of the above-disclosed aspects of the disclosure and may further incorporate only one or a plurality of the above-disclosed features. Furthermore, any embodiment discussed and identified as being "preferred" is considered to be part of a best mode contemplated for carrying out the embodiments of the present disclosure. Other embodiments also may be discussed for additional illustrative purposes in providing a full and enabling disclosure. Moreover, many embodiments, such as adaptations, variations, modifications, and equivalent arrangements, will be implicitly disclosed by the embodiments described herein and fall within the scope of the present disclosure.

Accordingly, while embodiments are described herein in detail in relation to one or more embodiments, it is to be understood that this disclosure is illustrative and exemplary of the present disclosure, and are made merely for the purposes of providing a full and enabling disclosure. The detailed disclosure herein of one or more embodiments is not intended, nor is to be construed, to limit the scope of patent protection afforded in any claim of a patent issuing here from, which scope is to be defined by the claims and the equivalents thereof. It is not intended

that the scope of patent protection be defined by reading into any claim a limitation found herein that does not explicitly appear in the claim itself.

Thus, for example, any sequence(s) and/or temporal order of steps of various processes or methods that are described herein are illustrative and not restrictive. Accordingly, it should be understood that, although steps of various processes or methods may be shown and described as being in a sequence or temporal order, the steps of any such processes or methods are not limited to being carried out in any particular sequence or order, absent an indication otherwise. Indeed, the steps in such processes or methods generally may be carried out in various different sequences and orders while still falling within the scope of the present invention. Accordingly, it is intended that the scope of patent protection is to be defined by the issued claim(s) rather than the description set forth herein.

Additionally, it is important to note that each term used herein refers to that which an ordinary artisan would understand such term to mean based on the contextual use of such term herein. To the extent that the meaning of a term used herein—as understood by the ordinary artisan based on the contextual use of such term—differs in any way from any particular dictionary definition of such term, it is intended that the meaning of the term as understood by the ordinary artisan should prevail.

Furthermore, it is important to note that, as used herein, "a" and "an" each generally denotes "at least one," but does not exclude a plurality unless the contextual use dictates otherwise. When used herein to join a list of items, "or" denotes "at least one of the items," but does not exclude a plurality of items of the list. Finally, when used herein to join a list of items, "and" denotes "all of the items of the list."

The following detailed description refers to the accompanying drawings. Wherever possible, the same reference numbers are used in the drawings and the following description to refer to the same or similar elements. While many embodiments of the disclosure may be described, modifications, adaptations, and other implementations are possible. For example, substitutions, additions, or modifications may be made to the elements illustrated in the drawings, and the methods described herein may be modified by substituting, reordering, or adding stages to the disclosed methods. Accordingly, the following detailed description does not limit the disclosure. Instead, the proper scope of the disclosure is defined by the appended claims. The present disclosure contains headers. It should be understood that these headers are used as references and are not to be construed as limiting upon the subjected matter disclosed under the header.

The present disclosure includes many aspects and features. Moreover, while many aspects and features relate to, and are described in the context of facilitating a health protection protocol, embodiments of the present disclosure are not limited to use only in this context.

In general, the method disclosed herein may be performed by one or more computing devices. For example, in some embodiments, the method may be performed by a server computer in communication with one or more client devices over a communication network such as, for example, the Internet. In some other embodiments, the method may be performed by one or more of at least one server computer, at least one client device, at least one network device, and at

least one sensor. Examples of the one or more client devices and/or the server computer may include, a desktop computer, a laptop computer, a tablet computer, a personal digital assistant, a portable electronic device, a wearable computer, a smart phone, an Internet of Things (IoT) device, a smart electrical appliance, a video game console, a rack server, a super-computer, a mainframe computer, mini-computer, micro-computer, a storage server, an application server (e.g. a mail server, a web server, a real-time communication server, an FTP server, a virtual server, a proxy server, a DNS server etc.), a quantum computer, and so on. Further, one or more client devices and/or the server computer may be configured for executing a software application such as, for example, but not limited to, an operating system (e.g. Windows, Mac OS, Unix, Linux, Android, etc.) in order to provide a user interface (e.g. GUI, touch-screen based interface, voice based interface, gesture based interface etc.) for use by the one or more users and/or a network interface for communicating with other devices over a communication network. Accordingly, the server computer may include a processing device configured for performing data processing tasks such as, for example, but not limited to, analyzing, identifying, determining, generating, transforming, calculating, computing, compressing, decompressing, encrypting, decrypting, scrambling, splitting, merging, interpolating, extrapolating, redacting, anonymizing, encoding and decoding. Further, the server computer may include a communication device configured for communicating with one or more external devices. The one or more external devices may include, for example, but are not limited to, a client device, a third-party database, public database, a private database and so on. Further, the communication device may be configured for communicating with the one or more external devices over one or more communication channels. Further, the one or more communication channels may include a wireless communication channel and/or a wired communication channel. Accordingly, the communication device may be configured for performing one or more of transmitting and receiving of information in electronic form. Further, the server computer may include a storage device configured for performing data storage and/or data retrieval operations. In general, the storage device may be configured for providing reliable storage of digital information. Accordingly, in some embodiments, the storage device may be based on technologies such as, but not limited to, data compression, data backup, data redundancy, deduplication, error correction, data finger-printing, role based access control, and so on.

