A

TITLE OF THE INVENTION

A System and Method for Retrieving and Transmitting Cognitive Parameter Measurements for Real Time Display on User Interfaces and Triggering Cryptocurrency Transfer ~~Among Users~~

- Best disclosure of Teams
- Mentioned Emotiv = good
  - mentioned some other parameters also - P101
- Included arena ~~spectators~~ w/ fig = Fig 9
- Figure 10B is messed up
- Overall nice job w/ profiles (Fig 10-11)
- claims getting better, but still need work
- Overall good
- Most complete disclosure in class

BACKGROUND OF THE INVENTION

[0001] [Describe long felt unmet need]

[0002] [Describe prior art]

BRIEF SUMMARY OF THE INVENTION

[0003] [Describe invention as claimed]

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] Figure 1A illustrates a system for receiving and transmitting cognitive parameter measurements for real time display on user interfaces according to an embodiment of the present invention.

[0005] Figure 1B illustrates the components of a cryptocurrency server according to an embodiment of the present invention.

[0006] Figure 1C illustrates the components of a payment server according to an embodiment of the present invention.

[0007] Figure 1D illustrates the components of the host server memory according to an embodiment of the present invention.

[0008] Figure 2A illustrates the components of the user repository data table according to an embodiment of the present invention.

[0009] Figure 2B illustrates the components of the first user profile data table and the second user profile data table according to an embodiment of the present invention.

[0010] Figure 2C illustrates the components of the challenge terms/request data table according to an embodiment of the present invention.

[0011] Figure 2D illustrates the components of the real time challenge data table for a first user and a real time challenge data table for a second user according to an embodiment of the present invention.

[0012] Figure 2E illustrates the components of a combined real time challenge data table for a first and second user according to an embodiment of the present invention.

[0013] Figure 2F illustrates the components of a challenge outcomes data table according to an embodiment of the present invention.

[0014] Figure 3A illustrates the components of a first team data table and a second team data table according to an embodiment of the present invention

[0015] Figure 3B illustrates the components of a real time challenge data table for a first team and a real time challenge data table for a second team according to an embodiment of the present invention.

[0016] Figure 3C illustrates the components of the combined real time challenge data table for a first and second team according to an embodiment of the present invention.

[0017] Figure 4A illustrates the components of the announcements data table according to an embodiment of the present invention.

[0018] Figure 4B illustrates the components of the messages data table according to an embodiment of the present invention.

[0019] Figure 5 illustrates the components of the challenge history data table for a first user according to an embodiment of the present invention.

[0020] Figure 6 illustrates a flowchart of a process of retrieving challenge terms from a first user interface and transmitting a challenge request to a second user interface according to an embodiment of the present invention.

[0022] Figure 7 illustrates a flowchart of a process of measuring cognitive parameters for a first and second user and displaying corresponding computer graphic images onto a first and second user interface in real time according to an embodiment of the present invention.

[0023] Figure 8 illustrates a flowchart of a process of concluding a challenge and transferring the challenge wager to a user according to an embodiment of the present invention

[0024] Figure 9 illustrates a flowchart of a process for generating an announcement for a public challenge and collecting a challenge admission fee according to an embodiment of the present invention.

[0025] Figure 10A illustrates a user interface presented to the user on the smart phone device upon opening the application on the smart phone device according to an embodiment of the present invention.

[0026] Figure 10B illustrates a user interface presented to the user on the smart phone device to create a profile according to an embodiment of the present invention.

[0027] Figure 10C illustrates a user interface presented to the user on the smart phone device after the profile is created according to an embodiment of the present invention.

[0028] Figure 10D illustrates a user interface presented to the user on the smart phone device to send challenge terms and request a challenge to an opponent according to an embodiment of the present invention.

[0029] Figure 11 illustrates a user interface presented to the user on the smart phone device upon request to view an announcement according to an embodiment of the present invention.

[0030] Figure 12 illustrates a user interface presented to the user on the smart phone device for real time display of the challenge participants' cognitive parameters throughout the challenge duration according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0031] Figure 1A illustrates a system for receiving and transmitting cognitive parameter measurements for real time display on user interfaces according to an embodiment of the present invention. The application and spectator sport platform system 100 involves five main components: a first measuring device 101, a first smart phone device 106, a second measuring device 121, a second smart phone device 126, and a host server 114. The first measuring device 101 includes a first measuring device plurality of electroencephalogram (EEG) sensors 102, a first measuring device processor 103, a first measuring device memory 136, and a first measuring device transceiver 105. The measuring device processor 103 includes an analog to digital converter (ADC) 104. The first smart phone device 106 includes a first smart phone device transceiver 107, a first smart phone device processor 108, a first smart phone internal clock 110, first graphical processor 111, a first network control 112, and a first user interface 113. The host server 114 includes a host server processor 115, a host server memory 117, a host server transceiver 118, a cryptocurrency gateway 119, and a payment gateway 120. The second measuring device 121 includes a second measuring device plurality of EEG sensors 122, a second measuring device processor 123, a second measuring device memory 137, and a second measuring device transceiver 127. The second measuring device processor 123 includes a second ADC 124. The second smart phone device 126 includes a second smart phone device transceiver 127, a second smart phone device processor 128, a second graphical processor 131, a second network control 132, and a second user interface 133. The second smart phone device processor 128 includes a second smart phone internal clock 130.

[0032] In the preferred embodiment of the application and spectator sport platform system 100, the first measuring device 101 is in communication with the first smart phone device 106 through a wireless Bluetooth connection 134. The first measuring device plurality of EEG sensors 102 is electronically coupled with the first measuring device processor 103. The first measuring device plurality of EEG sensors 102 is electronically coupled with the first ADC 104. The first measuring device processor 103 is electronically coupled with the first ADC 104. The first measuring device processor 103 is electronically coupled with the first measuring device memory 136. The first measuring device processor 103 is electronically coupled with the first measuring device transceiver 105. The first measuring device transceiver 105 is electronically coupled with the first smart phone device transceiver 107. The first measuring device transceiver 105 is electronically coupled with the first network control 112.

[0033] In addition, the first smart phone device transceiver 107 is electronically coupled with the first smart phone device processor 108. The first smart phone device processor 108 is electronically coupled with the first smart phone internal clock 110. The first smart phone device transceiver 107 is electronically coupled with the first graphical processor 111. The first smart phone device transceiver 107 is electronically coupled with the first network control 112. The first smart phone device processor 108 is electronically coupled with the first graphical processor 111. The first graphical processor 111 is electronically coupled with the first user interface 113. The first network control 112 is electronically coupled with the host server transceiver 118. The first smart phone device transceiver 107 is electronically coupled with the host server transceiver

118. The first smart phone device 106 is in communication with the host server 114 through a network connection 135.

[0034] In addition, the host server transceiver 118 is electronically coupled with the host server processor 115. The host server transceiver 118 is electronically coupled with host server memory 117. The host server processor 115 is electronically coupled with the host server memory 117. The host server processor 115 is electronically coupled with the cryptocurrency gateway 119. The host server processor 115 is electronically coupled with the payment gateway 120. The host server transceiver 118 is electronically coupled with the cryptocurrency gateway 119. The host server transceiver 118 is electronically coupled with the payment gateway 120. The cryptocurrency gateway 119 is in communication with a cryptocurrency server 140 (further described in figure 1B) through a network connection 135. The payment gateway 120 is in communication with a payment server 144 (further described in figure 1C) through a network connection 135.

[0035] In addition, the second measuring device 121 is in communication with the second smart phone device 126 through a wireless Bluetooth connection 134. The second measuring device plurality of EEG sensors 122 is electronically coupled with the second measuring device processor 123. The second measuring device plurality of EEG sensors 122 is electronically coupled with the second ADC 124. The second measuring device processor 123 is electronically coupled with the second ADC 124. The second measuring device processor 123 is electronically coupled with the second measuring device memory 137. The second measuring device processor 123 is electronically coupled with the second measuring device transceiver 125.

The second measuring device transceiver 125 is electronically coupled with the second smart phone device transceiver 127. The second measuring device transceiver 125 is electronically coupled with the second network control 132.

