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(54) METHOD AND APPARATUS FOR MOBILE HEALTH AND WELLNESS MANAGEMENT INCORPORATING REAL-TIME COACHING AND FEEDBACK, COMMUNITY AND REWARDS

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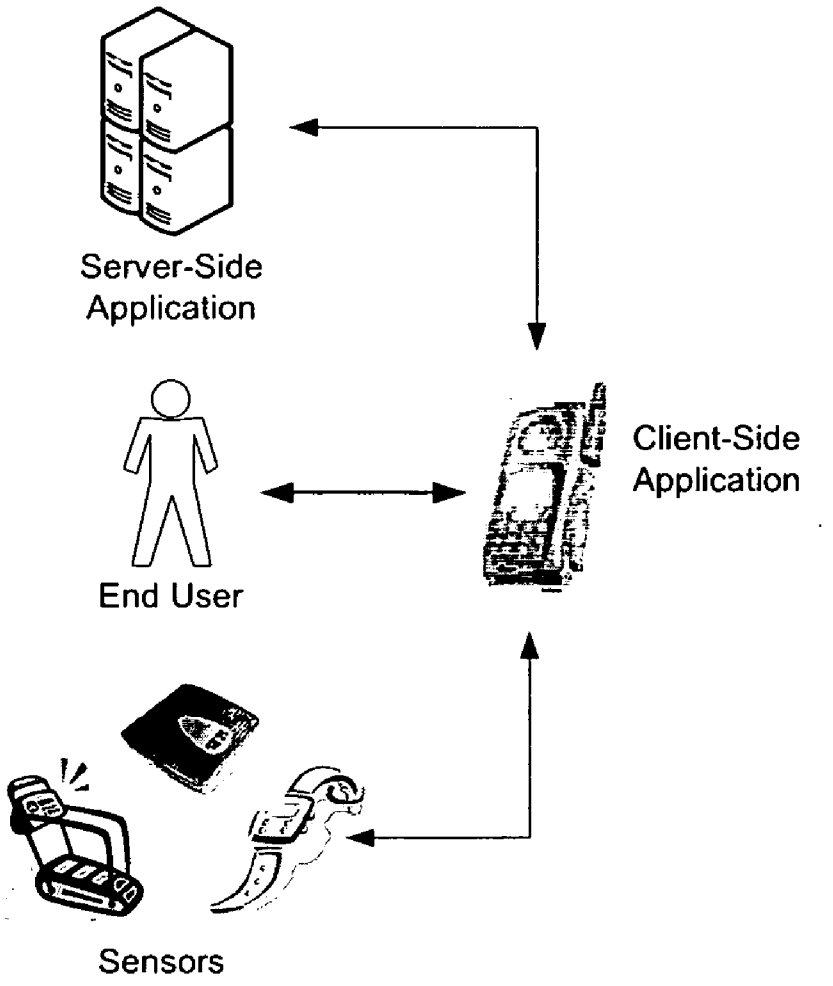
(57) **ABSTRACT**

A method and apparatus for a mobile lifestyle management system, combining a server-based application enabling creation of an integrated health and wellness plan (comprising diet, exercise, medication and vitals testing), with a client-based application enabling management of, and compliance with, the resulting lifestyle plan. The client application is installed on a wireless, Internet-enabled mobile device, the server application on an Internet-connected server, and the two applications exchange data with one another via an over-the-air "OTA" synchronization using standard Internet protocols. The resulting ecosystem operates as a stand-alone lifestyle management system, but can also be configured to function as a content delivery platform, when integrated with existing Web-based health and wellness content.



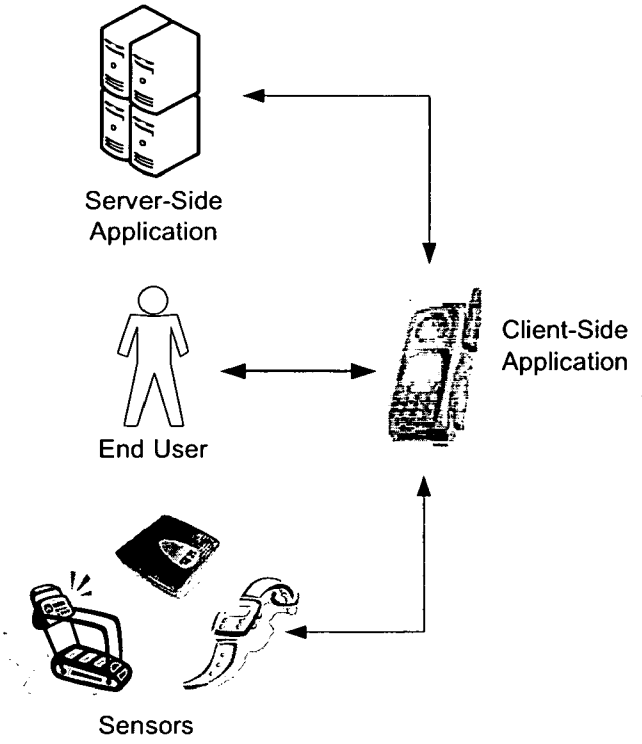

Server-Side
Application
Client-Side
Application
End User
Sensors

Fig. 1A.

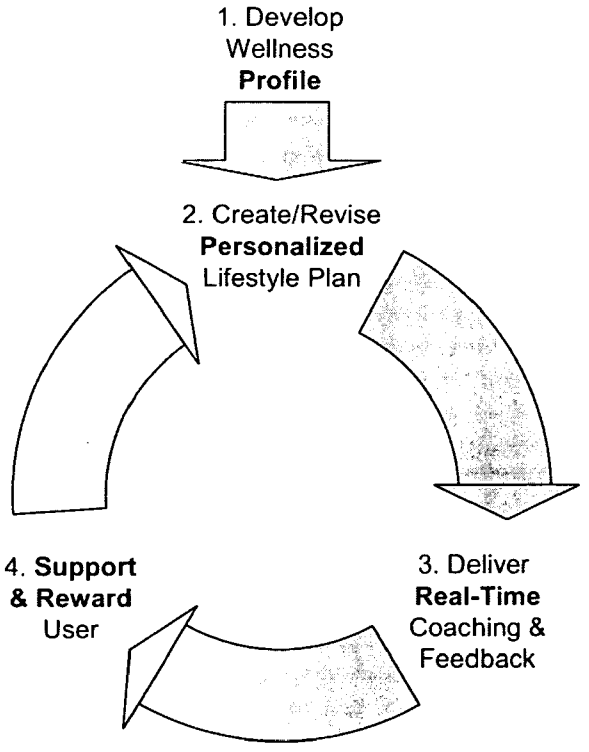

1. Develop
Wellness
Profile
2. Create/Revise
Personalized
Lifestyle Plan
3. Deliver
Real-Time
Coaching &
Feedback
4. **Support**
& Reward
User

Fig. 1B.

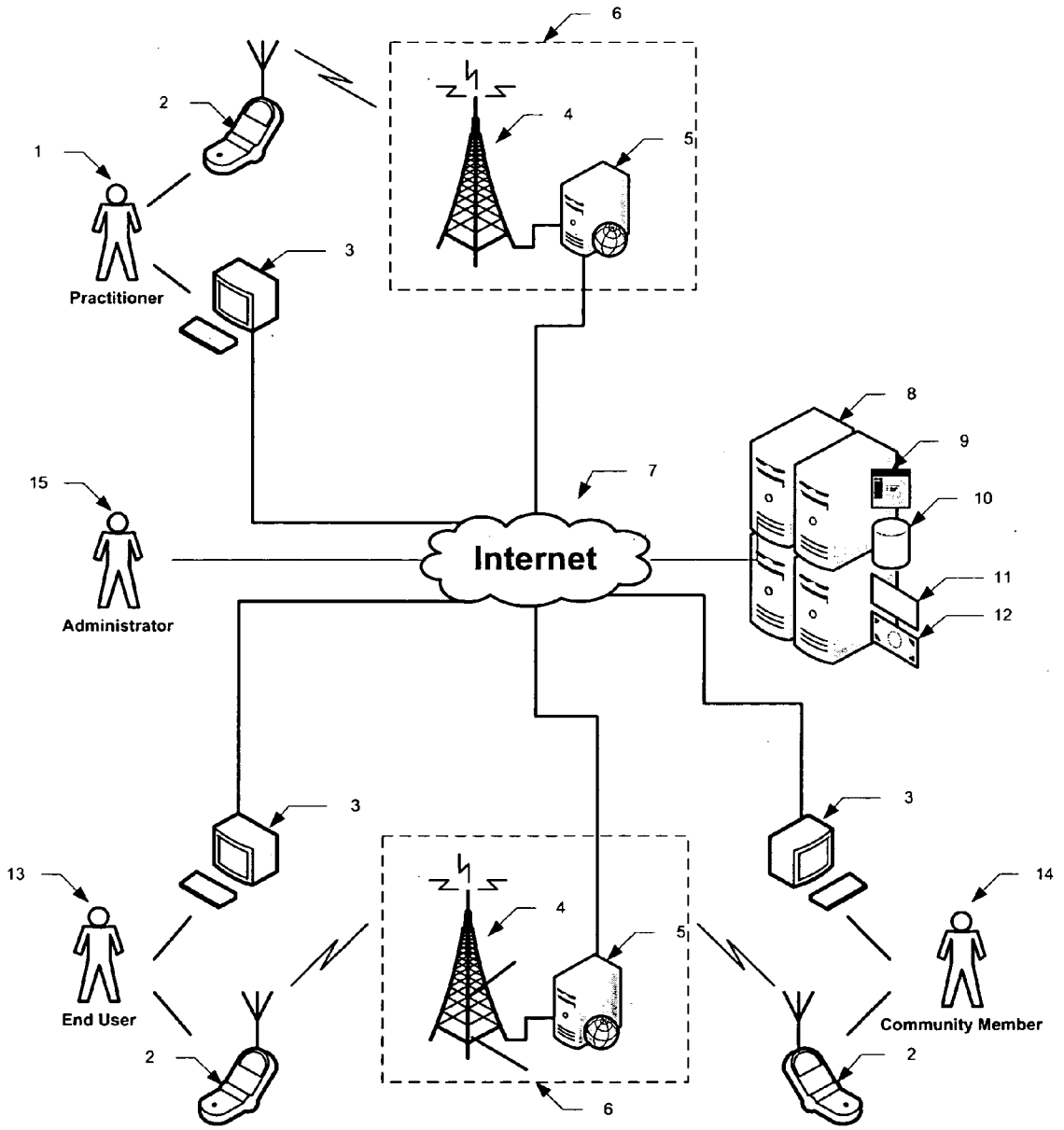

6
2
4
5
1
3
Practitioner
8
9
7
15
10
Internet
11
12
Administrator
3
3
13
4
5
14
End User
Community Member
2
2
6

Fig. 2.