Further, one or more steps of the method disclosed herein may be initiated, maintained, controlled and/or terminated based on a control input received from one or more devices operated by one or more users such as, for example, but not limited to, an end user, an admin, a service provider, a service consumer, an agent, a broker and a representative thereof. Further, the user as defined herein may refer to a human, an animal or an artificially intelligent being in any state of existence, unless stated otherwise, elsewhere in the present disclosure. Further, in some embodiments, the one or more users may be required to successfully perform authentication in order for the control input to be effective. In general, a user of the one or more users may perform authentication based on the possession of a secret human readable secret data (e.g. username, password, passphrase, PIN, secret question, secret answer etc.) and/or possession of a machine readable secret data (e.g. encryption key, decryption key, bar codes, etc.) and/or or possession of one or more embodied characteristics unique to the user (e.g. biometric variables such as, but not limited to, fingerprint, palm-print, voice characteristics, behavioral

characteristics, facial features, iris pattern, heart rate variability, evoked potentials, brain waves, and so on) and/or possession of a unique device (e.g. a device with a unique physical and/or chemical and/or biological characteristic, a hardware device with a unique serial number, a network device with a unique IP/MAC address, a telephone with a unique phone number, a smartcard with an authentication token stored thereupon, etc.). Accordingly, the one or more steps of the method may include communicating (e.g. transmitting and/or receiving) with one or more sensor devices in order to perform authentication. For example, the one or more steps may include receiving, using the communication device, the secret human readable data from an input device such as, for example, a keyboard, a keypad, a touch-screen, a microphone, a camera and so on. Likewise, the one or more steps may include receiving, using the communication device, the one or more embodied characteristics from one or more biometric sensors.

Further, one or more steps of the method may be automatically initiated, maintained and/or terminated based on one or more predefined conditions. In an instance, the one or more predefined conditions may be based on one or more contextual variables. In general, the one or more contextual variables may represent a condition relevant to the performance of the one or more steps of the method. The one or more contextual variables may include, for example, but are not limited to, location, time, identity of a user associated with a device (e.g. the server computer, a client device etc.) corresponding to the performance of the one or more steps, environmental variables (e.g. temperature, humidity, pressure, wind speed, lighting, sound, etc.) associated with a device corresponding to the performance of the one or more steps, physical state and/or physiological state and/or psychological state of the user, physical state (e.g. motion, direction of motion, orientation, speed, velocity, acceleration, trajectory, etc.) of the device corresponding to the performance of the one or more steps and/or semantic content of data associated with the one or more users. Accordingly, the one or more steps may include communicating with one or more sensors associated with the one or more contextual variables. For example, the one or more sensors may include, but are not limited to, a timing device (e.g. a real-time clock), a location sensor (e.g. a GPS receiver, a GLONASS receiver, an indoor location sensor etc.), a biometric sensor (e.g. a fingerprint sensor), an environmental variable sensor (e.g. temperature sensor, humidity sensor, pressure sensor, etc.) and a device state sensor (e.g. a power sensor, a voltage/current sensor, a switch-state sensor, a usage sensor, etc. associated with the device corresponding to performance of the or more steps).

Further, the one or more steps of the method may be performed one or more number of times. Additionally, the one or more steps may be performed in any order other than as exemplarily disclosed herein, unless explicitly stated otherwise, elsewhere in the present disclosure. Further, two or more steps of the one or more steps may, in some embodiments, be simultaneously performed, at least in part. Further, in some embodiments, there may be one or more time gaps between performance of any two steps of the one or more steps.

Further, in some embodiments, the one or more predefined conditions may be specified by the one or more users. Accordingly, the one or more steps may include receiving, using the communication device, the one or more predefined conditions from one or more and devices operated by the one or more users. Further, the one or more predefined conditions may be stored

in the storage device. Alternatively, and/or additionally, in some embodiments, the one or more predefined conditions may be automatically determined, using the processing device, based on historical data corresponding to performance of the one or more steps. For example, the historical data may be collected, using the storage device, from a plurality of instances of performance of the method. Such historical data may include performance actions (e.g. initiating, maintaining, interrupting, terminating, etc.) of the one or more steps and/or the one or more contextual variables associated therewith.

Further, one or more steps of the method may be performed at one or more spatial locations. For instance, the method may be performed by a plurality of devices interconnected through a communication network. Accordingly, in an example, one or more steps of the method may be performed by a server computer. Similarly, one or more steps of the method may be performed by a client computer. Likewise, one or more steps of the method may be performed by an intermediate entity such as, for example, a proxy server. For instance, one or more steps of the method may be performed in a distributed fashion across the plurality of devices in order to meet one or more objectives. For example, one objective may be to provide load balancing between two or more devices. Another objective may be to restrict a location of one or more of an input data, an output data and any intermediate data therebetween corresponding to one or more steps of the method. For example, in a client-server environment, sensitive data corresponding to a user may not be allowed to be transmitted to the server computer. Accordingly, one or more steps of the method operating on the sensitive data and/or a derivative thereof may be performed at the client device.

Overview:

Further, the present disclosure aims to provide a safe and healthy work or living environment under coronavirus pandemic. Further, the present disclosure describes a protocol (may be referred to as AnyCARE Health Protection (AHP) system) which aims to contain the spread of COVID-19 in the community by monitoring any fever among community members and screening out a potential COVID-19 infection early. The fever is the first symptom of COVID-19 for most patients with symptoms. Further, the protocol disclosed in the disclosure consists of a TAP health tracker watch, a smartphone application for the user and family, and a dashboard for the caregiver to monitor the health status of their community members in real-time. The community can be a senior living facility, cruise ship, school, hotel or any work place.