[0036] In addition, the second smart phone device transceiver 127 is electronically coupled with the second smart phone device processor 128. The second smart phone device processor 128 is electronically coupled with the second smart phone internal clock 130. The second smart phone device transceiver 127 is electronically coupled with the second graphical processor 131. The second smart phone device transceiver 127 is electronically coupled with the second network control 132. The second smart phone device processor 128 is electronically coupled with the second graphical processor 131. The second graphical processor 131 is electronically coupled with the second user interface 133. The second network control 132 is electronically coupled with the host server transceiver 118. The second smart phone device transceiver 127 is electronically coupled with the host server transceiver 118. The second smart phone device 126 is in communication with the host server 114 through a network connection 135.

[0037] In operation, the first plurality of EEG sensors 102 detects an electrical signal from the surface of a first user's head. The first plurality of EEG sensors 102 creates an analog measurement of the electrical signal. The first ADC 104 converts the analog electrical signal to a digital electrical signal. The first measuring device processor 103 calculates a first user first cognitive parameter 246 from the digital electrical signal. The first measuring device processor 103 transmits the first user first cognitive parameter 246 to the first measuring device transceiver

105. The first measuring device transceiver 105 transmits the first user first cognitive parameter 246 to the first smart phone device transceiver 107. The first smart phone device transceiver 107 transmits the first user first cognitive parameter 246 to the host server transceiver 118. The host server transceiver 118 transmits the first user first cognitive parameter 246 to the host server memory 117 to be stored in a real time challenge data table for a first user 243 (further illustrated in figure 2D).

[0038] Further describing the operation, the first plurality of EEG sensors 102 detects an electrical signal from the surface of a first user's head every 0.5 seconds. The host server processor 115 generates a first user first time point 245 that corresponds with the first user first cognitive parameter 246. The first measuring device 101 generates a first user second cognitive parameter 0.5 seconds after the first measuring device 101 generates the first user first cognitive parameter 246. The host server processor 115 generates a first user second time point that corresponds with the first user second cognitive parameter 0.5 seconds after the first measuring device 101 generates the first user first cognitive parameter 246. The time points indicate the sequence in which the first measuring device 101 generates cognitive parameter measurements. This measuring process is repeated throughout the challenge duration 244 until the first measuring device 101 generates a first user final cognitive parameter 248 and the host server processor 115 generates a first user final time point 247 (further illustrated in figure 2D).

[0039] Further describing the operation, the host server processor 115 retrieves the first user first cognitive parameter 246 from the host server memory 117 and summates the first user first cognitive parameter 246 with an immediately preceding cognitive parameter measurement

to generate a first user first cognitive parameter summation 249. The host server processor 115 retrieves the first user second cognitive parameter from the host server memory 117 and summates the first user second cognitive parameter with the immediately preceding first user first cognitive parameter 246 to generate a first user second cognitive parameter summation. This summation process is repeated throughout the challenge duration 244 until the host server processor 115 generates a first user final cognitive parameter summation 250 (further illustrated in figure 2D).

[0040] Further describing the operation, the second plurality of EEG sensors 122 detects an electrical signal from the surface of a second user's head. The second plurality of EEG sensors 122 creates an analog measurement of the electrical signal. The second ADC 124 converts the analog electrical signal to a digital electrical signal. The second measuring device processor 123 calculates a second user first cognitive parameter 253 from the digital electrical signal. The second measuring device processor 123 transmits the second user first cognitive parameter 253 to the second measuring device transceiver 125. The second measuring device transceiver 125 transmits the second user first cognitive parameter 253 to the second smart phone device transceiver 127. The second smart phone device transceiver 127 transmits the second user first cognitive parameter 253 to the host server transceiver 118. The host server transceiver 118 transmits the second user first cognitive parameter 253 to the host server memory 117 to be stored in a real time challenge data table for a second user 251 (further illustrated in figure 2D).

[0041] Further describing the operation, the second plurality of EEG sensors 122 detects an electrical signal from the surface of a first user's head every 0.5 seconds. The host server

processor 115 generates a second user first time point 252 that corresponds with the second user first cognitive parameter 253. The second measuring device 121 generates a second user second cognitive parameter 0.5 seconds after the second measuring device 121 generates the second user first cognitive parameter 253. The host server processor 115 generates a second user second time point that corresponds with the second user second cognitive parameter 0.5 seconds after the second measuring device 121 generates the second user first cognitive parameter 253. The time points indicate the sequence in which the second measuring device 121 generates cognitive parameter measurements. This measuring process is repeated throughout the challenge duration 244 until the second measuring device 121 generates a second user final cognitive parameter 255 and the host server processor 115 generates a second user final time point 254 (further described in figure 2D).

[0042] Further describing the operation, the host server processor 115 retrieves the second user first cognitive parameter 253 from the host server memory 117 and summates the second user first cognitive parameter 253 with an immediately preceding cognitive parameter measurement to generate a second user first cognitive parameter summation 256. The host server processor 115 retrieves the second user second cognitive parameter from the host server memory 117 and summates the second user second cognitive parameter with the immediately preceding second user first cognitive parameter 253 to generate a second user second cognitive parameter summation. This summation process is repeated throughout the challenge duration 244 until the host server processor 115 generates a second user final cognitive parameter summation 257 (further illustrated in figure 2D).

[0043] Further describing operation, the host server processor 115 calculates a first user first percentage 261 and a second user first percentage 262 to be stored in a combined real time challenge data table for a first and second user 258. This percentage calculation process is repeated throughout the challenge duration 244 until the host server processor 115 calculates a first user final percentage 263 and a second user final percentage 264 (further illustrated in figure 2E).

[0044] Further describing operation, the host server transceiver 118 retrieves the data from the real time challenge data table for a first user 243, the real time challenge data table for a second user 251, and the combined real time challenge data table for a first and second user 258. The host server transceiver 118 transmits the data to the first smart phone device transceiver 107 and second smart phone device transceiver 127. The first graphical processor 111 retrieves the data from the first smart phone device transceiver 107 and generates a computer graphic image (further illustrated in figure 7). The computer graphic image is transmitted from the first graphical processor 111 to the first user interface 113 for real time display. Simultaneously, the second graphical processor 111 retrieves the data from the second smart phone device transceiver 127 and generates the computer graphic image. The computer graphic image is transmitted from the second graphical processor 131 to the second user interface 133 for real time display. This computer graphic image generation process is repeated throughout the challenge duration 244.

[0045] Further describing operation, the cryptocurrency gateway 119 receives a first user cryptocurrency wallet address 222, a second user cryptocurrency wallet address 269, and

additional user cryptocurrency wallet addresses from the host server processor 115. In particular, the host server processor 115 retrieves the cryptocurrency wallet address 222, the second user cryptocurrency wallet address 269, and additional user cryptocurrency wallet addresses from the respective user profile data table in the host server memory 117 (further illustrated in figure 2B). The host server processor 115 transmits the cryptocurrency wallet address 222, the second user cryptocurrency wallet address 269, and additional user cryptocurrency wallet addresses to the cryptocurrency gateway 119. The cryptocurrency gateway 119 transmits a signal to the cryptocurrency server 140 to verify the cryptocurrency wallet address 222, the second user cryptocurrency wallet address 269, and additional user cryptocurrency wallet addresses.

[0046] Additionally, the cryptocurrency gateway 119 receives a challenge wager 239 from the host server processor 115. In particular, the host server processor 115 retrieves the challenge wager 239 from a challenge terms/request data table 231 in the host server memory 117 (further illustrated in figure 2C). The host server processor transmits the challenge wager 239 to the cryptocurrency gateway 119. The cryptocurrency gateway 119 transmits a signal to the cryptocurrency server to transfer the challenge wager 239 amount to a cryptocurrency holding wallet address 143 from the cryptocurrency wallet addresses of each user listed in the challenge participants data table 241 in the challenge terms/request data table 231. In a similar process, the cryptocurrency gateway 119 receives a challenge outcome 287. The host server processor 115 retrieves the challenge outcome 287 from the challenge outcomes data table 286 in the host server memory (further illustrated in figure 2F). The host server processor 115 transmits the challenge outcome 287 to the cryptocurrency gateway 119. The cryptocurrency gateway 119 transmits a signal to the cryptocurrency server 140 to transfer a challenge holding wager 147

from the cryptocurrency holding wallet address 143 to the user cryptocurrency wallet address corresponding with the challenge outcome 287.

[0047] In the preferred embodiment, users are provided with the option to use a private wallet balance towards the challenge wager 239 (further illustrated in figure 8).