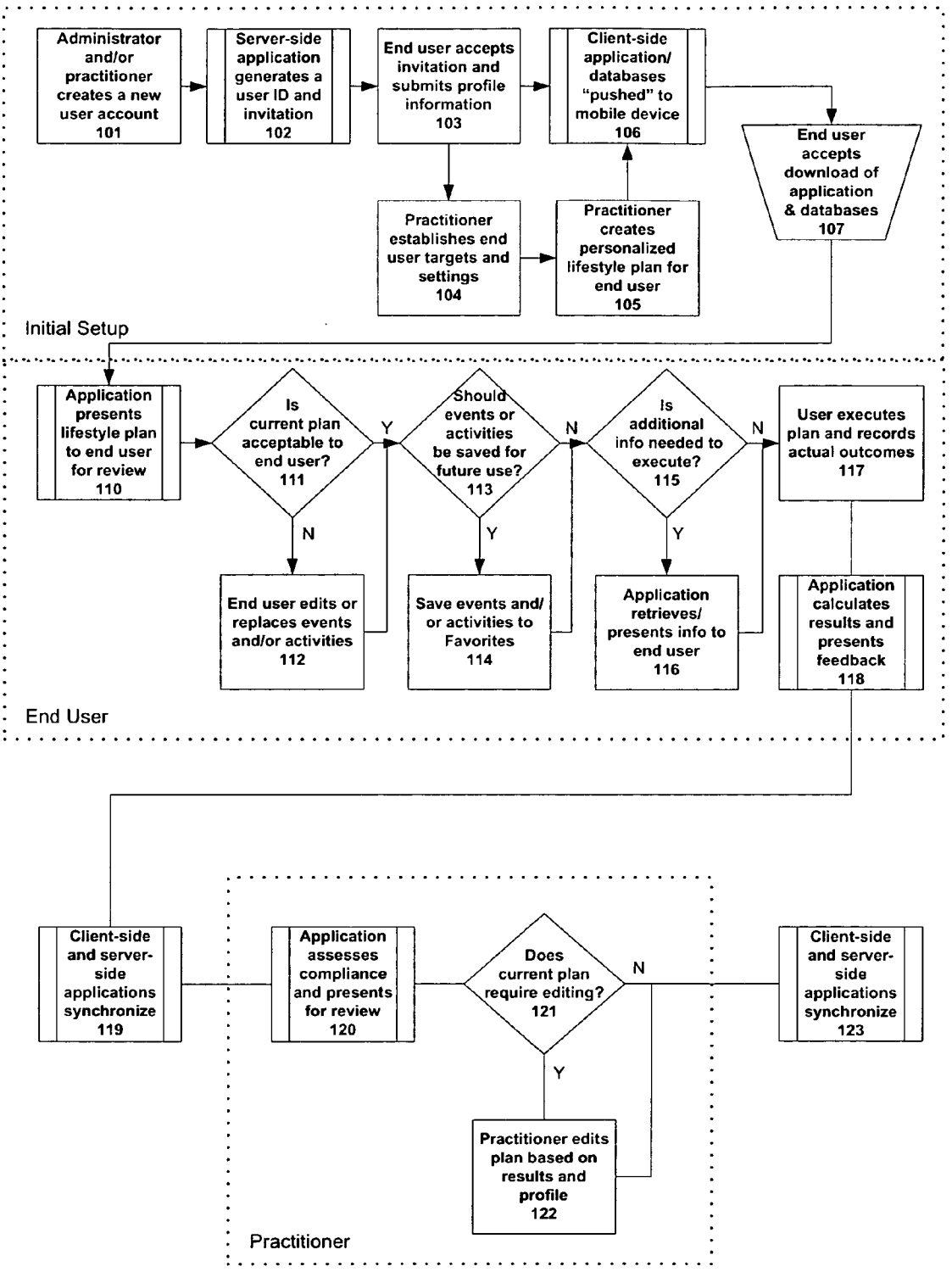

Administrator and/or practitioner creates a new user account 101
Server-side application generates a user ID and invitation 102
End user accepts invitation and submits profile information 103
Client-side application/ databases "pushed" to mobile device 106
End user accepts download of application & databases 107
Practitioner establishes end user targets and settings 104
Practitioner creates personalized lifestyle plan for end user 105
Initial Setup
Application presents lifestyle plan to end user for review 110
Is current plan acceptable to end user? 111
Y
N
Should events or activities be saved for future use? 113
Y
N
Is additional info needed to execute? 115
Y
N
User executes plan and records actual outcomes 117
End user edits or replaces events and/or activities 112
Save events and/ or activities to Favorites 114
Application retrieves/ presents info to end user 116
Application calculates results and presents feedback 118
End User
Client-side and server-side applications synchronize 119
Application assesses compliance and presents for review 120
Does current plan require editing? 121
Y
N
Practitioner edits plan based on results and profile 122
Client-side and server-side applications synchronize 123
Practitioner

Fig. 3.

SERVER-SIDE ARCHITECTURE

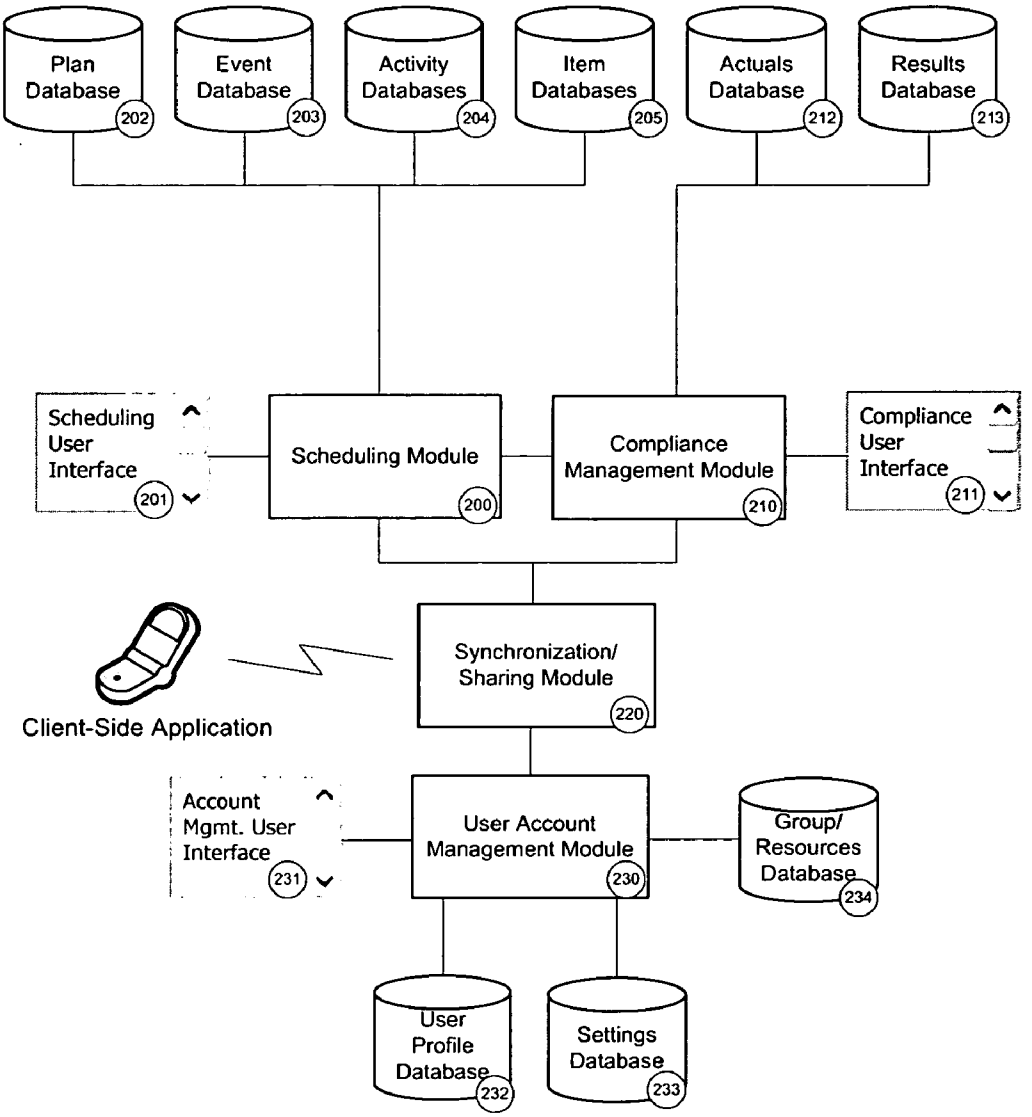


Fig. 4.

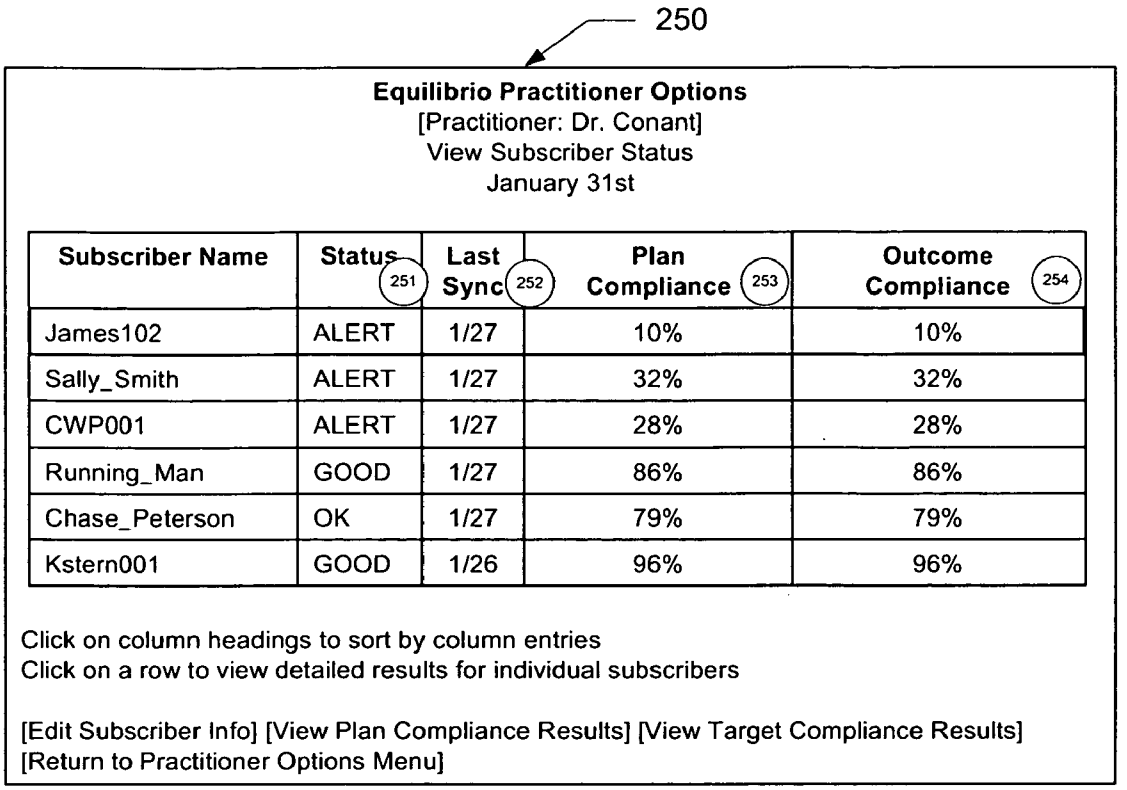

250
Equilibrio Practitioner Options
[Practitioner: Dr. Conant]
View Subscriber Status
January 31st
Subscriber Name
Status 251
Last Sync 252
Plan Compliance 253
Outcome Compliance 254
James102 ALERT 1/27 10% 10%
Sally_Smith ALERT 1/27 32% 32%
CWP001 ALERT 1/27 28% 28%
Running_Man GOOD 1/27 86% 86%
Chase_Peterson OK 1/27 79% 79%
Kstern001 GOOD 1/26 96% 96%
Click on column headings to sort by column entries
Click on a row to view detailed results for individual subscribers
[Edit Subscriber Info] [View Plan Compliance Results] [View Target Compliance Results]
[Return to Practitioner Options Menu]

Fig. 5A.

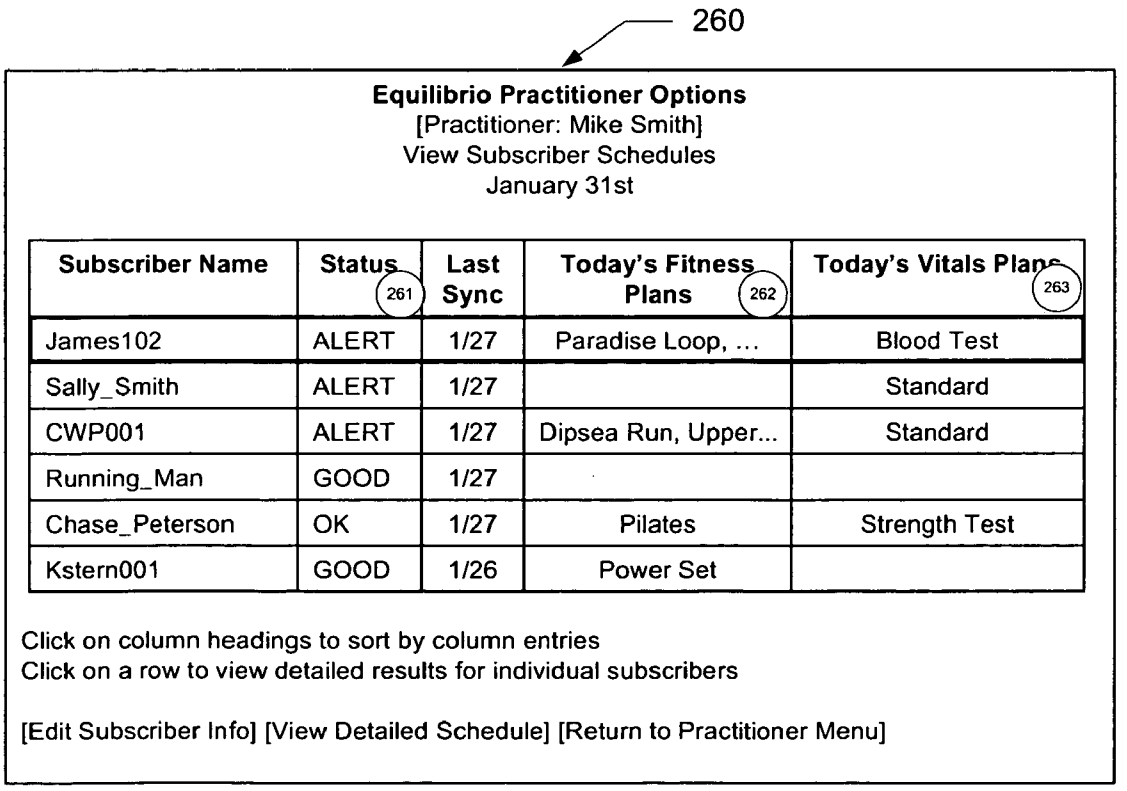

260
Equilibrio Practitioner Options
[Practitioner: Mike Smith]
View Subscriber Schedules
January 31st
Subscriber Name
Status 261
Last Sync
Today's Fitness Plans 262
Today's Vitals Plans 263
James102 ALERT 1/27 Paradise Loop, ... Blood Test
Sally_Smith ALERT 1/27 Standard
CWP001 ALERT 1/27 Dipsea Run, Upper... Standard
Running_Man GOOD 1/27
Chase_Peterson OK 1/27 Pilates Strength Test
Kstern001 GOOD 1/26 Power Set
Click on column headings to sort by column entries
Click on a row to view detailed results for individual subscribers
[Edit Subscriber Info] [View Detailed Schedule] [Return to Practitioner Menu]

Fig. 5B.