Further, the TAP health tracker disclosed in the disclosure is a unique smartwatch innovation, which combines fitness tracker, thermometer, pulse oximeter and medical alert function into one package. The TAP monitors the user's body temperature every 30 minutes and store the data for 30 days. It has two temperature screens, one for daily trend and another for two weeks of historical trend data, which can be used as a temperature certificate to replace two weeks quarantine. Further, the smartphone application disclosed in the disclosure can share the current and historical trends of temperature, blood oxygen level, heart rate, exercise level and sleep patterns among user, family and caregivers. Further, the AHP dashboard disclosed in the disclosure displays the health data of all community members and receives a warning message in case of any high body temperature incident detected by TAP health trackers. The caregiver can

send alert messages from the dashboard to the community member's health tracker(s) in case of any incident.

Further, the present disclosure aims for early detection of any fever symptom among community members, as fever is the first sign of COVID-19 infected people showing symptoms. The early detection can be a very effective way of preventing a possible spread of coronavirus in the community. Further, the present disclosure aims to empower each individual member to manage health with the 24x7 body temperature information and refrain from moving around in case of any fever to minimize further exposure to other people. Further, the present disclosure aims to provide a safe and healthy community environment with actively monitoring the health status of their community members and share the information with family and caregiver. Further, the present disclosure aims to provide an affordable, but reliable safety tool for senior living facilities and cruise liners to manage the safety of their guests and workers proactively.

1. Health Tracker Watch include features such as,

- Body temperature trend display on the watch; daily and weekly up to 4 weeks, which can be used as a verification tool for free of fever for any gate or access control.

- Owner' ID on the watch; name, phone number and MAC address of the health tracker to prove the temperature data on the watch belong to the wearer of the health tracker.

- Make the health tracker vibrate when the health tracker loses the Bluetooth pairing with the phone.

- User can send an SOS message by double tapping the SOS screen to the family and caregiver.

- Enable the phone to receive the incoming call in speaker mode when the user can't get to the phone nearby.

- Retain the collected vital signs for 30 days in the TAP health tracker.

Further, specifications of the TAP health tracker smartwatch include:

- Bluetooth 5.0
- Display: 1.3"
- Sensors: PPG, Accelerometer, Temperature, Heart rate sensor
- Battery life time: ~ 7 days
- IP67 water resistant
- Data saving for 30 days
- Woven Nylon band

Further, the key features of the TAP health tracker smartwatch include:

- Automatic Monitoring and Display:

- Body temperature

- Steps

- Heart Rate

- Sleep Status

- Two weeks body temperature history

- Manual Measurement:

- Heart Rate

- Blood Oxygen (SpO2)

- Heart Rate Variability (HRV)

- Temperature

- Notifications:

- Incoming call

- Incoming message

- Bluetooth disconnects

- Message display from monitoring center

- Owner ID: name and phone number

- Phone locator

- Family Connect App for Android and iOS

- Desktop dashboard for caregiver

2. Caregiver's dashboard include features such as,

- Can open user's account and configure the individual user's health tracker and app remotely.

- Can send message from the dashboard to the user's health tracker(s) screen.

- A master caregiver can assign regional caregiver to manage the local members in the region.

- Provide a daily status report for the recording keeping.

3. Smartphone application include features such as,

- User can select application mode, user mode or family mode.

- Create and send approval codes for the family and caregiver to view the user's health data.

- Under the family mode, the user can view the health status of the family members.

- Send a SMS message to the family and caregiver with the user's location information to the receivers when receives the SOS request from the TAP health tracker.

Further, the health protection protocol may be implemented for the senior living facilities as follows:

• The TAP health tracker monitors various parameters such as body temperature, heart rate, SpO2, HRV, activity level, and display various reminders including medication of all residents and workers.

• The smartphone application installed on a user's phone displays the current and historical trends of temperature, blood oxygen level, heart rate, exercise level, sleep patterns, etc.

• A cloud server stores the current and historical trends of temperature, blood oxygen level, heart rate, exercise level, sleep patterns, etc.

• A daily temperature alert status report may be sent to the safety officer on a caregiver's every morning, and the report will contain the list of residents and workers showing fever symptoms along with an overnight temperature history.

Further, the health protection protocol may be implemented for the cruise liners as follows:

• Provide a pre-configured TAP health tracker to each passenger 2–3 weeks before a boarding date such that the TAP health tracker may monitor, in an instance, body temperature, heart rate, activity level, and display messages from a safety officer in a ship and successful pairing with a user's phone.

• Inspect temperature data on the TAP health tracker during boarding, such as current body temperature and a daily minimum temperature history or a daily maximum temperature history during last 2 weeks.

• The cloud server stores the current and historical trends of temperature, blood oxygen level, heart rate, exercise level, sleep patterns, etc.

• A daily temperature alert status report may be sent to the ship safety officer on a 24x7 desktop dashboard every morning, and the report will contain the list of residents and workers showing fever symptoms along with an overnight temperature history.

Further, the health protection protocol may be implemented for the school as follows:

• Provide a TAP health tracker to each student and teacher such that the TAP health tracker may monitor, in an instance, body temperature, heart rate, activity level, and display messages from the safety officer at the school and successful pairing with a user's phone.

- An application to send overnight body temperature data to the school every morning, such as a current body temperature and an overnight minimum temperature or an overnight maximum temperature.

- The cloud server stores the current and historical trends of temperature, blood oxygen level, heart rate, exercise level, sleep patterns, etc.