[0048] Further describing the operation, the payment gateway 120 receives a user's payment information from the host server processor 115. In particular, the host server processor 115 retrieves the user's payment information from the user interface. In the preferred embodiment, the payment information is in the form of a credit card number. The host server processor 115 transmits the user's payment information to the payment gateway 120. The payment gateway 120 transmits a signal to the payment server 144 through a network connection 135 to transfer the challenge admission fee 237 amount from the user's payment wallet address to the payment holding wallet address 146 (further illustrated in figure 9).

[0049] Further describing the operation, the first smart phone internal clock 110 transmits a signal, or pulse, to the host server processor 115 that the first user first cognitive parameter 246 is the first cognitive parameter in the subsequent sequence of cognitive parameters. The host server internal clock 116 reads the pulse and generates the first user first time point 245 (further illustrated in figure 2D). The second smart phone internal clock 130 operates in the same manner as the first smart phone internal clock 110.

[0050] The first network control 112 establishes the network connection 135 between the first smart phone device 106 and the host server 114. Additionally, the first network control 112 establishes the network connection 135 between the first smart phone device 106 and the first measuring device 101. In the preferred embodiment, the network connection 135 between the first smart phone device 106 and the host server 114 is an internet or cellular data connection. In the preferred embodiment, the network connection 135 between the first smart phone device 106 and the first measuring device 101 is a wireless Bluetooth connection 134. In the same manner as the first network control 112, the second network control 132 establishes the network connection 135 between the second smart phone device 126 and the host server 114. In the same manner as the first network control 112, the second network control 132 also establishes the network connection 135 between the second smart phone device 126 and the second measuring device 121.

[0051] Further describing the operation, the first measuring device memory 136 transmits a first user measuring device identification number 221 to the host server processor 115. The host server processor 115 stores the first user measuring device identification number 221 in a first user profile data table 213 in the host server memory 117 (further illustrated in figure 2B). The first measuring device memory 136 is pre-populated with a first user measuring device identification number 221. In the preferred embodiment, the first smart phone device 106 establishes a wireless Bluetooth connection 134 with the first measuring device 101. When the wireless Bluetooth connection 134 is established, the host server processor 115 transmits a signal to the first smart phone device processor 108 to retrieve the first user measuring device identification number 221 from the first measuring device 101. In particular, the first measuring

device processor transmits the first user measuring device identification number 221 to the first measuring device transceiver 105. The first measuring device transceiver 105 transmits the first user measuring device identification number 221 to the first smart phone device transceiver 107 through a wireless Bluetooth connection 134. The host server transceiver 118 retrieves the first user measuring device identification number 221 from the first smart phone device transceiver 107 through a network connection 135. The host server processor 115 retrieves the first user measuring device identification number 221 from the host server transceiver 118. The host server processor 115 stores the first user measuring device identification number 221 in the first user profile data table 213 in the host server memory 117. The second measuring device memory 137 transmits a second user measuring device identification number 268 by operating in the same manner as the first measuring device memory 136.

[0052] In the preferred embodiment, the first measuring device 101 and second measuring device 121 are of the Emotiv Insight 2 model. The Emotive Insight 2 measuring devices include a 5 channel EEG that is rechargeable with up to 20 hours of battery life. In alternate embodiments, other measuring device models are used.

[0053] In an alternate embodiment, the system is compatible with teams, where each team includes one or more users (team embodiments are further illustrated in figures 3A - 3C).

[0054] In an alternate embodiment, the system includes more than two headsets and more than two smartphone devices.

[0055] In an alternate embodiment, the system replaces the smart phone devices with computers.

[0056] In an alternate embodiment, the measuring devices establish a connection with the smart phone devices through a connection other than a wireless Bluetooth connection. For example, an internet connection or a wired connection.

[0057] In an alternate embodiment, the measuring device takes a measurement every 1/10 of a second.

[0058] Figure 1B illustrates the components of a cryptocurrency server 140 according to an embodiment of the present invention. The cryptocurrency server 140 includes the following: a user cryptocurrency wallet address data table 141, a cryptocurrency holding wallet address 143, and a challenge holding wager 147. In the preferred embodiment, the cryptocurrency server 140 belongs to a third-party cryptocurrency exchange platform. The user cryptocurrency wallet address data table 141 includes an indefinite number of user cryptocurrency wallet addresses. The cryptocurrency holding wallet address 143 is a public address affiliated with the preferred embodiment and serves as an escrow wallet. The challenge holding wager 147 is the total of wagers collected from each user's cryptocurrency wallet addresses. The challenge holding wager 147 is held in escrow in the cryptocurrency holding wallet address 143 until the end of the challenge duration 244.

[0059] In operation, the host server processor 115 retrieves user cryptocurrency wallet addresses from the user interfaces and stores the user cryptocurrency wallet addresses in the respective user profile data table in the host server memory 117. Additionally, the cryptocurrency gateway 119 transmits a signal to the cryptocurrency server 140 to transfer the challenge wager 239 amount to a cryptocurrency holding wallet address 143 from the cryptocurrency wallet addresses of each user listed in the challenge participants data table 241 in the challenge terms/request data table. In a similar process, the cryptocurrency gateway 119 transmits a signal to the cryptocurrency server 140 to transfer a challenge holding wager 147 from the cryptocurrency holding wallet address 143 to the user cryptocurrency wallet address corresponding with the challenge outcome 287 (as described in figure 1A).

[0060] Figure 1C illustrates the components of a payment server 144 according to an embodiment of the present invention. The payment server 144 includes the following: a user payment wallet address data table 145 and a payment holding wallet address 146. In the preferred embodiment, the payment server 144 belongs to a third-party payment platform. The user payment wallet address data table 145 includes an indefinite number of user payment wallet addresses. The payment holding wallet address 146 is affiliated with the preferred embodiment and serves as an escrow wallet. The payment holding wallet address 146 is used to collect the challenge admission fee 237 from user payment wallet addresses through a payment portal (further illustrated in figure 9).

[0061] In operation, the host server processor 115 retrieves the user's payment information from the user interface. In the preferred embodiment, the payment information is in

the form of a credit card number. The host server processor 115 transmits the user's payment information to the payment gateway 120. The payment gateway 120 transmits a signal to the payment server 144 through a network connection 135 to transfer the challenge admission fee 237 amount from the user's payment wallet address to the payment holding wallet address 146 (further illustrated in figure 9). In a similar process, the host server processor 115 transmits a signal to the payment server 144 to transfer the total collected admission fee 288 to the payment wallet addresses of the users listed in the challenge participants data table 241 according to the challenge admission fee split 238 (further illustrated in figure 2C).

[0062] Figure 1D illustrates the components of the host server memory 117 according to an embodiment of the present invention. The host server memory 117 includes the following data tables: a user repository data table 150, a challenge terms/request repository data table 155, a real time challenge repository data table 160, a challenge outcomes repository data table 165, an announcements repository data table 170, a messages repository data table 175, and a challenge history repository data table 180.

[0063] The user repository data table 150 includes an indefinite number of user profile data tables and team profile data tables. An embodiment of a first user profile data table 213 and a second user profile data table 226 is illustrated and further described in figure 2B. An embodiment of a first team data table 205 and second team data table 206 is illustrated and further described in figure 3A.

[0064] The challenge terms/request repository table 155 includes an indefinite number of challenge terms/request data tables. In operation, the host server processor 115 receives a signal from a user interface to generate a challenge terms/request data table. An embodiment of a challenge term/request data table 231 is illustrated and further described in figure 2C.

[0065] The real time challenge repository data table 160 includes an indefinite number of real time challenge data tables. In operation, the host server processor 115 generates a real time challenge data table at the start of a challenge duration 244. An embodiment of a real time challenge data table for a first user 243 and a real time challenge data table for a second user 251 is illustrated and further described in figure 2D. An embodiment of a combined real time challenge data table for a first and second user 258 is illustrated and further described in figure 2E. An embodiment of a real time challenge data table for a first team 290 and a real time challenge data table for a second team 291 is illustrated and further described in figure 3B. An embodiment of a combined real time challenge data table for a first and second team 292 is illustrated and further described in figure 3C.

[0066] The challenge outcomes repository data table 165 includes an indefinite number of challenge outcomes data tables. In operation, the host server processor 115 generates a challenge outcomes data table at the end of a challenge duration 244. An embodiment of a challenge outcome data table 286 is illustrated and further described in figure 2F.