CLIENT-SIDE ARCHITECTURE

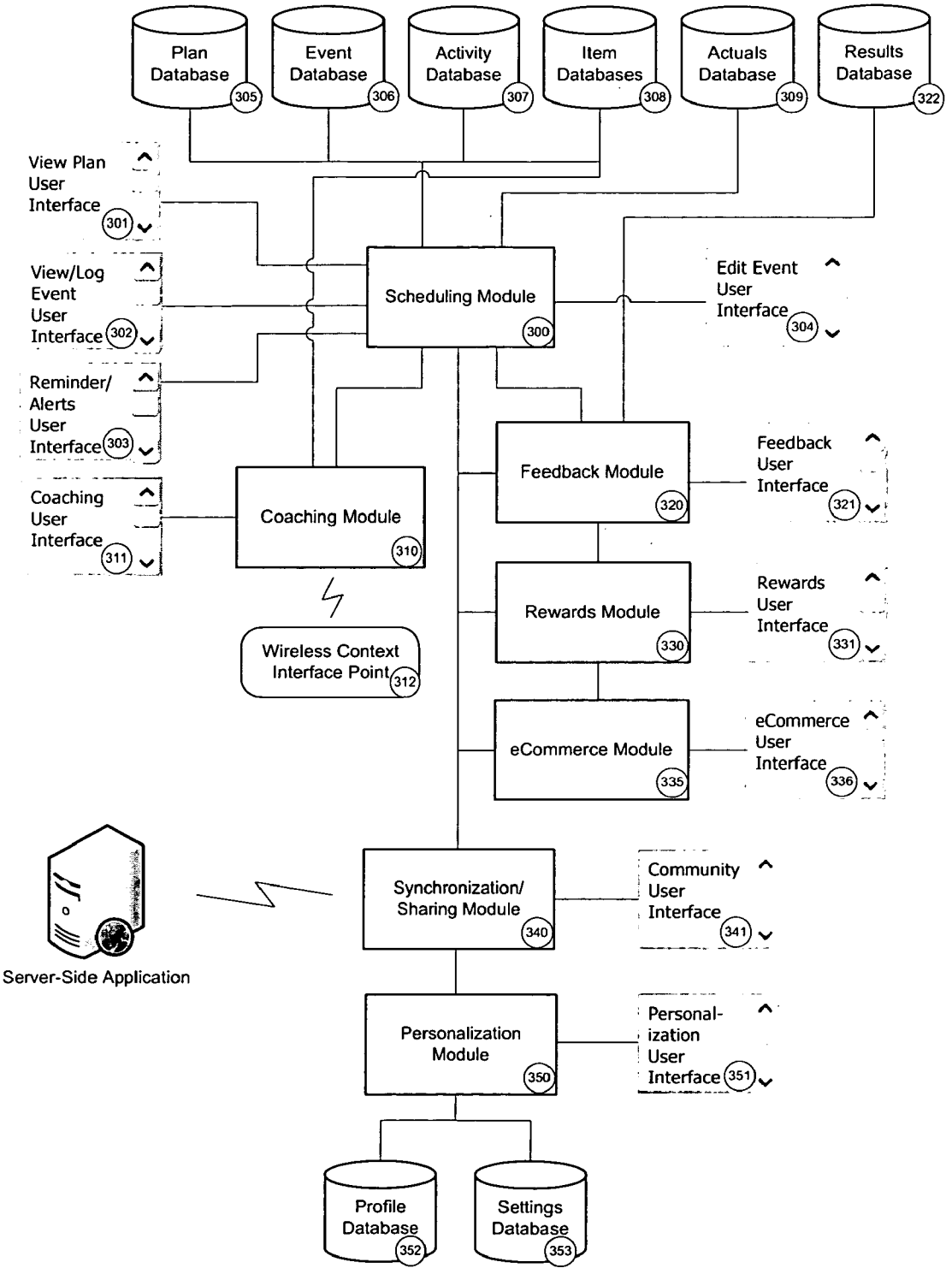


Fig. 6.

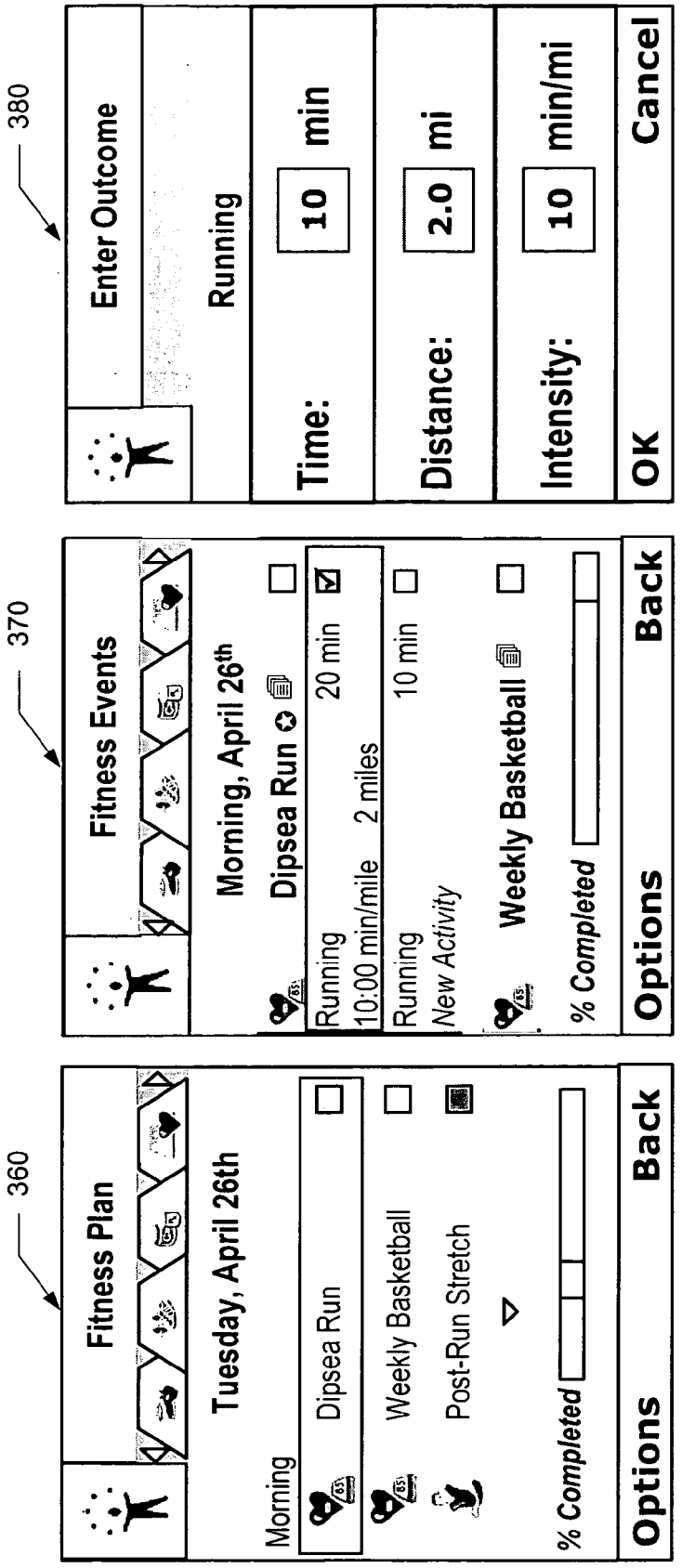


Fig. 7A.

Fig. 7B.

Fig. 7C.

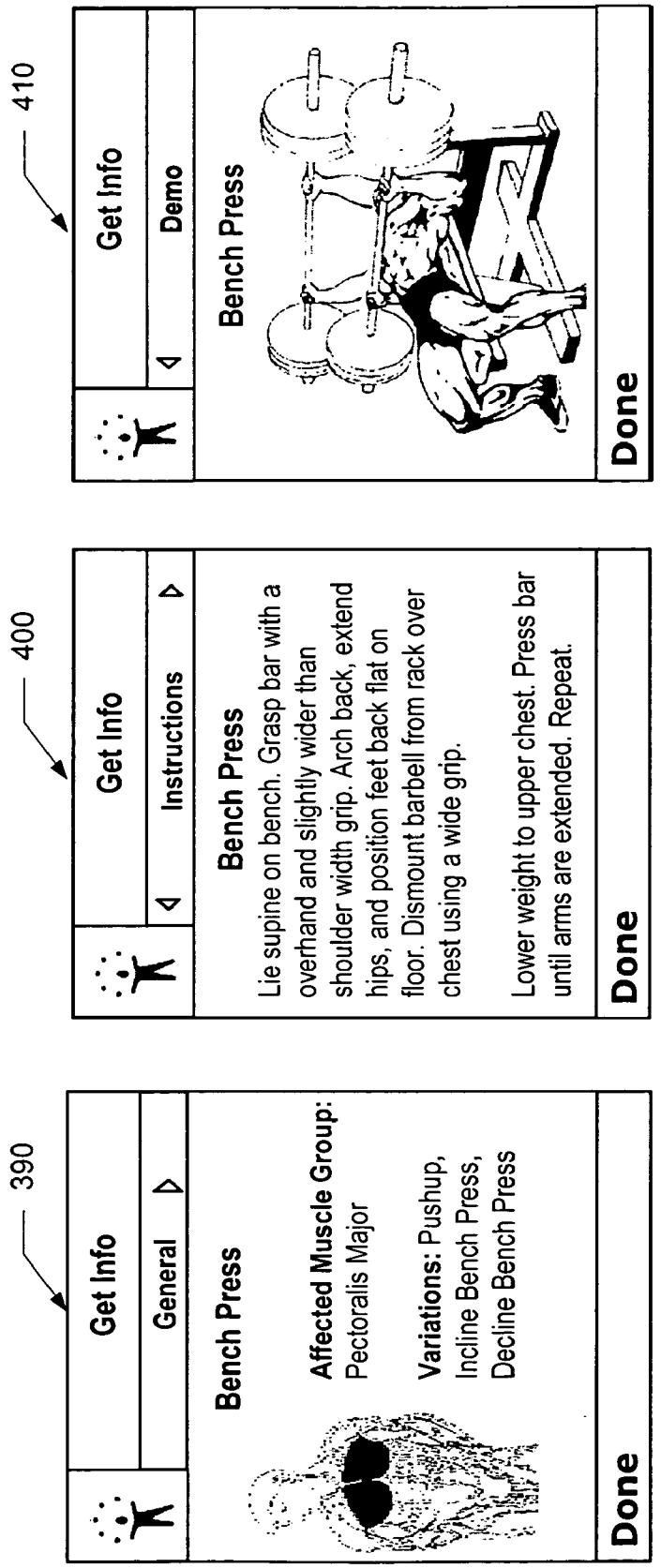


Fig. 8A.

Fig. 8B.

Fig. 8C.

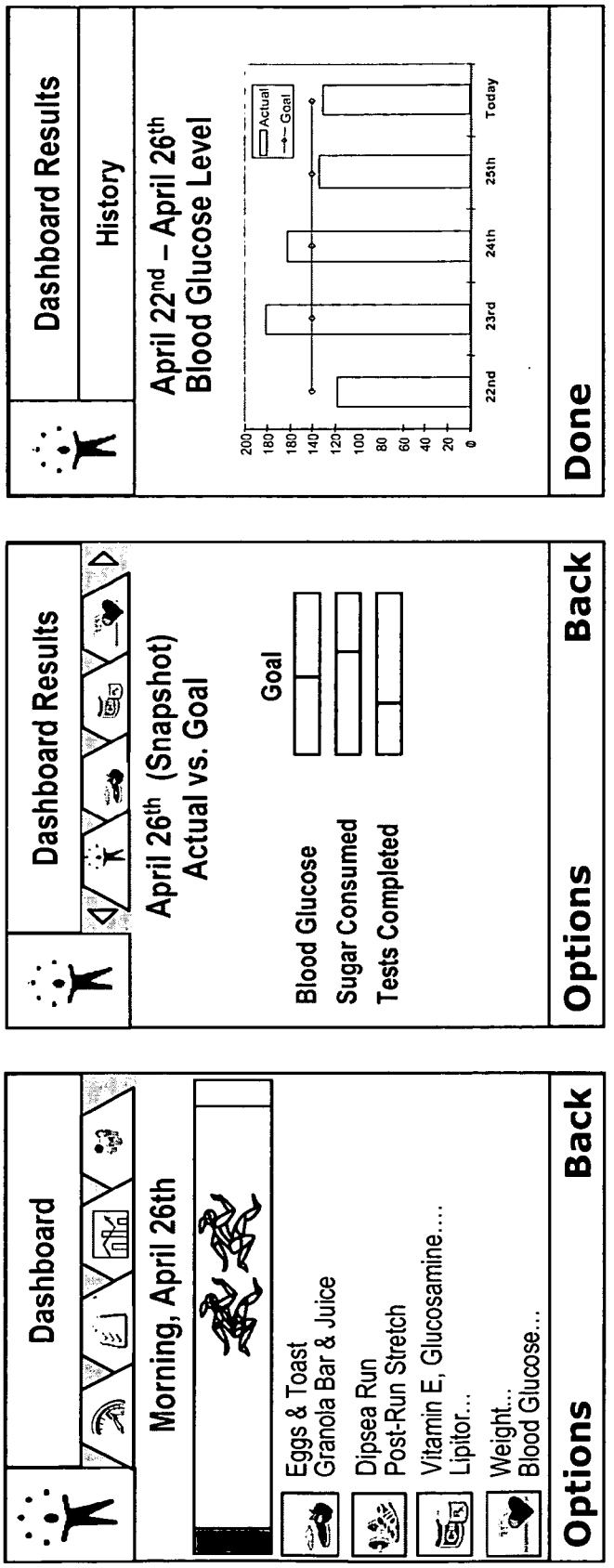


Fig. 9A.