- Send a temperature alert status report to the safety officer at the school on a desktop dashboard every morning before 7 am during week days, and the report will contain the list of students showing fever symptoms along with their contact phone number and an overnight temperature history.

Referring now to figures, FIG. 1 is an illustration of an online platform 1000 consistent with various embodiments of the present disclosure. By way of non-limiting example, the online platform 1000 to facilitate a health protection protocol may be hosted on a centralized server 1002, such as, for example, a cloud computing service. The centralized server 1002 may communicate with other network entities, such as, for example, a mobile device 1006 (such as a smartphone, a laptop, a tablet computer, etc.), other electronic devices 1010 (such as desktop computers, server computers, etc.), databases 1014, sensors 1016, actuators (not shown) and a health tracker 1018 over a communication network 1004, such as, but not limited to, the Internet. Further, users of the online platform 1000 may include relevant parties such as, but not limited to, end-users, administrators service providers, service consumers and so on. Accordingly, in some instances, electronic devices operated by the one or more relevant parties may be in communication with the online platform 1000.

A user 1012, such as the one or more relevant parties, may access the online platform 1000 through a web-based software application or browser. The web-based software application may be embodied as, for example, but not be limited to, a website, a web application, a desktop application, and a mobile application compatible with a computing device 700.

FIG. 2 is a block diagram representation of a system to facilitate a health protection protocol, in accordance with some embodiments. Further, the system may include at least one sensor, a processing device, a communication device, and a storage device.

Further, the at least one sensor (such as, sensors 1016) may be communicatively coupled to the communication device. Further, the at least one sensor, in an instance, may be any sensor that may be disposed of in a health tracker associated with the health protection protocol. Further, the at least one sensor may include sensors such as, but are not limited to, a temperature sensor, a heart rate sensor, a photoplethysmography (PPG) sensor, etc. Further, the at least one sensor may be configured to sense one or more parameters of a body of a user. Further, at least one reading associated with the one or more parameters may be generated subsequent to the sensing of the one or more parameters by the at least one sensor.

Further, the communication device may be communicatively coupled with the processing device. Further, the communication device may be configured for receiving the at least one reading

associated with the one or more parameters on a user device (such as, mobile device 1006 or other electronic devices 1010). Further, the user device may include devices such as, but are not limited to, smartphones, laptops, PCs, etc. Further, the communication device may be configured to establish a communication link between the user device and the health tracker. Further, the user device may receive one or more temperature readings over the communication link from the health tracker. Further, the communication device may be configured for transmitting at least one trend corresponding to the one or more parameters to at least one health protection protocol custodian. Further, the communication device may be configured to establish a communication link between the user device and at least on device associated with the at least one health protection protocol custodian. Further, the at least one device may receive the at least one temperature trend of the user over the communication link. Further, the communication device may be configured for transmitting at least one alert on the health tracker and/or the user device from the at least one device.

Further, the processing device may be configured for analyzing one or more temperature readings of the user. Further, the processing device may be configured for determining the at least one trend associated with the one or more parameters. Further, the processing device may be configured to generate a report based on the at least one trend.

Further, the storage device (such as, a centralized server 1002) may be communicatively coupled with the processing device. Further, the storage device may be configured to store the one or more temperature readings based on the receiving of the one or more temperature readings from the user device. Further, the storage device, in an instance, may be configured to store at least one first current health data (explained further in conjunction with FIG. 3) and the at least one first past health data (explained further in conjunction with FIG. 3).

FIG. 3 is flowchart of a method to facilitate a health protection protocol, in accordance with some embodiments. Further, the health protection protocol may be referred to as AnyCARE health protection (AHP) system. Further, the health protection protocol may include a health tracker (may be referred to as AnyCARE TAP health tracker), a software application, and a data visualization interface (such as, a dashboard). Further, the health tracker, in an instance, may monitor one or more parameters of a body of a user. Further, the one or more parameters may include parameters such as, but are not limited to, temperature, blood oxygen, heart rate, heart rate variability (HRV), activity level, etc. Further, the user, in an instance, may wear the health tracker on a wrist. Further, the software application (may be referred to as a user application) may be downloaded on a user device. Further, the user device may include devices such as, but are not limited to, smartphones, laptops, PCs, etc. Further, a software application programming interface (or software API), in an instance, may display at least one trend corresponding to each parameter of the one or more parameters on the user device. Further, the at least one trend, in an instance, may include current trends and historical trends. Further, the current trends may include at least one first current health data of the each parameter associated with the body of the user (for example, if the parameter is temperature, then the at least one first current health data may include a minimum temperature and a maximum temperature in a current duration of time). Further, the historical trends may include at least one first past health data of the each parameter

associated with the body of the user (for example, if the parameter is temperature, then the at least one first past health data may include a minimum temperature and a maximum temperature in a past duration of time). Further, the software application, in an instance, may provide a platform for sharing of the at least one trend with one or more second users, one or more members of a family of the user, and at least one health protection protocol custodian. Further, a second software application (may be referred to as a family application) may be downloaded on the user device. Further, the data visualization interface may display the at least one trend on at least one device (such as, mobile device 1006 or other electronic devices 1010) associated with the at least one health protection protocol custodian. Further, the at least one device may include devices such as, but are not limited to, smartphones, laptops, PCs, etc. Further, the data visualization interface, in an instance, may display the at least one first current health data and the at least one first past health data. Further, at least one community of members may be monitored using the health protection protocol by the at least one health protection protocol custodian. Further, the second software API may facilitate the monitoring of the at least one community of members. Further, the at least one community of members may correspond to places such as, but are not limited to, senior living facilities, cruise ships, schools, hotels, etc.