[0067] The announcements repository data table 170 includes an indefinite number of announcements data tables. In operation, the host server processor 115 generates an

announcement when a public challenge is created. An embodiment of an announcements data table 400 is illustrated and further described in figure 4A.

[0068] The messages repository data table 175 includes an indefinite number of messages data tables. In operation, the host server processor 115 retrieves a message from a sending user's user interface and transmits the message to the recipient user's user interface. An embodiment of a messages data table 401 is illustrated and further described in figure 4B.

[0069] The challenge history repository data table 180 includes an indefinite number of challenge history data tables. In the preferred embodiment, the number of challenge history data tables equals the number of users in the user repository data table 150. The challenge history data table serves as a summary table of a user's performance in previous challenges. In operation, the host server processor 115 transmits select fields from the challenge history data table to a user interface. An embodiment of a challenge history data table for a first user 500 is illustrated and further described in figure 5.

[0070] Figure 2A illustrates the components of the user repository data table 150 according to an embodiment of the present invention. In the preferred embodiment, the user repository data table 150 includes the following indefinite list of data tables: a first user profile data table 213, a second user profile data table 226, subsequent user profile data tables, a first team data table 205, a second team data table 206, and subsequent team data tables. The first user profile data table 213 and the second user profile data table 226 are further described in figure 2C. The first team data table 205 includes a list of user profile data tables, each user profile data

table including the same fields as included in the first user profile data table 213 (further described in figure 2B). Likewise, the second team data table 206 includes a list of user profile data tables, each user profile data table including the same fields as included in the first user profile data table 213. Subsequent team data tables include a list of user profile data tables, each user profile data table including the same fields as included in the first user profile data table 213.

[0071] In operation, the host server processor 115 generates the first user profile data table 213 and stores the first user profile data table 213 in the user repository data table 150 in the host server memory 117 (further illustrated in figure 10B). Likewise, the host server processor 115 generates the second user profile data table 226 and stores the second user profile data table 226 in the host server memory 117. The host server processor 115 generates subsequent user profile data tables in the same manner as described in figure 10B.

[0072] Further describing the operation, the host server processor 115 generates the first team data table 205 and stores the first team data table 205 in the user repository data table 150 in the host server memory 117 (further illustrated in figure 3A). Likewise, the host server processor 115 generates the second team data table 206 and stores the second team data table 206 in the user repository data table 150 in the host server memory 117. The host server processor 115 generates subsequent team data tables in the same manner as described in figure 3A.

[0073] In the preferred embodiment, each team profile data table includes between one and 99 user profile data tables.

[0074] In an alternate embodiment, each team profile data table need not be limited to 99 user profile data tables.

[0075] Figure 2B illustrates the components of the first user profile data table 213 and the second user profile data table 226 according to an embodiment of the present invention. The first user profile data table 213 includes the following data fields: a first username 202, a first encrypted password 214, a first user first name 215, a first user last name 216, a first user date of birth 217, a first user sex 218, a first user mobile phone number 219, a first user account creation date 220, a first user measuring device identification number 221, a first user cryptocurrency wallet address 222, a first user subscription 212, a first user subscription balance 224, and a first user private wallet balance 225.

[0076] In operation, the host server processor 115 retrieves the first username 202, first encrypted password 214, first user first name 215, first user last name 216, first user date of birth 217, first user sex 218, first user mobile phone number 219, and the first user cryptocurrency wallet address 222 from the first user interface 113 through a network connection 135. In particular, the first smart phone device processor 108 retrieves the first username 202, first encrypted password 214, first user first name 215, first user last name 216, first user date of birth 217, first user sex 218, first user mobile phone number 219, and the first user cryptocurrency wallet address 222 from the first user interface 113. The first smart phone device processor 108 transmits the first username 202, first encrypted password 214, first user first name 215, first user last name 216, first user date of birth 217, first user sex 218, first user mobile phone number 219,

and the first user cryptocurrency wallet address 222 to the first smart phone device transceiver 107. The first smart phone device transceiver 107 transmits the first username 202, first encrypted password 214, first user first name 215, first user last name 216, first user date of birth 217, first user sex 218, first user mobile phone number 219, and the first user cryptocurrency wallet address 222 to the host server transceiver 118 through a network connection 135. The host server processor 115 retrieves the first username 202, first encrypted password 214, first user first name 215, first user last name 216, first user date of birth 217, first user sex 218, first user mobile phone number 219, and the first user cryptocurrency wallet address 222 from the host server transceiver 118. The host server processor 115 stores the first username 202, first encrypted password 214, first user first name 215, first user last name 216, first user date of birth 217, first user sex 218, first user mobile phone number 219, and the first user cryptocurrency wallet address 222 in the first user profile data table 213 in the host server memory 117.

[0077] Further describing the operation, the host server processor 115 retrieves the first user account creation date 220 from the host server internal clock 116. In particular, upon the host server processor 115 storing the first username 202, first encrypted password 214, first user first name 215, first user last name 216, first user date of birth 217, first user sex 218, first user mobile phone number 219, and the first user cryptocurrency wallet address 222 in the first user profile data table 213 in the host server memory 117, the host server processor 115 retrieves the first user account creation date 220 from the host server internal clock 116. The host server processor 115 stores the first user account creation date 220 in the first user profile data table 213 in the host server memory 117.

[0078] Further describing the operation, the host server processor 115 retrieves the first user cryptocurrency wallet address 222 from the first user interface 113 (further illustrated in figure 10B). Upon the host server processor 115 storing the first user cryptocurrency wallet address 222 in the first user profile data table 213 in the host server memory 117, the host server processor 115 transmits the first user cryptocurrency wallet address 222 to the host server transceiver 118. The host server transceiver 118 transmits the first user cryptocurrency wallet address 222 to the cryptocurrency gateway 119 for verification.

[0079] Further describing the operation, the host server processor 115 retrieves the first user measuring device identification number 221 from the first measuring device memory 136 (as described in figure 1A). The host server processor 115 stores the first user measuring device identification number 221 in the first user profile data table 213 in the host server memory 117.

[0080] Further describing the operation, the host server processor 115 generates the first user subscription balance 224. In the preferred embodiment, users are provided with the option to purchase subscriptions. These subscriptions enable users to participate in challenges without requiring a challenge wager 239 (further illustrated in figure 8). The first user subscription balance 224 is the number of remaining challenges the user can participate in without requiring the challenge wager 239. The host server processor 115 updates the first user subscription balance 224 following the conclusion of a challenge.

[0081] The preferred embodiment provides users with an unlimited number of challenges without requiring the challenge wager 239 for the first 30 days following the account creation

date. The host server processor 115 retrieves the first user account creation date 220 from the first user profile data table 213 in the host server memory 117 to determine whether the first user subscription balance 224 is unlimited. After 30 days from the account creation date, the preferred embodiment provides users with the option to pay a monthly subscription fee that replenishes the subscription balance. The preferred embodiment charges a $10 per month subscription fee that provides users with a monthly subscription balance of 1,000 challenges that do not require a challenge wager 239. The subscription fee is paid through the user's cryptocurrency wallet address or payment information through a payment portal.

[0082] In operation, the host server processor 115 receives a request to subscribe through the first user interface 113. In one embodiment, the host server processor 115 collects the first user's payment information through a payment portal from the first user interface 113 (as described in figure 1C). Once the payment is processed, the host server processor 115 generates a first user subscription 112 to indicate that the user purchased a subscription. In the preferred embodiment, the first user subscription 112 is characterized as "yes" if the user purchased the subscription. The host server processor 115 updates the first user subscription balance 224 by summating 1,000 to the existing first user subscription balance 224.

[0083] Additionally, the host server processor 115 updates the user subscription balance following the conclusion of a challenge that requires a challenge wager 239. In the preferred embodiment, the user with the greater final cognitive parameter summation receives an additional 10 challenges that do not require a challenge wager 239. The user with the lowest final cognitive parameter summation receives an additional 20 challenges that do not require a

challenge wager 239. This is regardless of whether the user purchased a subscription. In operation, the host server processor 115 determines the user with the greater final cognitive parameter summation at the end of the challenge duration 244. The host server processor 115 updates the subscription balance of the user with the greater final cognitive parameter summation by summating 10 to the existing user subscription balance. The host server processor 115 updates the subscription balance of the user with the lowest final cognitive parameter summation by summating 20 to the existing user subscription balance.