Fig. 9B.

Fig. 9C.

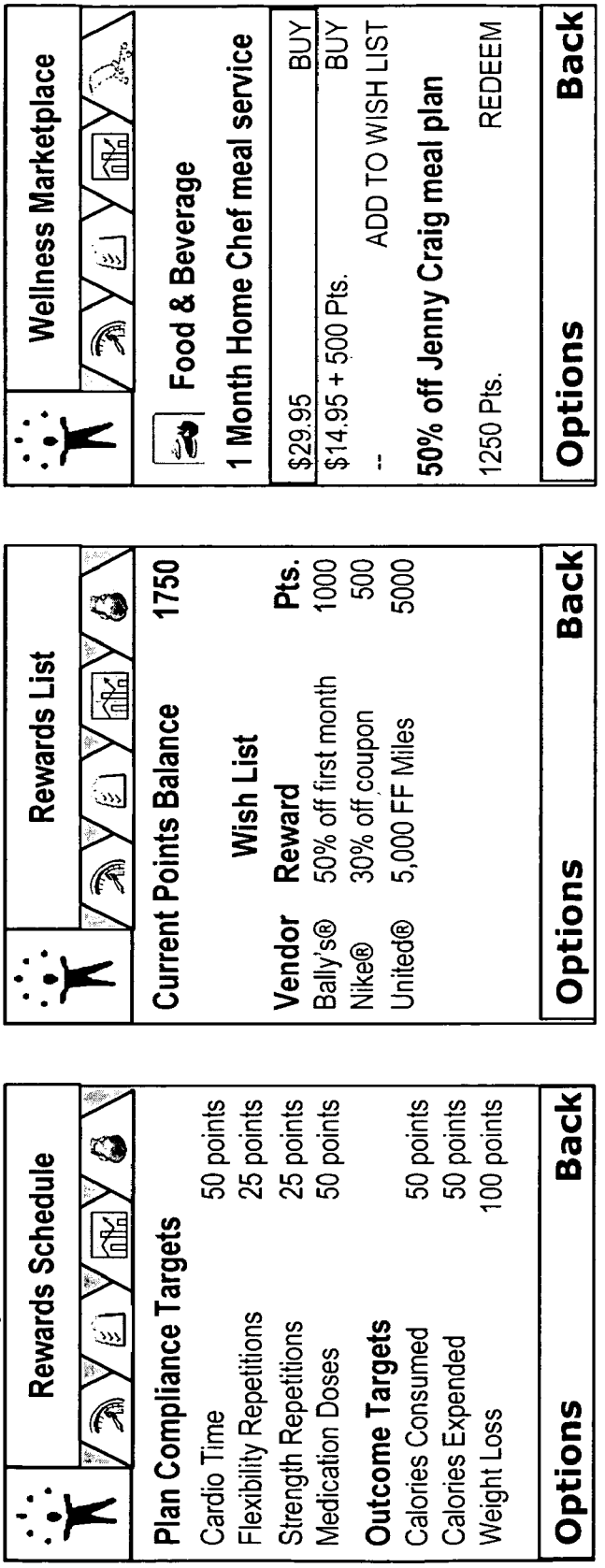


Fig. 10A.

Fig. 10B.

Fig. 10C.

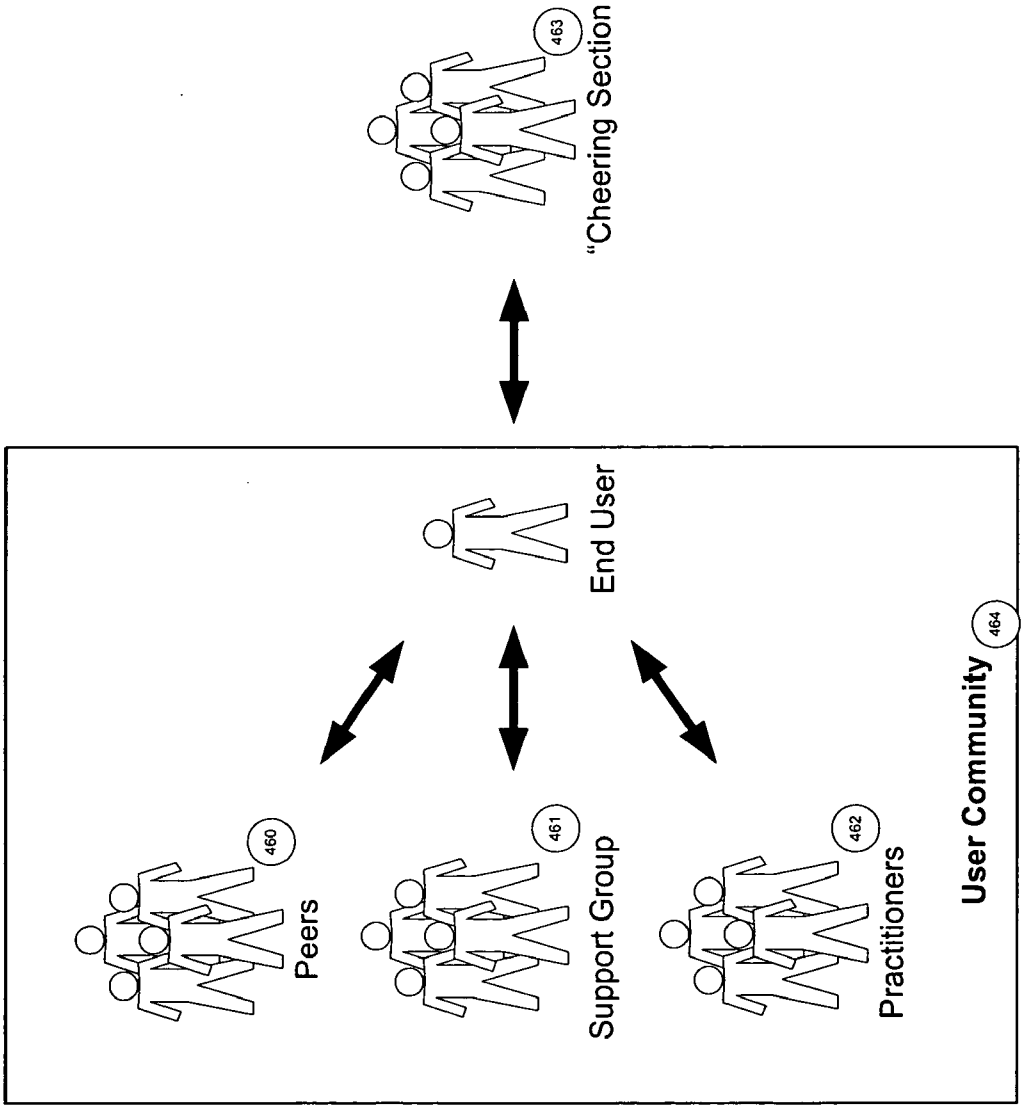

463
"Cheering Section
End User
User Community
464
460
Peers
461
Support Group
462
Practitioners

Fig. 11.

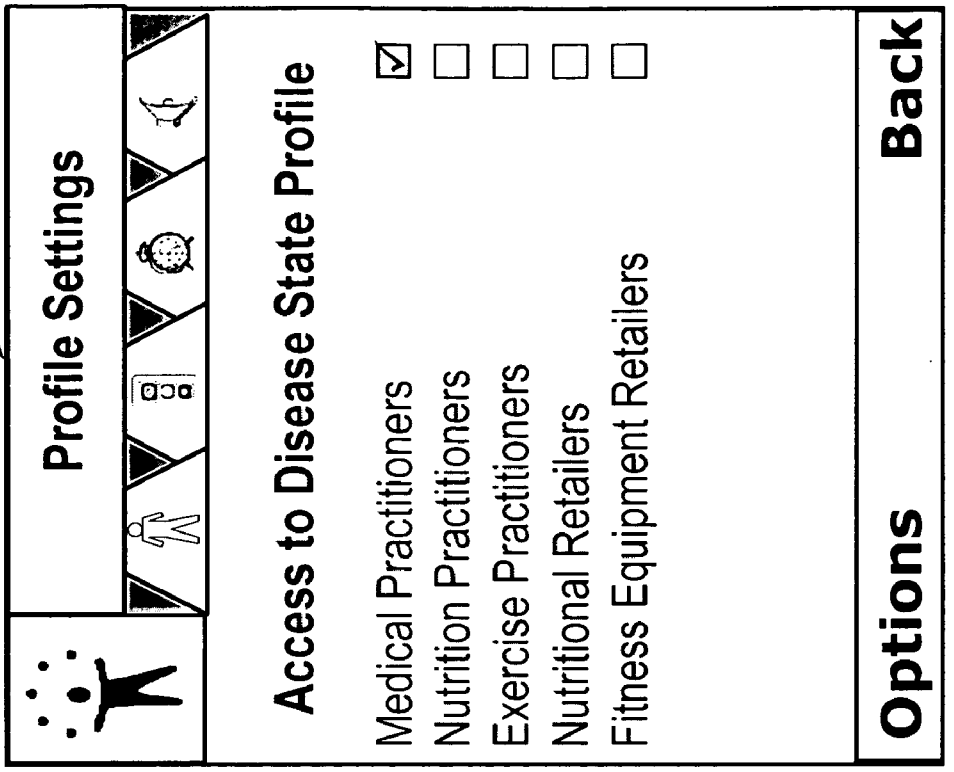


Fig. 12B.

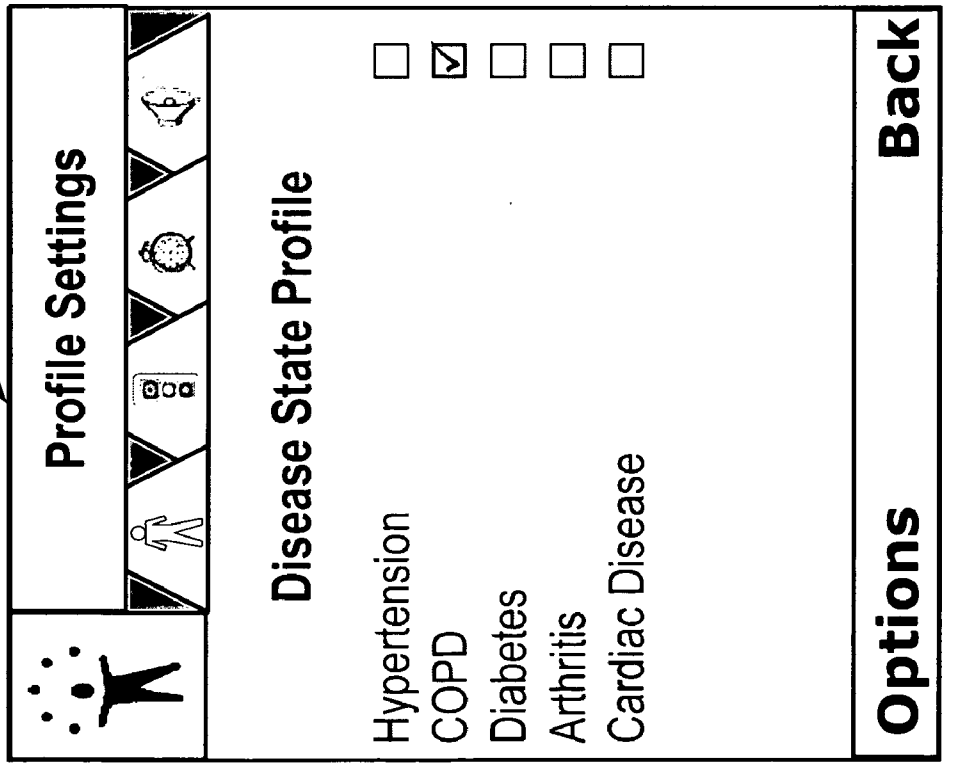


Fig. 12A.