Accordingly, the method may include a step of generating, using at least one sensor, a temperature reading of the user on the health tracker. Further, the at least one sensor, in an instance, may be any sensor that may be disposed of in the health tracker. Further, the at least one sensor may be configured to sense a temperature of the body of the user. Further, the temperature reading may be generated subsequent to the sensing of the temperature by the at least one sensor. Further, the health tracker, in an instance, may monitor the temperature of the body of the user at least once every thirty minutes subsequent to the generating. Further, the health tracker, in an instance, may be configured to store the at least one first past health data for at least thirty days based on the monitoring.

Further, the method may include a step of receiving, using a communication device, the temperature reading of the user on the user device. Further, a communication link may be established between the user device and the health tracker. Further, the user device may receive one or more temperature readings over the communication link from the health tracker. Further, the software API may be configured for displaying the one or more temperature readings of the user on the user device based on the receiving. Further, the software API may facilitate switching between at least two modes. Further, the at least two modes, in an instance, may include a user mode and a family mode. Further, the user, in an instance, may establish the communication link with one or more health trackers using the software API on the user device. Further, the establishing, in an instance, may be based on at least one approval code for each health tracker of the one or more health trackers. Further, the at least one approval code may facilitate successful authentication of the each health tracker for establishing the communication link with the user device. Further, the each health tracker may be associated with each community member of the at least one community of members (such as, members of the family of the user). Further, the user may monitor the one or more temperature readings of the each community member. Further, the second software API, in an instance, may facilitate the monitoring of the one or more temperature readings of the each community member.

Further, the method may include a step of retrieving, using a storage device, the one or more temperature readings of the user. Further, the storage device, in an instance, may correspond to a cloud server. Further, the storage device may establish the communication link with the user device. Further, the storage device may be configured to store the one or more temperature readings based on receiving of the one or more temperature readings from the user device. Further, the storage device, in an instance, may be configured to store the at least one first current health data and the at least one first past health data. Further, the storage device may establish the communication link with the at least one device of the at least one health protection protocol custodian. Further, the at least one health protection protocol custodian may monitor the one or more temperature readings, the at least one first current health data, and the at least one first past current health data as and when needed. Further, the one or more temperature readings, in an instance, may include the temperature readings of the at least one community of members.

Further, the method may include a step of analyzing, using a processing device, the one or more temperature readings of the user. Further, the one or more temperature readings, in an instance, may include the temperature readings of the at least one community of members.

Further, the method may include a step of determining, using the processing device, at least one temperature trend based on the analyzing. Further, the at least one temperature trend may be based on the one or more temperature readings of the user. Further, the at least one temperature trend, in an instance, may be based on the at least one first past health data associated with the user. Further, the at least one temperature trend, in an instance, may include one or more details associated with the temperature of the body of the user based on the at least one first past health data and the at least one first current health data. Further, the one or more details may include a daily average temperature, an average of the maximum temperature, an average of the minimum temperature, etc. Further, the at least one temperature trend, in an instance, may include temperature trends of the at least one community of members. Further, in an instance, the at least one temperature may be displayed on the health tracker subsequent to the determining. Further, the determining, in an instance, may display the at least one temperature trend on the user device based on receiving of the at least one temperature trend over the communication link.

Further, the method may include a step of transmitting, using the communication device, the at least one temperature trend to the at least one health protection protocol custodian. Further, the at least one device associated with the at least one health protection protocol custodian may receive the at least one temperature trend of the user based on the transmitting over the communication link. Further, the data visualization interface, in an instance, may display one or more temperature trends on the at least one device. Further, each temperature trend of the one or more temperature trends, in an instance, may be associated with the each community member of the at least one community of members. Further, the at least one health protection protocol custodian, in an instance, may take an action based on the at least one temperature trend. Further, the taking of the action, in an instance, may include transmitting at least one alert on the health tracker and/or the user device associated with the user. Further, the transmitting, in an instance, may include sending of the at least one alert to the each health tracker associated with the each community member. Further, in some embodiments, the at least one alert may include a message

in a form of a text on the user device with varying degrees of color and/or sound that may intensify based on a severity of the at least one alert.

FIG. 4 is a flowchart of a method to facilitate a health protection protocol in case of an emergency, in accordance with some embodiments. Accordingly, the method may include a step of generating, using a processing device, a help alert using a health tracker. Further, the help alert may be generated based on an interaction of a user with the health tracker in an emergency situation such as, but is not limited to, fall down, extreme heart rate, low temperature, etc. Further, the interaction, in an instance, may include tapping on a display of the health tracker. Further, at least of the at least one sensor (such as, an accelerometer) may facilitate sensing of the interaction on the health tracker. Further, the help alert, in an instance, may be generated based on the sensing.

Further, the method may include a step of receiving, using a communication device, the help alert on the user device based on the generating. Further, the receiving, in an instance, may be based over a communication link established between the user device and the health tracker. Further, in some embodiments, the user device may receive a plurality of help alerts from each community member of at least one community of members (such as, members of a family of the user). Further, the plurality of help alerts may be assigned a hierarchical order based on a severity of each help alert of the plurality of help alerts.