[0084] Further describing operation, the host server processor 115 updates the first user private wallet balance 225 following the conclusion of a challenge that requires a challenge wager 239. The host server processor 115 determines the user with the greater final cognitive parameter summation at the end of the challenge duration 244. For example, if the first user final cognitive parameter summation 250 is the greater final cognitive parameter summation value, then the host server processor 115 updates the first user private wallet balance 225 with the challenge holding wager 147 amount from the cryptocurrency holding wallet address 143. In particular, the host server processor 115 summates the amount of the challenge holding wager 147 to the existing first user private wallet balance 225 (further described in figure 8).

[0085] In the preferred embodiment, the first username 202, first encrypted password 214, first user first name 215, and first user last name 216 are in alphanumeric string format and input from the first user interface 113. The first user date of birth 217 is in "mm/dd/yyyy" format and is input from the first user interface 113. The first user sex 218 is input from a drop-down menu on the first user interface 113 and is characterized as "male", "female", "other" or "prefer

not to answer". The first user mobile phone number 219 is a 10-digit number input from the first user interface. The first user cryptocurrency wallet address 222 is input in alphanumeric string format and input from the first user interface 113.

[0086] In the preferred embodiment, the first user subscription 212 is generated from the host server processor 115 and is characterized as "yes" or "no". If the first user purchased a subscription, then the first user subscription 212 is populated with a "yes". The first user subscription balance 224 is an integer numeric value. The first user private wallet balance is a numeric value. In the preferred embodiment, the first user private wallet balance 225 is in bitcoin (BTC).

[0087] In an alternate embodiment, the first user cryptocurrency wallet address 222 is retrieved from a cryptocurrency portal (analogous to a payment portal) that allows the first user to log into their third-party cryptocurrency exchange platform account. The host server processor 115 retrieves the first user cryptocurrency wallet address 222 from the cryptocurrency portal on the first user interface 113.

[0088] In an alternate embodiment, the first user private wallet balance 225 is in units other than BTC. In other words, the cryptocurrency is not limited to BTC.

[0089] Figure 2B further illustrates the components of the second user profile data table 226. The data fields of the second user profile data table 226 are analogous to the data fields of the first user profile data table 213 (as described in paragraphs [0075] - [0088]).

not a good idea
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[0090] Figure 2C illustrates the components of the challenge terms/request data table 231 according to an embodiment of the present invention. The challenge terms/request data table 231 includes the following data fields: a challenge name 232, a challenge start date 233, a challenge start time 234, a challenge type 235, a challenge privacy 236, a challenge admissions fee 237, a challenge admission fee split 238, a challenge duration 244, a challenge wager 239, a team challenge field 240, a challenge participants data table 241, and a challenge status 242.

[0091] In operation, the host server processor 115 retrieves the challenge name 232, the challenge start date 233, the challenge start time 234, the challenge type 235, the challenge privacy 236, the challenge admissions fee 237, the challenge admission fee split 238, the challenge duration 244, the challenge wager 239, the team challenge field 240, and the challenge participants data table 241 from the first user interface 113. In particular, the first smart phone device processor 108 retrieves the challenge name 232, the challenge start date 233, the challenge start time 234, the challenge type 235, the challenge privacy 236, the challenge admissions fee 237, the challenge admission fee split 238, the challenge duration 244, the challenge wager 239, the team challenge field 240, and the challenge participants data table 241 from the first user interface 113. The first smart phone device processor 108 transmits the challenge name 232, the challenge start date 233, the challenge start time 234, the challenge type 235, the challenge privacy 236, the challenge admissions fee 237, the challenge admission fee split 238, the challenge duration 244, the challenge wager 239, the team challenge field 240, and the challenge participants data table 241 to the first smart phone device transceiver 107. The first smart phone device transceiver 107 transmits the challenge name 232, the challenge start date

233, the challenge start time 234, the challenge type 235, the challenge privacy 236, the challenge admissions fee 237, the challenge admission fee split 238, the challenge duration 244, the challenge wager 239, the team challenge field 240, and the challenge participants data table 241 to the host server transceiver 118 through a network connection 135. The host server processor 115 retrieves the challenge name 232, the challenge start date 233, the challenge start time 234, the challenge type 235, the challenge privacy 236, the challenge admissions fee 237, the challenge admission fee split 238, the challenge duration 244, the challenge wager 239, the team challenge field 240, and the challenge participants data table 241 from the host server transceiver 118. The host server processor 115 stores the challenge name 232, the challenge start date 233, the challenge start time 234, the challenge type 235, the challenge privacy 236, the challenge admissions fee 237, the challenge admission fee split 238, the challenge duration 244, the challenge wager 239, the team challenge field 240, and the challenge participants data table 241 in the challenge terms/request data table 231 in the host server memory 117.

[0092] Further describing operation, the host server processor 115 retrieves the challenge status 242 from the second user interface 133. In particular, the second smart phone device processor 128 retrieves the challenge status 242 from the first user interface 113. The second smart phone device processor 128 transmits the challenge status 242 to the second smart phone device transceiver 127. The second smart phone device transceiver 127 transmits the challenge status 242 to the host server transceiver 118 through a network connection 135. The host server processor 115 retrieves the challenge status 242 from the host server transceiver 118. The host server processor 115 stores the challenge status 242 in the challenge terms/request data table 231 in the host server memory 117 (further illustrated in figure 6).

[0093] In the preferred embodiment, the challenge name 232 is in alphanumeric string format. The challenge start date 233 is in the format of a month, followed by a day, followed by a year, or "mm/dd/yyyy". The challenge start time 234 is in the format of an hour, followed by minutes, or "hh:mm". The challenge type 235 indicates whether the challenge requires a challenge wager 239 or if the only challenge term is a challenge duration 244. In one embodiment, the challenge type 235 is characterized by "BTC" or "no BTC" and is selected from a drop-down menu on the first user interface 113. The "BTC" characterization indicates that the challenge requires a challenge wager 239. The "no BTC" characterization indicates that the only challenge term is a challenge duration 244. The challenge privacy 236 indicates whether the challenge is public and open to be viewed by users other than those listed in the challenge participants data table 241. In one embodiment, the challenge privacy 236 is characterized as "private" or "public" and is selected from a drop-down menu on the first user interface 113. The challenge admission fee 237 is in US Dollars. In the preferred embodiment, the minimum challenge admission fee 237 is $1. The challenge admission fee split 238 determines how to divide the total collected admission fee 288 among the users listed in the challenge participants data table 241. The challenge admission fee split 238 default setting is "50-50". The challenge admission fee split 238 is adjusted from a toggle on the first user interface 113 to indicate a split between "1-99" and "99-1". The challenge duration 244 is in seconds. The challenge wager 239 is in BTC. The team challenge field 240 indicates whether the challenge is a team challenge. The team challenge field 240 is characterized as "yes" or "no" and is selected from a drop-down menu on the first user interface 113. If the team challenge field 240 is characterized as "yes", then the host server processor 115 transmits team data tables to the first user interface 113

(further illustrated in figure 6). The challenge participants data table 241 indicates which users are participating in the challenge. The challenge participants data table 241 is a list of user profile data tables. The challenge status 242 is characterized as "accepted" or "rejected" and is selected from a drop-down menu on the second user interface 133.

[0094] Additionally, in the preferred embodiment, users are provided with the option to revoke the challenge after the challenge status 242 is characterized as "accepted" (further illustrated in figure 6). The challenge status 242 is then characterized as "revoked" and is selected from a drop-down menu on either the first user interface 113 or the second user interface 133.

[0095] Figure 2D illustrates the components of the real time challenge data table for a first user 243 and a real time challenge data table for a second user 251 according to an embodiment of the present invention. The real time challenge data table for a first user 243 includes the following fields: a challenge name 232, a challenge start date 233, a challenge start time 234, a challenge duration 244, a first user first time point 245, a first user first cognitive parameter 246, subsequent first user time points until a first user final time point 247, subsequent first user cognitive parameters until a final first user final cognitive parameter 248, a first user cognitive parameter summation 249, and subsequent first user cognitive parameter summations until a final first user cognitive parameter summation 250.