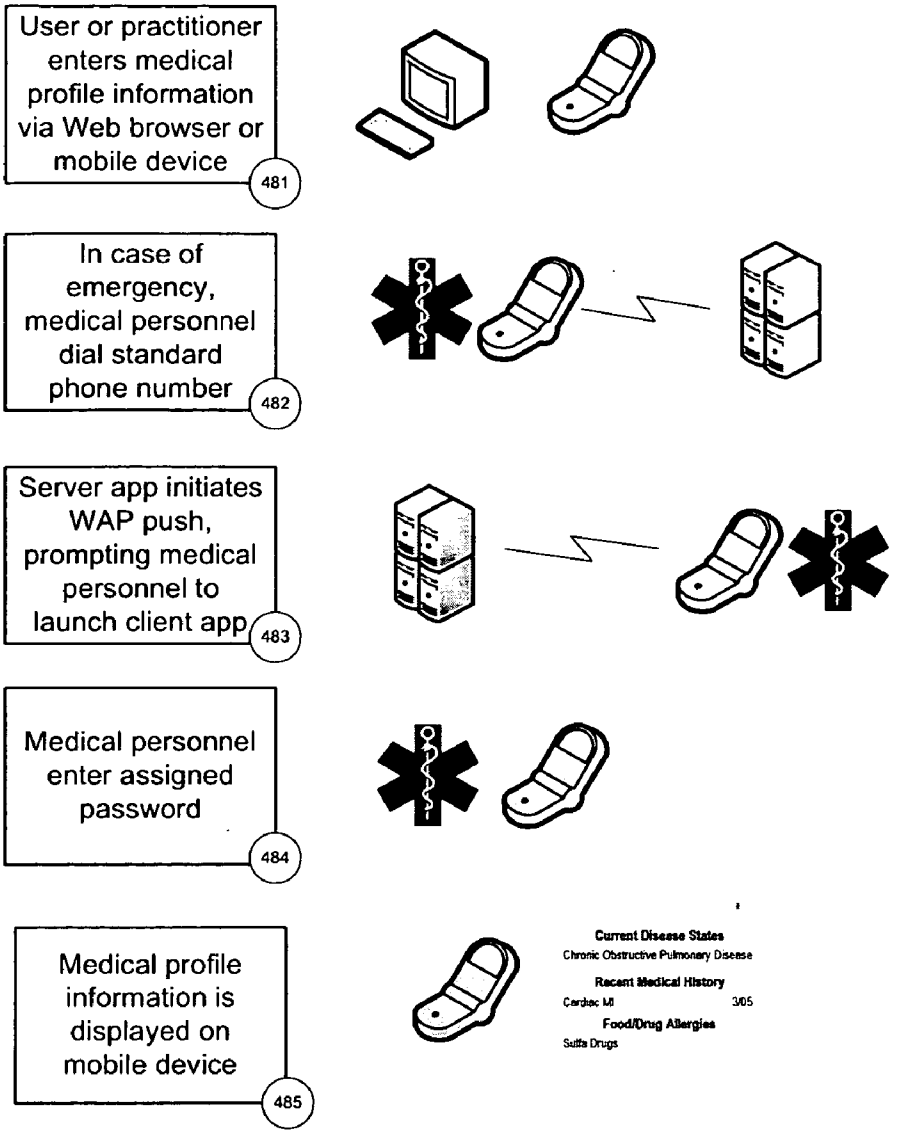

User or practitioner enters medical profile information via Web browser or mobile device
481
In case of emergency, medical personnel dial standard phone number
482
Server app initiates WAP push, prompting medical personnel to launch client app
483
Medical personnel enter assigned password
484
Medical profile information is displayed on mobile device
485
Current Disease States
Chronic Obstructive Pulmonary Disease
Recent Medical History
Cardiac MI
3/05
Food/Drug Allergies
Sulfa Drugs

Fig. 13.

METHOD AND APPARATUS FOR MOBILE HEALTH AND WELLNESS MANAGEMENT INCORPORATING REAL-TIME COACHING AND FEEDBACK, COMMUNITY AND REWARDS

RELATED APPLICATIONS

[0001] This Application is related to U.S. Provisional Patent Application Ser. No. 60/594,009 filed Mar. 4, 2005 entitled METHOD AND APPARATUS FOR MOBILE HEALTH AND WELLNESS MANAGEMENT INCORPORATING REAL-TIME COACHING AND FEEDBACK, COMMUNITY AND REWARDS, which is incorporated herein by reference in its entirety, and claims any and all benefits to which it is entitled therefrom.

FIELD OF THE INVENTION

[0002] The present invention relates to wireless health maintenance and lifestyle management, and more particularly to the exchange of health and wellness data between an internet-enabled mobile device and a server-based application, based on a lifestyle plan provided by a practitioner, expert system, or the patient/subscriber/user themselves.

BACKGROUND OF THE INVENTION

[0003] Recent trends suggest that the United States (and to a lesser extent, other industrialized nations throughout the world) are facing a looming public health crisis, the byproduct of an aging population and the increasingly poor nutrition and fitness regimens of the populace. According to recently published public health statistics, over 30% of the US population are considered obese, while 60% are considered overweight. This has led to a dramatic upswing in obesity-related disease states, including Type II diabetes, cardiovascular disease, and hypertension, with treatment costs associated with these disease states estimated at $117 billion, and is exerting tremendous upward pressure on healthcare costs in the US, which are currently forecast to reach 16% of GDP by 2006.

[0004] This trend, which is clearly unsustainable, has led to a slow but deliberate shift in the orientation and focus of the traditional healthcare delivery system, as payers and practitioners alike seek more effective and efficient alternatives to traditional disease treatment programs, such as disease state management and prevention. A common element amongst these alternatives is the realization that the individual plays a critical role in managing their own health and wellness, particularly as relates to those enablers of health for which the individual has ultimate decision-making authority, such as diet, exercise, medication, and vital sign testing.

[0005] While the market for consumer-oriented health and wellness products and services is large and growing, research consistently demonstrates that the majority of such offerings (be they diet programs or health club memberships) fail to deliver the sort of measurable, sustainable results that would warrant their expense. Furthermore, while recent advances in technology (in particular, the emergence of wireless, Internet-enabled mobile devices) has led to a broad array of technology-based solutions, each aimed at improving the health and wellness of an individual, a review of the prior art suggests that these solutions each have one or more disadvantages that may ultimately limit their effectiveness—to wit:

[0006] Not optimally integrating (and balancing) the roles of practitioners and end users. Practitioner-driven solutions (such as wireless health monitoring solutions) often treat the end user as little more than a passive instruction follower, while consumer-driven solutions provide little in the way of coaching and guidance, often requiring the end user to act as their own practitioner or to access/integrate practitioner knowledge in an awkward fashion, limiting their usefulness.

[0007] Lacking the ability to address all of the "enablers" of health and wellness, including (but not limited to) diet, exercise, medication and vital sign testing. Such single-point solutions (e.g. mobile exercise instructional software) require the user to either ignore the other enablers, or to employ multiple solutions to address all of the enablers, again limiting their usefulness.

[0008] Focusing on plan delivery at the expense of plan compliance. Such solutions (such as diet tracking software packages) assume that the user needs little motivation to comply with their specified plan, which conflicts with published research highlighting the need for behavioral modification.

[0009] Requiring the users to modify their normal activities or routines to utilize the solution. Such solutions (such as on-line fitness journaling sites) often require the users to perform additional tasks, such as creating a temporary, paper-based copy of their health and wellness plan for later transfer to a Web site, obviating the advantages of the technology.

[0010] As an example, in U.S. Pat. Nos. 6,602,691 and 6,936,007, and 6,976,958 Quy describes a method and apparatus for interactively monitoring the disease or health state of a patient using a health management device, coupled to an internet-enabled wireless web device to capture health parameters, such as vital signs or exercise outcomes, and to transmit the captured data to a central repository via a wireless network and to facilitate the delivery of a response to the user. However, the referenced design is highly practitioner-driven, encompasses only selected enablers of health and wellness, and does not focus on the driver of plan compliance.

[0011] Similarly, in U.S. Pat. No. 6,735,551 Voegeli et al. describe a system for the maintenance and management of the health which permits easy and complete access to all important data of the patient to be treated. Once again, this is strictly a practitioner-driven system, with the patient relegated to the role of instruction follower, and comprises only the monitoring of vitals signs.

[0012] U.S. Patent Publication No. 2005/0113649 to Bergantino teaches a method and apparatus for managing a user's health. The teaching, however, focuses primarily on the nutritional and dietary requirements and activity of the end user, is not configured to allow practitioner generation of integrated lifestyle plans, nor does it incorporate functionality intended to drive plan compliance, such as rewards or the ability to share plans and results with a broader community.

[0013] Finally, in U.S. Patent Publication No. 2004/0176666 to Chait teaches a health and well being monitoring and advisory system but without coaching and real-time

feedback, it is unlikely such system would be effective in ensuring compliance and increase in overall health and well being.

ADVANTAGES AND SUMMARY OF THE INVENTION

[0014] What is missing, then, is an integrated solution that actively involves both the practitioner and the end user, encompasses all of the enablers of health and wellness, focuses on enabling compliance with a healthy lifestyle plan, and integrates seamlessly with an individual's normal routine.

[0015] It is an object and advantage of the invention to provide a system and method for improving the health and wellness of an individual (hereafter, referred to as the end user) by delivering an integrated health and wellness management platform, consisting in the preferred embodiment of an Internet-connected server-side application configured to enable the creation of a comprehensive, personalized lifestyle plan by a health and wellness practitioner(s), and connected via wireless synchronization of known method with a client-side application installed on an Internet-enabled mobile device, itself configured to enable compliance with the lifestyle plan through the application of behavior modification techniques such as real-time coaching, outcome journaling and feedback, goal-based rewards and linkage with a broad community. The presence of the mobile device is a critical advantage, ensuring that the end user receives critical coaching and feedback when and where it matters most; that is, at the time and place of decision-making relative to diet, exercise, medication and other key lifestyle choices that impact health and wellness.

[0016] For the sake of clarity, in the context of the present invention the term "lifestyle plan" refers to a series of scheduled events, each occurring at a specific time (and in some cases, place) and consisting of one or more actionable activities. In the preferred embodiment of the invention, the aforementioned events are related to a user's health and wellness, including:

[0017] 1. Fitness events, such as a cardiovascular workout

[0018] 2. Nutritional events, such as a meal

[0019] 3. Medication events, such as a regimen of antiviral drugs

[0020] 4. Vitals events, such as a practitioner-administered blood test

[0021] In an alternative embodiment of the present invention, the definition of an event may be expanded to include any scheduled activity, including those that are only tangentially related to health and wellness, such as a social gathering of end users initiated using the system's community functionality.

[0022] The invention may be implemented in various different embodiments. Several such embodiments are described herein, although other embodiments, and embodiments which are extensions to the described embodiments can be envisioned. In the preferred embodiment, the role of the practitioner may be assumed by one or more individuals with specific expertise in the field of health and wellness, including (but not limited to) physicians, nurses, pharmacists, dietitians, nutritionists, physical therapists, and personal/athletic trainers. This practitioner (or practitioners) may interface with the system via a web portal, interacting with the server-based application to add, delete or edit user accounts and profiles, to create lifestyle plans that have been personalized based on the profile of the end user (i.e. the practitioner's client), to transmit the lifestyle plan to the end user's mobile device, to track end user compliance with the plan, and to provide feedback and/or modify the plan as required to achieve the overarching lifestyle goals agreed by the end user.

[0023] The client may be any personal computer, such as a smart or dumb terminal, network computer, wireless device, information appliance, workstation, minicomputer, mainframe computer, handheld device, or other computing device that has a graphical user interface, and the databases may be either installed along with the client application, or may be retrieved via connection to a local PC or other device with storage means which has communicated with the server previously and has stored the databases for later installation on the client device. In another embodiment, the client device may be connected with another device which provides data communication means to the client, thereby enabling connectivity to the server.

[0024] The end user, after downloading or installing the client application and associated databases to their Internet-enabled mobile device in known fashion, may then elect to review their lifestyle plan, to view further information related to activities in the plan, to modify the activities in the plan, and/or to execute the activities in the plan and record the actual outcomes. Additionally, the end user may review the rewards that he or she has "earned" through documented compliance with plan and outcome targets, exchange these rewards for goods and services provided by affiliate companies, and/or share plans and results with others in the invention's system; namely, practitioners, peers and "non-users."

[0025] The presence of an embedded, client-side application and database on a mobile device offers a critical advantage, by ensuring that the end user will always have access to the core functionality of the system (i.e. the viewing and logging of scheduled health and wellness events), irregardless of network connectivity, while the presence of wireless data communications connectivity, in the preferred embodiment, provides the end user with real-time access to server-based supplemental information on an as-needed basis. Thus, in one embodiment, an end user bicycling on a remote road with limited network connectivity would have the ability to view their plan and log outcomes, while still being to view a full-motion exercise instruction video "streamed" or downloaded from a server in situations where network connectivity was available. Solutions existing in the prior art, or those which have been proposed, cannot offer this capability.

[0026] Additionally, embodiments of the present invention overcome one or more of the disadvantages of the prior art, by:

[0027] Allowing for management of all of the critical elements of a healthy lifestyle plan, including diet, exercise, medication, and monitoring of vital signs. Existing or proposed solutions have tended to focus on a single such element, such as exercise or vital sign monitoring, thus missing the benefits that arise from

managing such elements in an integrated, holistic fashion, such as warning the end user of potentially dangerous food-drug interactions.

[0028] Defining an active, participatory role for both the practitioner and the end user in the lifestyle management process. Existing or proposed solutions have tended to be either practitioner-driven, with the end user (the patient) assuming a more passive role, performing activities (such as submitting health and wellness parameters) at the specific direction of the practitioner without a clear understanding or appreciation of the implications of such activities or of the meaning of the outcomes, or end user-driven, with the end user responsible for creating and managing the elements of a healthy lifestyle plan without the benefit of practitioner coaching or guidance.