Further, the method may include a step of transmitting, using the communication device, the help alert on at least one device associated with at least one health protection protocol custodian. Further, the transmitting, in an instance, may be based over a communication link established between the user device and the at least one device. Further, the plurality of help alerts may be received on the at least one device based on the transmitting. Further, the at least one health protection protocol custodian may determine a severity associated with the emergency situation. Further, the at least one health protection protocol custodian may take an action based on the determining. Further, the each help alert of the plurality of help alerts may be considered for taking an action by the at least one health protection protocol custodian in the hierarchical order based on the severity. Further, in an instance, the at least one health protection protocol custodian may dial a contact number associated with an emergency service for providing medical aid to the user for overcoming the emergency situation.

FIG. 5 is a portion view of an exemplary representation of a system structure associated with a health protection protocol, in accordance with some embodiments. Further, a cloud server, in an instance, may be configured to store at least one first current health data and at least one first past health data. Further, the cloud server, in an instance, may facilitate a real-time database configured for monitoring of the at least one first current health data of a user in real-time on a user device using a software application and/or on a health tracker. Further, the user, in an instance, may monitor the at least one first current health data and/or the at least one first past health data of each community member of at least one community of members.

Further, the health tracker may display a graphical user interface (GUI) inclusive of at least one trend based on an implementation of a custom firmware on the health tracker. Further, the GUI,

in an instance, may display one or more parameters (such as, body temperature, heart rate, etc.) associated with a body of the user on the health tracker. Further, the at least one trend may be displayed for at least twenty-four (24) hours based on monitoring of the one or more parameters at a regular interval using the health tracker. Further, one or more alerts may be received on the health tracker from at least one health protection protocol custodian. Further, the one or more alerts, in an instance, may include textual information and/or graphical information that the user may implement in order to keep the one or more parameters within normal limits.

Further, the custom firmware may be configured for displaying one or more second details corresponding to the user. Further, the one or more second details may include details such as, but are not limited to, a name of the user, a phone number associated with the user, a media access control (MAC) address, etc. Further, the custom firmware, in an instance, may configured to display a temperature report of one or more days based on the determining of the at least one trend (such as, a temperature trend). Further, the temperature report, in an instance, may be used as a report confirming a well-being state of the user.

Further, the health tracker may facilitate generating of a medical alert based on an interaction of the user with the health tracker in an emergency situation. Further, the interaction, in an instance, may include tapping on the health tracker. Further, at least of the at least one sensor (such as, an accelerometer) may facilitate sensing of the interaction on the health tracker. Further, the medical alert, in an instance, may be generated based on the sensing.

FIG. 6 is a portion view of an exemplary representation of a system structure associated with a health protection protocol, in accordance with some embodiments (explained in conjunction with FIG. 5). Further, a software API associated with the health protection protocol may facilitate switching between at least two modes based on an interaction with a user device associated with a user. Further, the at least two modes, in an instance, may include a user mode and a family mode.

Further, in the user mode, the software API may be configured to display current statistics of the one or more parameters based on monitoring of the one or more parameters by the health tracker. Further, the displaying, in an instance, may include at least one daily vital sign associated with the one or more parameters. Further, in the user mode, the software API may be configured to display past statistics of the one or more parameters based on the monitoring of the one or more parameters by the health tracker. Further, the displaying, in an instance, may include a report based on a duration of time. Further, the report based on the duration of time may include a weekly report, a monthly report, and/or a yearly report.

Further, in the family mode, the software API may be configured to display statistics of the one or more parameters associated with each community member of at least one community of members based on the monitoring of the one or more parameters by each health tracker of one or more health trackers associated with the each community members. Further, the displaying, in an instance, may include at least one daily vital sign, at least one historical vital sign, and at least one medical alert history.

Further, a second software API associated with the health protection protocol may be configured to display statistics of the one or more parameters associated with each community member of at least one community of members based on the monitoring of the one or more parameters by each health tracker of one or more health trackers associated with the each community members. Further, the displaying, in an instance, may include at least one daily vital sign, at least one historical vital sign, and at least one medical alert history.

Further, at least one device associated with at least one health protection protocol custodian send one or more notifications to at least one community of members. Further, the one or more notifications, in an instance, may include alerts that the user may implement in order to keep the one or more parameters associated with each community member of the at least community of members within normal limits.

With reference to FIG. 7, a system consistent with an embodiment of the disclosure may include a computing device or cloud service, such as computing device 700. In a basic configuration, computing device 700 may include at least one processing unit 702 and a system memory 704. Depending on the configuration and type of computing device, system memory 704 may comprise, but is not limited to, volatile (e.g. random-access memory (RAM)), non-volatile (e.g. read-only memory (ROM)), flash memory, or any combination. System memory 704 may include operating system 705, one or more programming modules 706 (such as, at least one sensor module, a communication protocol module, etc.), and may include a program data 707. Operating system 705, for example, may be suitable for controlling computing device 700's operation. Furthermore, embodiments of the disclosure may be practiced in conjunction with a graphics library, other operating systems, or any other application program and is not limited to any particular application or system. This basic configuration is illustrated in FIG. 7 by those components within a dashed line 708.

Computing device 700 may have additional features or functionality. For example, computing device 700 may also include additional data storage devices (removable and/or non-removable) such as, for example, magnetic disks, optical disks, or tape. Such additional storage is illustrated in FIG. 7 by a removable storage 709 and a non-removable storage 710. Computer storage media may include volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer-readable instructions, data structures, program modules, or other data. System memory 704, removable storage 709, and non-removable storage 710 are all computer storage media examples (i.e., memory storage.) Computer storage media may include, but is not limited to, RAM, ROM, electrically erasable read-only memory (EEPROM), flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store information and which can be accessed by computing device 700. Any such computer storage media may be part of device 700. Computing device 700 may also have input device(s) 712 such as a keyboard, a mouse, a pen, a sound input device, a touch input device, a location sensor, a camera, a biometric sensor, etc. Output device(s) 714 such as a display, speakers, a printer, etc. may also be included. The aforementioned devices are examples and others may be used.