[0096] In operation, the host server processor 115 retrieves the challenge name 232, the challenge start date 233, the challenge start time 234, and the challenge duration 244 from the

first user interface as described in figure 2C. The host server processor 115 retrieves the first user first cognitive parameter 246 from the first measuring device processor 103. In particular, the first measuring device processor 103 retrieves the first user first cognitive parameter 246 from the first ADC 104. The first measuring device processor 103 transmits the first user first cognitive parameter 246 to the first measuring device transceiver 105. The first measuring device transceiver 105 transmits the first user first cognitive parameter 246 to the first smart phone device transceiver 107 through a wireless Bluetooth connection 134. The first smart phone device processor 108 retrieves the first user first cognitive parameter 246 from the first smart phone device transceiver 107 for the first smart phone internal clock 110 to generate a pulse (further described in paragraph [0097]). The first smart phone device processor 108 transmits the first user first cognitive parameter 246 to the first smart phone device transceiver 107. The first smart phone device transceiver 107 transmits the first user first cognitive parameter 246 to the host server transceiver 118 through a network connection 135. The host server processor 115 retrieves the first user first cognitive parameter 246 from the host server transceiver 107. The host server processor 115 stores the first user first cognitive parameter 246 in the real time challenge data table for a first user 243 in the host server memory 117. This process of retrieving and storing the cognitive parameter for a first user is repeated throughout the challenge duration 244 until a first user final cognitive parameter 248 is retrieved and stored in the real time challenge data table for a first user 243 in the host server memory 117.

[0097] Further describing the operation, the host server processor 115 generates a first user first time point 245 from the first smart phone internal clock 110. The first user first time point 245 indicates the time at which the first user first cognitive parameter 246 was received by

the first smart phone device transceiver 107. The first user time points are generated by the host server processor 115 for each first user cognitive parameter generated by the first measuring device 101 in order to track the sequence of first user cognitive parameters. In particular, the first smart phone device transceiver 107 receives the first user first cognitive parameter 246 from the first measuring device transceiver 105. The first smart phone device processor 108 retrieves the first user first cognitive parameter 246 from the first smart phone device transceiver 107. The first smart phone internal clock 110 generates a signal, or pulse, to indicate to the host server processor 115 that the first user first cognitive parameter 246 is the first cognitive parameter in the subsequent sequence of cognitive parameters. The first smart phone device processor 108 retrieves the pulse from the first smart phone internal clock 110. The first smart phone device processor transmits the pulse to the first smart phone device transceiver 107. The first smart phone device transceiver 107 transmits the pulse to the host server transceiver 118 through a network connection 135. The host server processor 115 retrieves the pulse from the host server transceiver 118. The host server internal clock 116 reads the pulse and generates the first user first time point 245. The host server processor 115 stores the first user first time point 245 in the real time challenge data table for a first user 243 in the host server memory 117. This process of generating and storing the time points for a first user is repeated throughout the challenge duration 244 until a first user final time point 247 is retrieved and stored in the real time challenge data table for a first user 243 in the host server memory 117.

[0098] Further describing the operation, the host server processor 115 calculates a first user first cognitive parameter summation 249. The first user first cognitive parameter summations are the summation of a first user cognitive parameter with the immediately

preceding first user cognitive parameter. In the preferred embodiment, the first user first cognitive parameter summation 249 equals the first user first cognitive parameter 246 since there is not an immediately preceding first user cognitive parameter. On the other hand, the first user second cognitive parameter summation equals the first user second cognitive parameter summated with the first user first cognitive parameter 246. Upon calculation of the first user first cognitive parameter summation 249, the host server processor 115 stores the first user first cognitive parameter summation 249 in the real time challenge data table for a first user 243 in the host server memory 117. This process of calculating and storing the first user cognitive parameter summations is repeated throughout the challenge duration 244 until a first user final cognitive parameter summation 250 is calculated and stored in the real time challenge data table for a first user 243 in the host server memory 117.

[0099] In the preferred embodiment, the cognitive parameter is a focus performance metric. The focus performance metric is a numeric integer value, with a minimum value of 0 and a maximum value of 100. Thus, the cognitive parameters and cognitive parameter summations are numeric integer values.

[0100] Additionally, in the preferred embodiment, the first user time points are in seconds.

[0101] In an alternate embodiment, the cognitive parameter need not be limited to a focus performance metric. Examples of alternate parameters include stress, engagement, interest, relaxation, excitement, frequency bands, facial expressions, and motion data.

[0102] Figure 2D further illustrates the components of a real time challenge data table for a second user 251. The data fields of the real time challenge data table for a second user 251are analogous to the data fields of the real time challenge data table for a first user 243 (as described in paragraphs [0095] - [0101]).

[0103] In the preferred embodiment, the second user first time point 252 equals the first user first time point 245. Additionally, in the preferred embodiment, subsequent second user time points equal subsequent first user time points such that the cognitive parameter measurements for the first and second user are measured at the same time.

[0104] Figure 2E illustrates the components of a combined real time challenge data table for a first and second user 258 according to an embodiment of the present invention. The combined real time challenge data table for a first and second user 258 includes the following fields: a combined user summation 259, subsequent combined user summations until a final combined user summation 260, a first user first percentage 261, subsequent first user percentages until a first user final percentage 263, a second user first percentage 262, subsequent second user percentages until a second user final percentage 264.

[0105] In operation, the host server processor 115 calculates a combined user summation 259. The combined user summation 259 is the summation of the first user first cognitive parameter summation 249 and the second user first cognitive parameter summation 256. In particular, the host server processor 115 retrieves the first user first cognitive parameter

summation 249 from the real time challenge data table for a first user 243. The host server processor 115 retrieves the second user first cognitive parameter summation 256 from the real time challenge data table for a second user 251. The host server processor 115 summates the first user first cognitive parameter summation 249 and second user first cognitive parameter summation 256 to generate the combined user summation 259. The host server processor 115 stores the combined user summation 259 in the combined real time challenge data table for a first and second user 258 in the host server memory 117. Subsequent combined user summations are calculated in the same way. For example, the user second total summation is the summation of the first user second cognitive parameter summation and the second user second cognitive parameter summation. This process of calculating the combined user summations is repeated throughout the challenge duration 244 until a final combined user summation 260 is calculated and stored in the combined real time challenge data table for a first and second user 258 in the host server memory 117.

[0106] Further describing the operation, the host server processor 115 calculates the first user first percentage 261 and subsequent first user percentages until the first user final percentage 263. To calculate the first user first percentage 261, the host server processor 115 retrieves the first user first cognitive parameter summation 249 from the real time challenge data table for a first user 243 in the host server memory 117. The host server processor 115 retrieves the combined user summation 259 from the real time challenge data table for a first and second user 258 in the host server memory 117. The host server processor 115 divides the first user first cognitive parameter summation 249 by the combined user summation 259 and multiplies the resulting fraction by 100 to generate the first user first percentage 261. This process of

calculating first user percentages is repeated throughout the challenge duration 244 until the first user final percentage 263 is calculated and stored in the combined real time challenge data table for a first and second user 258 in the host server memory 117.

[0107] Likewise, the host server processor 115 calculates the second user first percentage 262 and subsequent second user percentages until the second user final percentage 264. To calculate the second user first percentage, the host server processor 115 retrieves the second user first cognitive parameter summation 256 from the real time challenge data table for a second user 251 in the host server memory 117. The host server processor 115 retrieves the combined user summation 259 from the real time challenge data table for a first and second user 258 in the host server memory 117. The host server processor 115 divides the second user first cognitive parameter summation 256 by the combined user summation 259 and multiplies the resulting fraction by 100 to generate the second user first percentage 262. This process of calculating second user percentages is repeated throughout the challenge duration 244 until the second user final percentage 264 is calculated and stored in the combined real time challenge data table for a first and second user 258 in the host server memory 117.

[0108] Further describing the operation, the host server processor transmits the first user first cognitive parameter summation 249, subsequent first user cognitive parameter summations until the first user final cognitive parameter summation 250, second user first cognitive parameter summation 256, subsequent second user cognitive parameter summations until the second user final cognitive parameter summation 257, first user first percentage 261, subsequent first user percentages until a first user final percentage 263, second user first percentage 262, and

subsequent second user percentages until a second user final percentage 264 to the first user interface 113 and second user interface 133 for real time display (further illustrated in figure 7).

[0109] In the preferred embodiment, the combined user summations are numeric integer values. The user percentages are stored in the host server memory 117 as numeric values and displayed on user interfaces as numeric integer values.