[0029] Incorporating behavior management tools aimed at driving plan compliance. By incorporating reinforcing mechanisms such as rewards and the ability to share plans and results with members of a broader community, the present invention serves to reinforce virtuous behavior, making attainment of health and wellness goals more likely. Existing or proposed solutions, with their focus on outcomes (as opposed to plan compliance), do not address the key drivers of behavioral changes, such as affinity to community.

[0030] In an alternative embodiment of the invention, the role of the practitioner (as relates to generating and monitoring plans) may be assumed by a so-called expert system, incorporated into either the server-side or client-side application. In such an embodiment, the requisite practitioner knowledge may be embedded in a series of software algorithms that, based on end user responses to a series of preconfigured questions aimed at assessing the end user's health and wellness profile, may generate a personalized lifestyle plan for the end user. Note that such artificial intelligence may be incorporated within the described system of the present invention, but may also exist on a server application that is external to this system (such as the website operated by Weightwatchers.com™), in which instance the aforementioned server-side application may be reconfigured to function primarily as a synchronization conduit between the web site and the client-side application.

[0031] In yet another embodiment of the invention, the role of the practitioner may be assumed by the end user themselves, who may access the functionality similar to that provided via the aforementioned practitioner Web portal in order to manually create a lifestyle plan, to log outcomes, and to track progress against compliance and outcome targets. Provided the end user has the requisite knowledge to create an appropriate lifestyle plan, this embodiment yields the additional advantage of economy for the end user.

[0032] Further details, objects and advantages of the present invention will be come apparent through the following descriptions, and will be included and incorporated herein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0033] **FIG. 1A** is an embodiment of a representative system overview of the present invention.

[0034] **FIG. 1B** is a flow chart, depicting an embodiment of an integrated cycle for health and wellness management of the present invention.

[0035] **FIG. 2** is an embodiment of a high-level architecture map of the present invention, showing the integration of the client-side and server-side application.

[0036] **FIG. 3** is an embodiment of a process map, showing the key steps involved in creating, delivering, and managing a lifestyle plan using the present invention.

[0037] **FIG. 4** is a schematic block diagram of an embodiment of the server-side application of the present invention, showing the logical modules, databases, and user interface components of the software application that is installed on a Web-based server.

[0038] **FIGS. 5A and 5B** are embodiments of "screen shots" of the present invention showing the user interface associated with the server-side application's subscriber management functionality.

[0039] **FIG. 6** is a schematic block diagram of an embodiment of the client-side application of the present invention, showing the logical modules, databases and user interface components of the software application that is installed on the end user's mobile device.

[0040] **FIGS. 7A, 7B** and 7C are embodiments of "screen shots," showing the user interface of the present invention associated with the client-side application's scheduling functionality.

[0041] **FIGS. 8A, 8B** and 8C are embodiments of "screen shots" showing the user interface of the present invention associated with the client-side application's coaching functionality.

[0042] **FIGS. 9A, 9B** and 9C are embodiments of "screen shots," showing the user interface of the present invention associated with the client-side application's feedback functionality.

[0043] **FIGS. 10A and 10B** are embodiments of relationship diagrams of the present invention, showing the groups that define an end user's community.

[0044] **FIG. 11** is an embodiment of a relationship diagram of the present invention, depicting the groups that define an end user's community.

[0045] **FIGS. 12A and 12B** are embodiments of "screen shots" from a representative mobile device of the present invention, depicting the user interface associated with the client-side application's profile management functionality.

[0046] **FIG. 13** is an embodiment of a process map of the present invention, depicting the steps associated with enabling a medical provider to retrieve an end user's medical profile in an emergency situation.

DETAILED DESCRIPTION OF EMBODIMENTS

[0047] The description that follows is presented to enable one skilled in the art to make and use the present invention, and is provided in the context of a particular application and its requirements. Various modifications to the disclosed embodiments will be apparent to those skilled in the art, and the general principals discussed below may be applied to other embodiments and applications without departing from the scope and spirit of the invention. Therefore, the invention is not intended to be limited to the embodiments

disclosed, but the invention is to be given the largest possible scope which is consistent with the principals and features described herein.

[0048] It will be understood that in the event parts of different embodiments have similar functions or uses, they may have been given similar or identical reference numerals and descriptions. It will be understood that such duplication of reference numerals is intended solely for efficiency and ease of understanding the present invention, and are not to be construed as limiting in any way, or as implying that the various embodiments themselves are identical.

[0049] Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which the present invention belongs. Definitions specific to this invention are presented below.

[0050] The term "practitioner" encompasses individuals and/or systems with specific expertise in the field of health and wellness, including but not limited to physicians, nurses, pharmacists, dietitians, nutritionists, physical therapists, advisers, counselors, social workers, and personal/athletic trainers. The term can also be applied to expert systems, in which the knowledge of a human practitioner is embodied in a series of software algorithms.

[0051] The term "administrator" refers to an individual who is responsible for administering the system of the present invention, performing duties such as account and database management.

[0052] The term "end user" refers to the individual who is responsible for executing the health and wellness plan generated by the practitioner or practitioner system; he or she interacts with the system primarily via the mobile device. End users can also be defined as subscribers, members, affiliates, patients, or subjects.

[0053] The term "user" refers collectively to those individuals who have access to the system of the present invention, including practitioners, administrators and end users. The term "non-user" refers to an individuals who does not have access to either the server-side and/or client-side applications described herein, yet may be a recipient of the content generated by same.

[0054] The term "lifestyle plan" refers to a series of scheduled events, each occurring at a specific time (and in some cases, place) and consisting of one or more actionable activities. In the embodiment of the invention, the aforementioned events are related to a user's health and wellness, including:

[0055] 1. Fitness Events, such as a cardiovascular workout

[0056] 2. Nutritional Events, such as a meal

[0057] 3. Medication Events, such as a regimen of antiviral drugs

[0058] 4. Vitals Events, such as a practitioner-administered blood test

[0059] In an alternate embodiment of the present invention, the definition of an "event" may be expanded to include any scheduled activity, including those that are only tangentially related to health and wellness, such as a social gathering of end users initiated using the system's community functionality.

[0060] Each of the events in a lifestyle plan in turn consists of one or more finite, actionable activities, while an activity consists of an item (such as Bicycling) and one or more parameters (such as Time, Duration, and Intensity), that when taken together define the activity, providing the subscriber with the specific instructions needed to execute the activity. By way of example, a plan might include the fitness event "Daily Run," composed of the activity of Running (an item) for 10 minutes at a 6 MPH pace (the parameters).

[0061] The term "OTA synchronization" (or alternatively, "OTA Sync") describes the process by which a server-side and client-side application exchange data "Over the Air" via a wireless (RF) link, using cellular telephony or equivalent protocols such as WiFi (802.11) WiMax (802.16), Bluetooth, or Zigbee.

[0062] The term "time" refers to a chronological time or timeframe, including but not limited to morning, afternoon, evening, breakfast, lunch, dinner, night time, beginning, end, etc.

[0063] Other examples of protocols or standard communications means between the server and client included within the scope of this invention include but are not limited to standard telephone lines, LAN or WAN links (e.g., T1, T3, 56 kb, X.25), broadband connections (ISDN, Frame Relay, ATM), and wireless connections, using a variety of communication protocols (e.g., HTTP, HTTPS, TCP/IP, IPX, SPX, NetBIOS, Ethernet, RS232, messaging application programming interface (MAPI) protocol, real-time streaming protocol (RTSP), real-time streaming protocol used for user datagram protocol scheme (RTSPU), the Progressive Networks Multimedia (PNM) protocol developed by RealNetworks, Inc. of Seattle, Wash., manufacturing message specification (MMS) protocol, wireless application protocol (WAP), and direct asynchronous connections.

[0064] Various embodiments of the architecture are now presented in greater detail.

Overview of System

[0065] **FIG. 1A** is an embodiment of a representative system overview of the present invention. As shown, the present invention is for Plan Creation. A server-based application guides the practitioner through the development of a lifestyle plan, which is then "pushed" to a mobile device via an OTA sync. The invention provides Coaching and Feedback. A mobile application helps the user to comply with his or her plan, by providing direction, instruction, tracking, and feedback. The invention provides Support. A web-based and mobile applications support and motivate the user, via links to community and a formalized reward program.

[0066] Referring to **FIG. 1B**, a flow chart depicting an integrated health and wellness management "cycle" is presented. This cycle, which serves as the foundation for the preferred embodiment of the present invention, consists of the following steps:

[0067] 1. A health and wellness profile, which describes the end user's current state of health, lifestyle preferences, goals, etc. is created.

[0068] 2. A server-side application enables the creation of a lifestyle plan for the end user consistent with the profile, and the plan is transmitted to a mobile device.

[0069] 3. A client-side application on mobile device guides the end user through the execution of the plan by providing real-time coaching, journaling, and feedback, and returns outcomes and results back to the server-side application.

[0070] 4. System tracks progress against the lifestyle plan, delivers rewards, and links user to their community.

[0071] Referring to **FIG. 2**, the high-level architecture of a system for the management of the health and wellness of an end user **13** is presented. In the preferred embodiment, the system enables the practitioner **1** to create a lifestyle plan for the end user **13** by accessing an application **9** and a database **10** stored on an server (or servers) **8** via a web browser **3** connected to the Internet **7**, with responsibility for the management of user accounts and databases assumed by an administrator **15**. The system then facilitates, via an OTA synchronization in known fashion, transmission of the lifestyle plan to the end user **13** via an Internet-enabled mobile device **2** connected to, or otherwise in communication with, a wireless Point of Presence ("POP") **6** consisting of a base station antenna **4** coupled to a server **5** or, in an alternative embodiment, via a Web browser **3** connected to the Internet **7**.

[0072] This synchronization of information between the end user **13** and practitioner **1** is two-way in nature, with data captured by the end user in the course of executing the lifestyle plan moving from the mobile device to the server. The system also provides the ability for an end user **13** to share plans and results with a designated "community," which may include fellow end users and practitioners **1**, as well as individuals **14** who fall into neither group (such as Friends and Family), with content delivered to this group via a messaging application **11**. Additionally, the system includes an eCommerce application **12**, allowing users to execute transactions with providers of health and wellness products and services.

[0073] It will be understood that the practitioner can be an actual live person, a health service establishment, or an expert system which, based on a set of entered parameters, may generate an optimal, "state of the art" lifestyle plan for the end user based on the end user's profile, track record of compliance, etc. Furthermore, it will be understood that such an expert system may be incorporated within the previously described server-side application or may be a component of a server-side application maintained by an external partner and connected to the described system. In yet another embodiment—the "do-it-yourself" model—the end user may serve as their own practitioner, creating their own lifestyle plan by selecting from a library of plans and/or plan components, such as end user profiles, goals, events, activities, and items.

[0074] Referring to **FIG. 3**, a process map depicting the proposed health and wellness management process is presented. The process of the present invention, as shown in the embodiment of **FIG. 3**, comprises essentially a setup or administration layer, an end user interface layer, and a practitioner interface layer. It will be understood that the flow chart utilizes the familiar icon comprising a square with vertical side bars to represent a process step which is automatic or automatically initiated, i.e., is not or does not have to be initiated manually. The process begins when an administrator or practitioner accesses the designated web portal and creates a user account **101** using profile information (e.g. age, height, weight) collected from the end user. The server-side application then automatically generates a user ID, and delivers (via e-mail or a mobile device-specific protocol, such as short messaging service (SMS)) an invitation to the prospective end user **102**. By responding to this invitation, the end user is routed to a new user web page, where he or she is prompted to submit the information required to complete their user profile **103**. Using this profile information, the practitioner then completes creation of the new end user account by establishing specific targets and settings for the end user **104** as well as a personalized lifestyle plan **105**. This triggers the server-side application to deliver the client-side application to the end user's mobile device **106** in known fashion; once accepted, the application and associated databases are automatically installed on the end user's mobile device **107** in known fashion.

[0075] In day-to-day usage, the client-side application presents the lifestyle plan to the end user in the form of a daily calendar **110**. The end user then reviews the plan and determines whether or not they will execute it in its current form **111**—in the negative case, the application guides the end user through the modification of the plan **112**. The end user then decides whether they wish to store any portion of the plan as a "Favorite" for future use **113**—in the affirmative case, the application guides the end user through storage of its components **114** in the corresponding database. The end user then assesses whether they have enough information to execute the plan **115**—in the negative case, the application retrieves the requisite coaching information **116** (consisting of text, graphics and/or video) and presents it to the end user for review. Finally, the end user executes the plan and records actual outcomes **117**, which triggers the application to calculate results, present feedback to the end user **118** and synchronize the client-side and server-side databases **119**.

[0076] Once synchronization has occurred and actual plan outcomes have been delivered to the server-side databases, the server-side application assesses the user's compliance with the plan **120** relative to both plan compliance and outcome measures, where plan compliance measures indicate whether end users are successfully completing the activities scheduled for them, and outcome measures indicate whether end users are achieving the results they desire. The practitioner then assesses whether the current lifestyle plan must be modified **121**, if modifications are required, the server-side application facilitates editing of the plan **122**. In either case, a synchronization event **123** is used to deliver the most current version of the lifestyle plan to the end user.