Computing device 700 may also contain a communication connection 716 that may allow device 700 to communicate with other computing devices 718, such as over a network in a distributed computing environment, for example, an intranet or the Internet. Communication connection 716 is one example of communication media. Communication media may typically be embodied by computer-readable instructions, data structures, program modules, or other data in a modulated data signal, such as a carrier wave or other transport mechanism, and includes any information delivery media. The term "modulated data signal" may describe a signal that has one or more characteristics set or changed in such a manner as to encode information in the signal. By way of example, and not limitation, communication media may include wired media such as a wired network or direct-wired connection, and wireless media such as acoustic, radio frequency (RF), infrared, and other wireless media. The term computer-readable media as used herein may include both storage media and communication media.

As stated above, a number of program modules and data files may be stored in system memory 704, including operating system 705. While executing on processing unit 702, programming modules 706 (e.g., application 720 such as a media player) may perform processes including, for example, one or more stages of methods, algorithms, systems, applications, servers, databases as described above. The aforementioned process is an example, and processing unit 702 may perform other processes.

Generally, consistent with embodiments of the disclosure, program modules may include routines, programs, components, data structures, and other types of structures that may perform particular tasks or that may implement particular abstract data types. Moreover, embodiments of the disclosure may be practiced with other computer system configurations, including hand-held devices, general-purpose graphics processor-based systems, multiprocessor systems, microprocessor-based or programmable consumer electronics, application-specific integrated circuit-based electronics, minicomputers, mainframe computers, and the like. Embodiments of the disclosure may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

Furthermore, embodiments of the disclosure may be practiced in an electrical circuit comprising discrete electronic elements, packaged or integrated electronic chips containing logic gates, a circuit utilizing a microprocessor, or on a single chip containing electronic elements or microprocessors. Embodiments of the disclosure may also be practiced using other technologies capable of performing logical operations such as, for example, AND, OR, and NOT, including but not limited to mechanical, optical, fluidic, and quantum technologies. In addition, embodiments of the disclosure may be practiced within a general-purpose computer or in any other circuits or systems.

Embodiments of the disclosure, for example, may be implemented as a computer process (method), a computing system, or as an article of manufacture, such as a computer program product or computer-readable media. The computer program product may be a computer storage media readable by a computer system and encoding a computer program of instructions for

executing a computer process. The computer program product may also be a propagated signal on a carrier readable by a computing system and encoding a computer program of instructions for executing a computer process. Accordingly, the present disclosure may be embodied in hardware and/or in software (including firmware, resident software, micro-code, etc.). In other words, embodiments of the present disclosure may take the form of a computer program product on a computer-usable or computer-readable storage medium having computer-usable or computer-readable program code embodied in the medium for use by or in connection with an instruction execution system. A computer-usable or computer-readable medium may be any medium that can contain, store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device.

The computer-usable or computer-readable medium may be, for example but not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, device, or propagation medium. More specific computer-readable medium examples (a non-exhaustive list), the computer-readable medium may include the following: an electrical connection having one or more wires, a portable computer diskette, a random-access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or Flash memory), an optical fiber, and a portable compact disc read-only memory (CD-ROM). Note that the computer-usable or computer-readable medium could even be paper or another suitable medium upon which the program is printed, as the program can be electronically captured, via, for instance, optical scanning of the paper or other medium, then compiled, interpreted, or otherwise processed in a suitable manner, if necessary, and then stored in a computer memory.

Embodiments of the present disclosure, for example, are described above with reference to block diagrams and/or operational illustrations of methods, systems, and computer program products according to embodiments of the disclosure. The functions/acts noted in the blocks may occur out of the order as shown in any flowchart. For example, two blocks shown in succession may in fact be executed substantially concurrently or the blocks may sometimes be executed in the reverse order, depending upon the functionality/acts involved.

While certain embodiments of the disclosure have been described, other embodiments may exist. Furthermore, although embodiments of the present disclosure have been described as being associated with data stored in memory and other storage mediums, data can also be stored on or read from other types of computer-readable media, such as secondary storage devices, like hard disks, solid-state storage (e.g., USB drive), or a CD-ROM, a carrier wave from the Internet, or other forms of RAM or ROM. Further, the disclosed methods' stages may be modified in any manner, including by reordering stages and/or inserting or deleting stages, without departing from the disclosure.

FIG. 8 is an exemplary representation of a health tracker displaying an SOS feature to facilitate a health protection protocol, in accordance with some embodiments.

FIG. 9 is a front view of a screen associated with a software application to facilitate a health protection protocol, in accordance with some embodiments.

FIG. 10 is a front view of a screen displaying a pop-up for switching between at least two modes associated with a software application, in accordance with some embodiments.

FIG. 11 is an exemplary representation of a health tracker displaying a home screen to facilitate a health protection protocol, in accordance with some embodiments.

FIG. 12 is an exemplary representation of a health tracker displaying daily body temperature statistics, in accordance with some embodiments.

FIG. 13 is an exemplary representation of a health tracker displaying daily heart rate statistics, in accordance with some embodiments.

FIG. 14 is an exemplary representation of a health tracker displaying daily exercise level statistics, in accordance with some embodiments.