[0110] Figure 2F illustrates the components of a challenge outcomes data table 286 according to an embodiment of the present invention. The challenge outcomes data table 286 includes the following fields: the challenge name 232, the challenge start date 233, the challenge start time 234, the challenge duration 244, the challenge wager 239, the challenge type 235, the challenge privacy 236, the team challenge field 240, the challenge participants data table 241, a challenge outcome 287, a total collected admission fee 288, the first user final cognitive parameter summation 250, the second user final cognitive parameter summation 257, the first team final cognitive parameter summation 310, the second team final cognitive parameter summation 322, the first team final average cognitive parameter summation 312, and the second team final average cognitive parameter summation 324.

[0111] In operation, the host server processor 115 retrieves the challenge name 232, the challenge start date 233, the challenge start time 234, the challenge duration 244, the challenge wager 239, the challenge type 235, the challenge privacy 236, the team challenge field 240, the challenge participants data table 241 from the challenge terms/request data table 231 in the host server memory 117. The host server processor 115 stores the challenge name 232, the challenge

start date 233, the challenge start time 234, the challenge duration 244, the challenge wager 239, the challenge type 235, the challenge privacy 236, the team challenge field 240, the challenge participants data table 241 in the challenge outcomes data table 286 in the host server memory 117.

[0112] Further describing operation, the host server processor 115 retrieves the first user final cognitive parameter summation 250 from the real time challenge data table for a first user 243. The host server processor 115 retrieves the second user final cognitive parameter summation 257 from the real time challenge data table for a second user 251. The host server processor stores the first user final cognitive parameter summation 250 and the second user final cognitive parameter summation 257 in the challenge outcomes data table 286 in the host server memory 117.

[0113] Further describing operation, the host server processor 115 retrieves the first team final cognitive parameter summation 310 and the first team final average cognitive parameter summation 312 from the real time challenge data table for a first team 290. The host server processor 115 stores the first team final cognitive parameter summation 310 and the first team final average cognitive parameter summation 312 in the challenge outcomes data table 286 in the host server memory 117.

[0114] Further describing the operation, the host server processor 115 retrieves the second team final cognitive parameter summation 322 and the second team final average cognitive parameter summation 324 from the real time challenge data table for a second team

291. The host server processor 115 stores the second team final cognitive parameter summation 322 and the second team final average cognitive parameter summation 324 in the challenge outcomes data table 286 in the host server memory 117.

[0115] Further describing the operation, the host server processor 115 retrieves the total collected admission fee 288 from the payment holding wallet address 146 and stores the total collected admission fee 288 amount in the challenge outcomes data table 286. The total collected admission fee 288 is the total of the admission fee collected from each user viewing a public challenge. The total collected admission fee 288 is held in the payment holding wallet address 146 in the payment server 144 until the end of the challenge duration 244. At the end of the challenge duration 244, the payment gateway 120 transmits a signal to the payment server 144 through a network connection 135 to transfer the total collected admission fee 288 from the payment holding wallet address 146 to the users in the challenge participants data table 241 according to the challenge admission fee split 238.

[0116] Further describing the operation, the host server processor 115 generates the challenge outcome 287 at the end of the challenge duration 244. In particular, the host server processor 115 retrieves the first user final cognitive parameter summation 250 from the real time challenge data table for a first user 243. The host server processor 115 retrieves the second user final cognitive parameter summation 257 from the real time challenge data table for a second user 251. The host server processor determines which cognitive parameter between the first user final cognitive parameter summation 250 and second user final cognitive parameter summation 257. Upon the determination, the host server processor 115 generates the challenge outcome 287.

[0117] The challenge outcome 287 indicates the user with the greater final cognitive parameter summation value at the end of the challenge duration 244. In the preferred embodiment, the challenge outcome 287 is populated with both the username and cryptocurrency wallet address of the user with the greater final cognitive parameter summation value.

[0118] In an alternate embodiment, the challenge outcome 287 is a data table which lists the users from the challenge participants data table 241 and characterizes each user as a "winner" or "loser". If a user is characterized as a "winner", then that user has the greater final cognitive parameter summation value at the end of the challenge duration 244.

[0119] Figure 3A illustrates the components of a first team data table 205 and a second team data table 206 according to an embodiment of the present invention. The first team data table 205 includes the following fields: a first team name 340, a number of users in the first team 341, a first team members data table 342, and a type of score 343. In the preferred embodiment, the first team members data table 342 includes between one and 99 user profile data tables, each user profile data table including the same fields as included in the first user profile data table 213.

[0120] In the preferred embodiment, the first user is prompted to input the first team name 340, the number of users in the first team 341, the first team members data table 342, and the type of score 343 into the first user interface 113 if the team challenge field 240 in the challenge terms/request data table 231 is characterized as "yes". In operation, the host server

processor 115 receives the first team name 340, the number of users in the first team 341, the first team members data table 342, and the type of score 343 from the first user interface 113. The host server processor 115 stores the first team name 340, the number of users in the first team 341, the first team members data table 342, and the type of score 343 in the first team data table 205. The first team data table 205 is stored in the user repository data table 201 in the host server memory 117.

[0121] In the preferred embodiment, the first team name 340 is in alphanumeric string format. Additionally, the number of users in the first team 341 is a numeric value between 1 and 99 that is selected from a drop-down menu on the first user interface 113.

[0122] The first team members data table 342 is a data table that includes user profile data tables. In one embodiment, the first user inputs the usernames of the desired team members into a search bar on the first user interface 113. The host server processor retrieves the usernames from the first user interface 113 and verifies the usernames with the user repository data table 201.

[0123] The type of score 343 indicates type of calculation the host server processor 115 performs on the user cognitive parameters in a team challenge. In the preferred embodiment, the type of score 343 is characterized as "highest total score" or "highest average score" and is selected from a drop-down menu on the first user interface 113. If the type of score is characterized as "highest total score", then the host server processor 115 is instructed to base the challenge outcome 287 on the first team final cognitive parameter summation 310 and second

team final cognitive parameter summation 322 (further described in figure 3B). If the type of score is characterized as "highest average score", then the host server is instructed to base the challenge outcome 287 on the first team final average cognitive parameter summation 312 and the second team final average cognitive parameter summation 312 (further described in figure 3B).

[0124] In an alternate embodiment, the number of users in a team is not restricted to a maximum of 99 users.

[0125] Figure 3A further illustrates the components of a second team data table 206. The fields in the second team data table 206 are analogous to the fields in the first team data table 205 (as described in paragraphs [0119] - [0124]).

[0126] In the preferred embodiment, the host server processor 115 receives the second team name 344, the number of users in the second team 345, the second team members data table 346 from the second user interface 133. The host server processor receives the type of score 343 from the first user interface 113 (further described in figure 6).

[0127] Figure 3B illustrates the components of a real time challenge data table for a first team 290 and a real time challenge data table for a second team 291 according to an embodiment of the present invention. The real time challenge data table for a first team 290 includes the following fields: a challenge name 232, a challenge start date 233, a challenge start time 234, a challenge duration 244, a first team first cognitive parameter 305, subsequent first team cognitive

parameter until a first team final cognitive parameter 306, a first team first average cognitive parameter 307, subsequent first team average cognitive parameters until a first team final average cognitive parameter 308, a first team first cognitive parameter summation 309, subsequent first team cognitive parameter summations until a first team final cognitive parameter summation 310, a first team first average cognitive parameter summation 311, subsequent first team average cognitive parameter summations until a first team final average cognitive parameter summation 312.

[0128] In operation, the host server processor 115 retrieves the challenge name 232, the challenge start date 233, the challenge start time 234, and the challenge duration 244 from the challenge terms/request data table 231. The host server processor 115 stores the challenge name 232, the challenge start date 233, the challenge start time 234, and the challenge duration 244 in the real time challenge data table for a first team 290 in the host server memory 117.

[0129] Further describing the operation, the host server processor 115 calculates the first team first cognitive parameter 305. The first team first cognitive parameter 305 is the summation of first cognitive parameters measured for each user in the first team members data table 342. For example, in one embodiment, the first team members data table 342 includes the first user profile data table 213 and the second user profile data table 226. The host server processor 115 retrieves the first user first cognitive parameter 246 from the host server memory 117. The host server processor 115 retrieves the second user first cognitive parameter 253 from the host server memory 117. The host server processor 115 summates the first user first cognitive parameter 264 and the second user first cognitive parameter 253 to calculate the first team first cognitive

parameter 305. The host server processor 115 stores the first team first cognitive parameter 305 in the real time challenge data table for a first team 290 in the host server memory 117. This process of calculating and storing first team cognitive parameters is repeated throughout the challenge duration 244 until a first team final cognitive parameter 306 is calculated and stored in the real time challenge data table for a first team 290 in the host server memory 117.