[0077] Server-Side Functionality Within the system of the present invention, the role of the practitioner **1** is to generate a lifestyle plan for the end user **13**, to monitor the end user's compliance with the lifestyle plan, and to provide coaching and feedback to the end user **13** as required to facilitate compliance with the plan. In the embodiment, this is accomplished via a server-side application/database, accessed via a network or web-based portal, which allows a practitioner **1** to:

[0078] 1. Manage end user **13** accounts

[0079] 2. Manage end user **13** lifestyle plans and compliance with same

[0080] 3. Manage the Activity, Event and Item Databases

[0081] In an alternative embodiment, some or all of this functionality could be accomplished via an Internet-enabled mobile device, using either an embedded application or a browser.

[0082] **FIG. 4** shows the high-level architecture of the server-side application. Creation of the lifestyle plan is facilitated by the Scheduling Module **200**, accessed via the Scheduling User Interface **201** and utilizing calendar data stored in the Plan Database **202**, which in turn is comprised of elements stored in the Event **203**, Activity **204**, and Item **205** Databases. Creation and/or editing of a lifestyle plan takes place at the Event level; as an example, a practitioner may create a Fitness Event by selecting an item (such as Running) from the Item Database **205** and assigning parameters (e.g. Time and Speed) to it, causing it to be stored in the Plan Database **202**. Alternately, the practitioner can select a pre-defined activity (such as a 3-mile Fast Run) from the Activity Database **204**, or a pre-defined event (such as an Upper Body Strength Workout) from the Event Database **203**.

[0083] Tracking of user compliance with lifestyle plans is facilitated by the Compliance Management Module **210**, accessed via the Compliance Management User Interface **211** and utilizing plan outcomes stored in the Actuals Database **212** and calculated results measures stored in the Results Database **213**. The Synchronization/Sharing Module **220** enables synchronization of the client-side and server-side applications.

[0084] Management of user accounts is facilitated by the User Account Management module **230**, accessed via the Account Management User Interface **231**. In the case of end users, accounts are defined by profile data such as User ID, age, weight, disease states, etc. which are stored in the User Profile Database **232** and used to tailor a lifestyle plan to the needs of the end user **13**. The user experience (both client-side and server-side) is defined by settings or preference data such as Synchronization Frequency, which are stored in the Settings Database **233**.

[0085] User access to system functionality is governed via the data stored in the Group/Resources Database **234**, which allows users with similar characteristics to be assigned to a group, and for groups to be assigned ownership of a specific resource, where a resource is broadly defined as the right to execute a function, such as accessing a database or editing an event. Amongst other uses, this mechanism can be used to share content amongst users (e.g. personal trainers working at a health club facility could create and share workouts that are relevant to the equipment installed at that facility), to restrict the ability of an end user to edit or delete a practitioner-generated plan, or to assign multiple practitioners to the same end user (achieved by defining a resource that limits practitioner access to a specific type of event, such as nutrition). Amongst other benefits, the ability to create groups and assign resources to those groups enhances network security and end user **13** privacy rights.

[0086] It will be understood that the "screen shots" of FIGS. **5**A-B, **7**A-C, **8**A-C, **9**A-C, **10**A-B, and **12**A-B are representative user interfaces showing the information and organization of the screens used by the end-users **13**, practitioners **1**, and administrators **15**. As is well known today, PDAs, cell phones and other mobile computing devices will have displays or screens via which a great deal of detailed information can be displayed effectively, clearly and otherwise as desired for a particular purpose and by a particular entity. For this reason, the rest of the PDA, cell phone, or other mobile device is not shown in these figures.

[0087] **FIGS. 5A and 5B** depict selected elements of the server-side user interface, specifically the interface for Compliance Management **250** and Plan Management **260**. The Compliance Management UI is intended to provide the practitioner **1** with a quick "snapshot" of an end user's status **251**, to identify the date of the end user's last synchronization event **252**, and to gauge to what extent the end user is complying with their plan targets **253**, such as number of exercises completed, and their outcome targets **254**, such as weight loss. (Note that in either case the figure represents a weighted average of several individual measures). Thus, Plan Compliance **253** is directed to whether or not the user **13** complies with the directives in the lifestyle plan, while Outcome Compliance **254** is focused on the measurement of progress made toward achieving the goal or planned outcome of compliance. The Plan Management UI is intended to provide the practitioner with a quick "snapshot" of an end user's status **261**, and to identify what events **262** and **263** are scheduled for completion by the end user.

Client-Side Application

[0088] Within the system of the present invention, the role of the end user is to execute the lifestyle plan generated by the practitioner(s), to record actual outcomes, and to provide feedback to the end user as necessary to ensure that their lifestyle plan remains consistent with their goals and preferences. In the preferred embodiment, this is accomplished via a client-side application and databases, installed on an Internet-enabled mobile device, which allow the end user to:

[0089] 1. Review their lifestyle plan

[0090] 2. Create, modify and delete lifestyle plan events

[0091] 3. Receive supplemental coaching and background information for plan events and activities

[0092] 4. Record actual outcomes

[0093] 5. Save favorite events and activities

[0094] 6. Manage their user profile and settings

[0095] 7. Share their Plan and/or Results with others in their community

[0096] 8. View and redeem their rewards

[0097] In an alternative embodiment, some or all of this functionality could be accomplished via a Web browser connected to a server-based application.

[0098] **FIG. 6** depicts the high-level architecture of the client-side application. At its most basic level, the client-side application serves as a dedicated scheduling application, with the Scheduling Module **300** providing the end user with a simple means of managing the events and associated activities that occur in a given timeframe. The ability to view

a plan and log it as complete are provided by View Plan UI **301** and View/Log Event UI **302**. Reminder UI **303** provides end user with reminders of upcoming events and alerts about past events (if they have not yet been logged), with these reminders/alerts ranging from audible alerts and/or "soft notes" (pop-up textual messages) generated by the client application to e-mails and/or SMS messages generated by the server-side application.

[0099] **FIGS. 7A, 7B** and 7C depict this user interface in greater detail: the Plan View screen **360** displays events in a calendar fashion (arranged by Event Type), while the Event View screen **370** displays an "exploded" view of the activities that comprise a single event. As an end user completes an activity, he or she is prompted to either log it as complete (indicating that the activity was completed exactly as specified by the activity parameters), or to enter "actual" outcomes using the Enter Actuals screen **380** (indicating that the completed activity differed in some way from the activity defined in the original event specification). In the preferred embodiment of the present invention, this logging is accomplished using the input devices embedded in the mobile device, including keyboard, touchscreen, microphone and/or camera.

[0100] In an alternative embodiment of the invention, logging of activities may be accomplished automatically via a wireless link with a compatible measurement device (such as a sphygmomanometer or peak flow monitor), exercise apparatus (such as a treadmill or rowing machine), and/or automated medication dispenser. In such cases, the end user would be prompted to establish a wireless link with the noted equipment in known fashion, and to confirm the uploading of outcomes before they are "accepted" as logged activities.

[0101] Returning to **FIG. 6**, logging of an activity causes a description of the actual activity as executed to be written to the Actuals Database **309** and triggers an OTA sync event with the server-based application, causing the outcomes to be uploaded to the corresponding server-based database. In the synchronization process, a finite number of days' worth of outcome data (number contingent on the storage capabilities of the mobile device) would be retained on the mobile device.

[0102] Depending on the permissions granted to him or her by the practitioner, the end user may also have the ability to edit the practitioner-generated lifestyle plan, either by adding a new event to the plan, adding activities to an existing event, or editing an existing event. These activities are enabled via the Edit Event UI **304**, which provides the end user with access to the Event Database **306**, Activity Database **307**, and Item Database **308** that contain the "building blocks" of an event. In a typical installation, the complete Activity and Event Databases, which allow the end user to store and retrieve Favorites, would be located on the mobile device, while a subset of the Item Database would be resident on the mobile device, with access to the server-based remainder achieved through an integrated WAP browser. All data in the client-side databases are backed up regularly to corresponding databases on the server-side in the course of a synchronization event.

[0103] Beyond simple scheduling, the client application is configured to provide real-time guidance to the end user to assist in the execution of a plan via the Coaching Module **310** and the Coaching UI **311**. This guidance takes several forms:

[0104] Instructional, such as demonstrating the necessary steps for performing an exercise

[0105] Supplemental, such as defining the nutritional content of a food or the recommended upper and lower limits for a vital sign test

[0106] Cautionary, such as warning the end user of dangerous food and drug interactions

[0107] Coaching, such as providing the end user with cues to enable him or her to maintain a recommended pace of exercise or medication consumption.

This guidance can be delivered via visual (text, graphics or video), auditory (ringtones) or other means, with the source files stored on the mobile device or a server, depending on the chosen configuration.

[0108] **FIGS. 8A, 8B** and 8C depict this user interface in greater detail: in the example of a Fitness Event, general information regarding muscle groups and alternative exercises is delivered via the Get Info (General) screen **390**, with instructions for performing the exercise delivered via the Get Info (Instructions) screen **400**, and the Get Info (Demo) screen **410**.

[0109] The Coaching Module **310** also features a context-sensing capability—in the preferred embodiment, the application may wirelessly connect with a Context Interface Point **312** configured to provide contextual information—such as the type of exercise equipment installed in a gymnasium or the nutritional content of items on a restaurant menu—that can be used to guide the end user in execution and/or modification of selected activities. This transfer of information may be facilitated by a broad range of wireless transmission protocols, such as RFID bar codes, IR, Bluetooth, Zigbee. In each case, the Coaching Module obtains the pertinent data from the Context Interface Point and via an expert system capability, recommends potential changes to the proposed plan, such as an alternative exercise routine based on available equipment.

[0110] As events are logged, a Feedback Module **320** provides feedback to the end user via the Feedback UI **321**, based on a comparison of planned (as scheduled) and actual (as executed) outcomes, with the goal of measuring the extent to which the end user is (a) complying with their lifestyle plan and (b) achieving their desired goals. In the first case, the feedback measure would be based on an activity parameter (e.g. % of scheduled exercises completed), with the plan compliance target derived by summing the corresponding values for each of the activities scheduled within the timeframe in question. In the second case, the feedback measure would be based on a desired outcome (such as caloric expenditure) for the selected timeframe, with the outcome target specified by the practitioner (or in the case of an end user-generated event, by the end user).

[0111] Regardless of the feedback measure selected, the application allows the user to select a different timeframe (i.e. to view results by week as well as by day) or point of reference (i.e. to view results relative to the aforementioned target as well as to the average of the past 7 days' results) and/or to view historical results, either for a specific measure

(such as calories expended) or for a recurring event (allowing the end user to track improvement in their ability to perform an exercise workout, as an example). Additionally, the application is capable of providing "prospective" feedback; that is, to project outcomes based on a blend of logged and scheduled (but not yet logged) activities, providing end users with the information needed to adjust their future behavior to achieve compliance with their targets.

[0112] **FIGS. 9A, 9B** and 9C depict this interface in greater detail. To simplify ease of use, feedback is by default presented in a graphical format, with a color-coding mechanism used to indicate the level of deviation from plan or outcome targets. Interpretation of results is further simplified by the use of a Dashboard **420** which displays (in the form of a single graphical icon) an overall Results "score," based on a weighted average of individual measures (configurable by the practitioner or end user). As an example, the dashboard for an end user **13** suffering from diabetes might comprise the outcome measures of blood glucose level and sugar consumption, blended with the plan compliance measure of number of blood glucose tests completed. Regardless of the feedback "score" being displayed, the Feedback UI allows the user to "drill down" to the level of individual measures **430** and to view history for a specific measure **440**.

[0113] Referring again to **FIG. 6**, the Feedback Module **320** and Feedback UI **321** are also configured to calculate and display "equivalencies," such as the minutes of cardiovascular exercise required to expend an amount of calories equivalent to that contained in a food item. Where possible, this information is presented graphically, such that a user engaging in an exercise routine would be able to view an icon representing a recently consumed food item progressively disappear from the screen, based on the amount of calories expended while exercising.

[0114] In addition to providing "passive" feedback similar to that described above, the Feedback Module **320** is configured to continually monitor scheduled and/or logged activities and actively warn end users of situations that threaten their well-being or otherwise violate their health and wellness goals. For example, if an end user's plan is modified to incorporate a new prescription medication, the Feedback Module would automatically conduct a review of scheduled nutritional events (i.e. snacks or meals) to identify dangerous food/drug interactions, issuing a warning via the Feedback UI where required. Similarly, if the end user were to log activity results that violated targets established in their user profile (for example, recording a maximum heart rate during exercise in excess of that recommended for the user's age) the application would issue a warning. As with the aforementioned alerts and reminders, the means of delivery for the warning may be configured by the user.

[0115] To further drive plan compliance, the system incorporates a rewards functionality, administered by Rewards Module **330** and accessible via the Rewards UI **331**, whereby "health and wellness points" are awarded to the end user based on their ability to achieve specific targets. These targets take one of two forms: plan compliance targets, such as quantity of food consumed, and outcome targets, such as body weight or cholesterol level. In either situation, earned points can be used to obtain rewards via the eCommerce Module **335** and eCommerce UI **336**, which provide the end user with access to an on-line marketplace populated by vendors offering goods and services that are pre-selected based on the end user's profile.