FIG. 15 is an exemplary representation of a health tracker displaying blood oxygen statistics, in accordance with some embodiments.

FIG. 16 is an exemplary representation of a health tracker displaying heart rate variability (HRV) statistics, in accordance with some embodiments.

FIG. 17 is an exemplary representation of a health tracker displaying daily sleep status statistics, in accordance with some embodiments.

FIG. 18 is an exemplary representation of a health tracker displaying a medical alert, in accordance with some embodiments.

FIG. 19 is a front view of a screen associated with a software application displaying a number of steps taken by a user in a user mode, in accordance with some embodiments.

FIG. 20 is a front view of a screen associated with a software application displaying last recorded one or more parameters in a user mode, in accordance with some embodiments.

FIG. 21 is a portion view of a screen associated with a software application displaying last recorded one or more parameters in a user mode, in accordance with some embodiments.

FIG. 22 is a front view of a screen associated with a software application displaying recorded one or more parameters in a user mode, in accordance with some embodiments.

FIG. 23 is a front view of a screen associated with a software application displaying one or more detail fields corresponding to at least one parameter (such as, blood pressure) of one or more parameters in a user mode, in accordance with some embodiments.

FIG. 24 is a front view of a screen associated with a software application displaying one or more detail fields corresponding to at least one parameter (such as, glucose) of one or more parameters in a user mode, in accordance with some embodiments.

FIG. 25 is a front view of a screen associated with a software application displaying one or more tabs of a navigational menu (such as, a navigational menu in “settings” associated with a software API) in a user mode, in accordance with some embodiments.

FIG. 26 is a portion view of a screen associated with a software application displaying one or more tabs of a navigational menu in a user mode, in accordance with some embodiments.

FIG. 27 is a front view of a screen associated with a software application displaying a number of steps taken by a community member of at least one community of members in a family mode, in accordance with some embodiments.

FIG. 28 is a front view of a screen associated with a software application displaying last recorded one or more parameters in a family mode, in accordance with some embodiments.

FIG. 29 is a portion view of a screen associated with a software application displaying last recorded one or more parameters in a family mode, in accordance with some embodiments.

FIG. 30 is a front view of a screen associated with a software application displaying recorded one or more parameters in a family mode, in accordance with some embodiments.

FIG. 31 is a portion view of a screen associated with a software application displaying one or more tabs of a navigational menu in a family mode, in accordance with some embodiments.

Although the invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention.

What is claimed is:

1. Health Tracker Watch features:

- body temperature trend display on the watch: daily and weekly up to 4 weeks, which can be used as a verification tool for free of fever for any gate or access control

- owner' ID on the watch: name, phone number and MAC address of the health tracker to prove the temperature data on the watch belong to the wearer of the health tracker.

- make the health tracker vibrate when it lose the Bluetooth pairing with the phone

- user can send a SOS message by double tapping the SOS screen to the family and caregiver

- enable the phone to receive the incoming call in speaker mode when the user can't get to the phone nearby

- Retain the collected vital signs for 30 days in the TAP health tracker

2. Caregiver's dashboard features:

- can open user's account and configure the individual user's health tracker and app remotely

- can send message from the dashboard to the user's health tracker(s) screen

- a master caregiver can assign regional caregiver to manage the local members in the region

- Provide a daily status report for the recording keeping

3. Family app features:

- user can select application mode, user mode or family mode

- create and send approval codes for the family and caregiver to view the user's health data

- under the family mode, the user can view the health status of the family members

- send a SMS message to the family and caregiver with the user's location information to the receivers when receives the SOS request from the TAP health tracker

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Document Description: COVID-19 Collab Database Request for Prov Appl

PTO/SB/452 (09-20)

CERTIFICATION AND REQUEST FOR COVID-19 PROVISIONAL PATENT APPLICATION PROGRAM

(Page 1 of 1)

First Named Inventor:	Soonbum Shin
Title of Invention:	METHODS, SYSTEMS, AND DEVICES FOR FACILITATING A HEALTH PROTECTION PROTOCOL
Contact information to include in database (optional)	

APPLICANT HEREBY MAKES THE FOLLOWING CERTIFICATIONS AND REQUESTS THAT THE USPTO INCLUDE THE DESCRIPTION OF THE ACCOMPANYING PROVISIONAL PATENT APPLICATION IN A PUBLIC DATABASE.

1.e The description of the accompanying provisional patent application concerns a product or processe relating to COVID-19 and such product or process is subject to an applicable FDA approval fore COVID-19 use.e

2.e The accompanying application is in the English language.e

3.e The accompanying application is being filed in DOCX format via the USPTO's Patent Center filinge system, together with this form.e

4. The applicant understands that while the required filing fee for the accompanying provisional application may be deferred by acceptance into this program, the appropriate filing fee must be paid in order for a subsequent U.S. nonprovisional application to claim the benefit of the filing date of the accompanying provisional application. Applicant recognizes that the filing fee due in the future may be more than the current fee due and that by deferring payment of the filing fee, there may be an increase in the total fee due.

5.e Applicant authorizes and requests that the description, including the specification and anye drawings, claims and/or abstract of the accompanying provisional patent application, as well ase this form, be included in a searchable online public database.e

6.e Applicant understands that inclusion in the public database is a publication of the description ande this form.e

Signature	Date 11/06/2020
Name (Print/Typed) Soonbum Shin	Practitioner Registration Number

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☐ *Total of ..... forms are submitted.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.