[0116] **FIGS. 10A, 10B**, and 10C depict the Rewards and eCommerce UI in greater detail. The Rewards Schedule **450** illustrates the linkage between targets and earned points, while the Rewards List **451** lists the goods and services for which points can be redeemed. Actual redemption of points is achieved via the Wellness Market **452**, which allows the end user to view specific products and services and to select them for redemption and/or purchase.

[0117] In one embodiment, the system also enables the concept of a "Wish List," allowing the end user to save offerings of interest to a master list, arranged by points values required for redemption. Earning the corresponding number of rewards points would trigger an automatic request for confirmation of redemption or, in an alternative embodiment, an automatic redemption, thus providing a powerful reinforcement of virtuous behavior.

[0118] Referring again to **FIG. 6**, synchronization of the client-side application and databases with their server-side counterparts is controlled via the Synchronization/Sharing Module **340** and Synchronization/Sharing UI **341**, which also enable the end user to define the membership of their community and to control sharing of information within that community.

[0119] **FIG. 11** depicts the groups which comprise an end user's community, of which there are four: the Peer Group **460**, consisting of fellow end users selected by the end user for affiliation; the Support Group **461**, consisting of fellow end users selected by the system for affiliation based on a comparison of end user profile data, such as goals, medical needs, etc.; the Practitioner Group **462**, consisting of practitioners who are affiliated with the end user; and the Cheering Section **463**, consisting of non-users that have a vested interest in the end user's health and wellness, such as friends and family members. In certain cases, peers **460** can consciously associate themselves with each other, or be objectively identified by having goals, medical needs, etc. in others, while support group members **461** are assigned automatically by the system. The User Community **464** consists of those individuals who actively participate in and interface with the health and wellness system of the present invention on a regular basis. End users may have one or several practitioners from whom they receive coaching and feedback, while practitioners may have one or more end users to whom they provide services. As shown in the embodiment of **FIG. 11**, the members of the Cheering Section **463** may not meet the strict definition of the user community, but they may indeed receive information on an occasional, passive and non-involved basis. In this way, the health and wellness system of the present invention reaches out to non-subscribers, and encourages and promotes health and wellness at levels beyond the participants in the system. While striving to optimize the health and wellness of end users **13**, leverage can be achieved by utilizing participants beyond the User Community **464** as shown in **FIG. 11** to promote and reward compliance.

[0120] Once the membership of these groups has been defined, the end user **13** may select which subsets of information (e.g. Plans, Results, Profiles) are shared with which groups and/or group members. Subsequent sharing of information enables the following functionality:

[0121] Challenge groups, whereby end users can exchange results and compete head-to-head with fellow end users

[0122] Support groups, whereby end users can exchange plans and compare results with fellow end users in a non-competitive setting

[0123] Publishing, whereby end users can publish all or part of their lifestyle plan to a web log for access by other users

[0124] Subscriptions, whereby end users can subscribe to a published plan and receive regular invitations to the events defined in the plan

[0125] Cheering sections, whereby end users can designate a collection of individuals who may or may not be fellow end users (such as friends and family) to receive regular progress updates relative to plan compliance and outcomes.

[0126] In one embodiment, the functionality described above would be accessible via the client-side application; in an alternative embodiment, some or all of this functionality would be provided via the client-side application to leverage the ease of use of a large form-factor device.

[0127] Referring again to **FIG. 6**, management of the end user's personal profile and personalization of the client-side user experience is controlled via the Personalization Module **350** and the Personalization UI **351**, with the resulting settings stored in the Profile Database **352** and the Settings Database **353**.

[0128] **FIGS. 12A and 12B** depicts the Profile Management user interface in greater detail. The process includes creation of a profile by the end user (or alternately, the practitioner) using the Profile Creation screen **470**, by defining each of the components that comprise their health and wellness profile, including demographics, nutritional and exercise preferences, learning/motivational styles, and medical conditions. Once defined, the end user then specifies access permissions using the Profile Access screen **471**, which dictates which elements of their profile will be visible to members of the user community.

[0129] **FIG. 13** depicts the Emergency Profile Retrieval functionality of the system, a specific embodiment of the Profile Management functionality that allows a medical provider to quickly access the medical profile of an end user in an emergency situation; i.e. when the end user is unable to provide required information to the medical provider. User or practitioner enters medical profile information via Web browser or mobile device. In case of emergency, medical personnel dial standard phone number. The server application then initiates WAP push, prompting medical personnel to launch client application. Medical personnel to enter assigned password. Subsequently, medical profile information will be displayed on mobile device.

[0130] It is possible to envision additional, alternative embodiments of the present invention by blending the above functionality. Such additional and alternative embodiments are expressly included within the scope of this invention. Selected examples of such functionality include, but are not limited to:

[0131] 1. Auto Replenishment, whereby the scheduling and eCommerce capabilities of the system are leveraged to enable continual, automatic purchase of replenishables, such as supplements or prescription medication. As en example of the functionality of the present invention, the end user **13** might receive a 60 day supply of medication or the end user **13** might receive a 60 dose vial, but usage depends on symptoms of the end user **13**. Based upon the scheduled and actually recorded usage levels of the medication at the Compliance Management Module **210**, the Scheduling Module **200** can automatically send a notification to the medication distributor and have the next 60 days or **60** doses of medication delivered to the end user or his or her other health care provider. Electronic messaging can be utilized to update members of the Community to these events, in order to advise end users **13** of prospective delivery of medications, allow practitioners **1** to monitor compliance, etc.

[0132] 2. Clinical Trial Administration, whereby the scheduling, outcome tracking, and profile management capabilities of the system are leveraged to administer clinical trials of a health and wellness enabler, such as a medication regimen. End users can sign up for clinical trials, and in an embodiment gain rewards for participation. By participation in the clinical trial, end users **13** can be assigned on a blinded, randomized basis with a control group selected by the administrator of the trial. Outcomes and results can be analyzed, as described above, and a Clinical Trial Administration data processing module generates statistical data related to cost, drug efficacy, side effects, and overall safety. Results of the Clinical Trial Administration data processing module could be pushed in real time to practitioners to provide up to date therapy reports. Trends in end user health and well being can be analyzed to derive expert system tools for optimizing the lifestyle plan described in **FIG. 1B** on an automatic, regular and/or synchronized basis.

[0133] 3. Sponsorship Programs, whereby a third party with a vested interest in the health and wellness of an end user **13** can "fund" the individual's rewards program. Employers, insurers, public health administrators, benefactors and other family members are but a few of the many types of persons which might have an interest in the maintained health and wellness of an end user **13**.

[0134] 4. Data Mining, whereby the profile management and outcome tracking capabilities of the system are leveraged to allow health and wellness product and service providers to better tailor their product offerings to their target customer, based on monitoring the activities of an end user of known profile. Participation in such activities is strictly at the consent and/or request of the member whose data is being "mined," whether they be end users, practitioners, cheering section members, etc.

[0135] Although any methods and materials similar or equivalent to those described can be used in the practice or testing of the present invention, one method and materials are now described. All publications and patent documents referenced in the present invention are incorporated herein by reference.

[0136] Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly

understood by one of ordinary skill in the art to which the present invention belongs. Although any methods and materials similar or equivalent to those described can be used in the practice or testing of the present invention, methods and materials are now described. All publications and patent documents referenced in the present invention are incorporated herein by reference.

[0137] While the principles of the invention have been made clear in illustrative embodiments, there will be immediately obvious to those skilled in the art many modifications of structure, arrangement, proportions, the elements, materials, and components used in the practice of the invention, and otherwise, which are particularly adapted to specific environments and operative requirements without departing from those principles. The appended claims are intended to cover and embrace any and all such modifications, with the limits only of the true purview, spirit and scope of the invention.

I claim:

1. An integrated health and wellness management system, comprising:

A secure server having a computer readable medium disposed in communication with the internet and accessible via a world wide web portal;

A server-based application residing on the server that provides for:

(a) Addition, deletion and configuration of user accounts;

(b) Generation of end user lifestyle plans comprising diet, exercise, medication and vitals testing;

(c) Tracking of end user compliance with plans; and

(d) Synchronization of plans and outcomes with a client-based application;

An internet-enabled mobile device featuring a wireless link to the Internet; and

A client-based application residing on the internet-enabled mobile device that provides for:

(a) Presentation of lifestyle plans comprising diet, exercise, medication and vitals testing;

(b) Delivery of real-time coaching and guidance;

(c) Capture of outcomes;

(d) Delivery of feedback; and

(e) Synchronization of plan and outcomes with the server-based application.

2. The system of claim 1 wherein the internet-enabled mobile device is selected from the group consisting of PDAs, mobile handsets and cellular telephones, laptop and mobile computers, wireless devices, Bluetooth devices and other WAP devices.

3. The system of claim 1, where the client-based application is written in the JAVA programming language, or in a native language configured to run on devices with an operating system selected from the list of Symbian, BREW, Windows Mobile, or Palm OS.

4. A method of driving end user compliance with a lifestyle plan, comprising the following steps:

Providing an expert system for delivering real-time, graphical feedback based on references to agreed targets;

Developing a wellness profile unique to the end user;

Creating a personalized lifestyle plan incorporating agreed targets and revising as needed;

delivering real-time coaching and feedback by one or more practitioners to the end user; and

Supporting and rewarding the end user through the use of the expert system.

5. A method for improving the health and wellness of an individual end user, the method comprising the steps of:

Delivering an integrated health and wellness management platform, the platform consisting of an internet-connected server-side application configured to enable the creation of a unique and comprehensive, personalized lifestyle plan by one or more health and wellness practitioners,

Connecting the platform via wireless synchronization with a client-side application installed on a wireless, internet-enabled mobile device; and

Configuring the wireless, internet-enabled mobile device to ensure compliance with the lifestyle plan through the application of behavior modification techniques including real-time coaching, outcome journaling and feedback, goal-based rewards and linkage with a broad community.

6. The method of claim 5, wherein the personalized lifestyle plan comprises a series of scheduled events, each occurring at a specific time and/or place.

7. The method of claim 6, wherein the series of scheduled events consist of one or more actionable activities related to a user's health and wellness.

8. The method of claim 6, wherein the series of scheduled events are selected from the group consisting of fitness events, nutritional events, medication events, and vitals events.

9. The method of claim 6, wherein the series of scheduled events include any scheduled activity tangentially related to health and wellness.

10. The method of claim 5 further comprising the following step:

downloading the client application and associated databases to the end user's wireless internet-enabled mobile device.

11. The method of claim 5 further comprising the following step:

initiating an over-the-air (OTA) synchronization using standard protocols to receive a copy of the lifestyle plan created by the practitioner.

12. The method of claim 5 further comprising the following step:

Viewing further information related to activities in the plan.

13. The method of claim 5 further comprising the following step:

Executing the activities and recording the actual outcomes.

14. The method of claim 5 further comprising the following step:

Modifying the components of the plan.

15. The method of claim 5 further comprising the following step:

Reviewing the rewards earned through documented compliance with plan and outcomes targets.

16. The method of claim 5 further comprising the following step:

Exchanging these rewards for coupons and/or goods and services supplied by partners.

17. The method of claim 5 further comprising the following step:

Sharing plans and results with others in the community; including practitioners, peers and "non-users" with a vested interest in the individual's success.

18. A method of use of an integrated health and wellness management cycle consisting of the following steps:

A. User entering basic health information and exercise/nutritional preferences via web site, and optionally collecting such information and preferences via real-time interview;

B. Automatically creating a lifestyle plan and transmitting it to mobile device by a web application based on user inputs;

C. Handheld device guiding user through the execution of the plan, via reminders and real-time coaching/encouragement, data capture and feedback, and returning results back to the web application; and

D. Tracking the web-based application progress against plan, prompting for changes as required, linking user to community and delivering rewards.

19. A method for creating and maintaining a wellness lifestyle plan for an end user integrating health and fitness practitioners, peers and supporting community over a real-time network utilizing server-side and client-side applications and user interfaces, the method comprising the following steps:

A. Initially setting up, including the steps of:

Administrator and/or practitioner creating new user accounts;

Automatically generating a user ID and invitation by a server-side application;

End user accepting invitation and submits profile information;

Practitioner establishing end user targets and settings;

Practitioner creating personalized lifestyle plan for end user based on end user targets and settings;

Automatically pushing client-side application/databases to mobile device; and

End user accepting download of application and databases;

B. Integrating the end user, including the following steps:

Automatically presenting lifestyle plan to end user for review;

Determining if current plan is acceptable to end user;

End user editing or replacing events and/or activities, as desired;

Determining if events or activities should be saved for future use;

Saving events and/or activities to Favorites as desired

Determining if additional information is needed to execute the lifestyle plan;

Retrieving and presenting information to end user by the application;

End user executing plan and recording actual outcomes; and

Automatically calculating results and presenting feedback by the application to the end user;

C. Integrating the practitioner, including the following steps:

Automatically synchronizing the client-side and server-side applications;

Automatically assessing compliance and presenting for review;

Determining if current plan requires editing;

Practitioner editing plan based on results and end user profile; and

Automatically synchronizing client-side and server-side applications.

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