[0130] Further describing the operation, the host server processor calculates the first team first average cognitive parameter 307. The first team first average cognitive parameter 307 is the average of first cognitive parameters measured for each user in the first team members data table 342. For example, in one embodiment, the first team members data table 342 includes the first user profile data table 213 and the second user profile data table 226. The host server processor 115 retrieves the first user first cognitive parameter 246 from the host server memory 117. The host server processor 115 retrieves the second user first cognitive parameter 253 from the host server memory 117. The host server processor 115 calculates the average of the first user first cognitive parameter 264 and the second user first cognitive parameter 253 to generate the first team first average cognitive parameter 307. The host server processor 115 stores the first team first average cognitive parameter 307 in the real time challenge data table for a first team 290 in the host server memory 117. This process of calculating and storing first team average cognitive parameters is repeated throughout the challenge duration 244 until a first team final average cognitive parameter 308 is calculated and stored in the real time challenge data table for a first team 290 in the host server memory 117.

[0131] Further describing the operation, the host server processor calculates the first team first cognitive parameter summation 309. The first team first cognitive parameter summation 309 is the summation of first cognitive parameter summations measured for each user in the first team members data table 342. For example, in one embodiment, the first team members data table 342 includes the first user profile data table 213 and the second user profile data table 226. The host server processor 115 retrieves the first user first cognitive parameter summation 249 from the host server memory 117. The host server processor 115 retrieves the second user first cognitive parameter summation 256 from the host server memory 117. The host server processor 115 summates the first user first cognitive parameter summation 249 and the second user first cognitive parameter summation 256 to calculate the first team first cognitive parameter summation 309. The host server processor 115 stores the first team first cognitive parameter summation 309 in the real time challenge data table for a first team 290 in the host server memory 117. This process of calculating and storing first team cognitive parameter summations is repeated throughout the challenge duration 244 until a first team final cognitive parameter summation 310 is calculated and stored in the real time challenge data table for a first team 290 in the host server memory 117.

[0132] Further describing the operation, the host server processor calculates the first team first average cognitive parameter summation 311. The first team first average cognitive parameter summation 311 is the average of first cognitive parameter summations measured for each user in the first team members data table 342. For example, in one embodiment, the first team members data table 342 includes the first user profile data table 213 and the second user profile data table 226. The host server processor 115 retrieves the first user first cognitive

parameter summation 249 from the host server memory 117. The host server processor 115 retrieves the second user first cognitive parameter summation 256 from the host server memory 117. The host server processor 115 calculates the average of the first user first cognitive parameter summation 249 and the second user first cognitive parameter summation 256 to generate the first team first average cognitive parameter summation 311. The host server processor 115 stores the first team first average cognitive parameter summation 311 in the real time challenge data table for a first team 290 in the host server memory 117. This process of calculating and storing first team average cognitive parameter summations is repeated throughout the challenge duration 244 until a first team final average cognitive parameter summation 312 is calculated and stored in the real time challenge data table for a first team 290 in the host server memory 117.

[0133] Figure 3B further illustrates the components of a real time challenge data table for a second team 291. The fields in the real time challenge data table for a second team 291 are analogous to the real time challenge data table for a first team 290 (as described in paragraphs {0127] - [0132]).

[0134] Figure 3C illustrates the components of the combined real time challenge data table for a first and second team 292 according to an embodiment of the present invention. The combined real time challenge data table for a first and second team 292 includes the following fields: a first combined team summation 325, subsequent combined team summations until a final combined team summation 326, a first combined team average summation 327, subsequent combined team average summations until a final combined team average summation 328, a first

team first percentage 329, subsequent first team percentages until a first team final percentage 330, a second team first percentage 331, subsequent second team percentages until a second team final percentage 332, a first team first average percentage 333, subsequent first team average percentages until a first team final average percentage 334, a second team first average percentage 335, subsequent second team average percentages until a second team final average percentage 336.

[0135] In operation, the host server processor 115 calculates the first combined team summation 325. The first combined team summation 325 is the summation of the first team first cognitive parameter summation 309 and the second team first cognitive parameter summation 321. The host server processor 115 calculates the first team first cognitive parameter summation 309 as illustrated in figure 3B. The host server processor 115 calculates the second team first cognitive parameter summation 321 as illustrated in figure 3B The host server processor summates the first team first cognitive parameter summation 309 and the second team first cognitive parameter summation 321 to calculate the first combined team summation 325. The host server processor 115 stores the first combined team summation 325 in the real time challenge data table for a first and second team 292 in the host server memory 117. This process of calculating and storing the combined team summations is repeated throughout the challenge duration 244 until a final combined team summation 326 is calculated and stored in the combined real time challenge data table for a first and second team 292 in the host server memory 117.

[0136] Further describing the operation, the host server processor 115 calculates the first combined team average summation 327. The first combined team average summation 327 is the summation of the first team first average cognitive parameter summation 311 and the second team first cognitive parameter summation 323. The host server processor 115 calculates the first team first average cognitive parameter summation 311 as illustrated in figure 3B. The host server processor 115 calculates the second team first average cognitive parameter summation 323 as illustrated in figure 3B. The host server processor summates the first team first average cognitive parameter summation 311 and the second team first average cognitive parameter summation 323 to calculate the first combined team average summation 327. The host server processor 115 stores the first combined team average summation 327 in the real time challenge data table for a first and second team 292 in the host server memory 117. This process of calculating and storing the combined team average summations is repeated throughout the challenge duration 244 until a final combined team average summation 328 is calculated and stored in the combined real time challenge data table for a first and second team 292 in the host server memory 117.

[0137] Further describing the operation, the host server processor 115 calculates the first team first percentage 329. The first team first percentage 329 is the percentage of the first combined team summation 325 that is contributed from the first team. The host server processor 115 calculates the first team first cognitive parameter summation 309 as illustrated in figure 3B. The host server processor 115 calculates the first combined team summation 325 as illustrated in figure 3B. The host server processor 115 divides the first team first cognitive parameter summation 309 by the first combined team summation 325 and multiplies the resulting fraction by 100 to generate the first team first percentage 329. The host server processor 115 stores the

first team first percentage 329 in the combined real time challenge data table for a first and second team 292 in the host server memory 117. This process of calculating and storing first team percentages is repeated throughout the challenge duration 244 until a first team final percentage 330 is calculated and stored in the combined real time challenge data table for a first and second team 292 in the host server memory 117.

[0138] Further describing the operation, the host server processor 115 calculates the second team first percentage 331. The second team first percentage 331 is the percentage of the first combined team summation 325 that is contributed from the second team. The host server processor 115 calculates the second team first cognitive parameter summation 321 as illustrated in figure 3B. The host server processor 115 calculates the first combined team summation 325 as illustrated in figure 3B. The host server processor 115 divides the second team first cognitive parameter summation 321 by the first combined team summation 325 and multiplies the resulting fraction by 100 to generate the second team first percentage 331. The host server processor 115 stores the second team first percentage 331 in the combined real time challenge data table for a first and second team 292 in the host server memory 117. This process of calculating and storing second team percentages is repeated throughout the challenge duration 244 until a second team final percentage 332 is calculated and stored in the combined real time challenge data table for a first and second team 292 in the host server memory 117.

[0139] Further describing the operation, the host server processor 115 calculates the first team first average percentage 333. The first team first average percentage 333 is the percentage of the first combined team average summation 327 that is contributed from the first team. The

host server processor 115 calculates the first team first average cognitive parameter summation 311 as illustrated in figure 3B. The host server processor 115 calculates the first combined team average summation 327 as illustrated in figure 3B. The host server processor 115 divides the first team first average cognitive parameter summation 311 by the first combined team average summation 327 and multiplies the resulting fraction by 100 to generate the first team first average percentage 333. The host server processor 115 stores the first team first average percentage 333 in the combined real time challenge data table for a first and second team 292 in the host server memory 117. This process of calculating and storing first team average percentages is repeated throughout the challenge duration 244 until a first team final average percentage 334 is calculated and stored in the combined real time challenge data table for a first and second team 292 in the host server memory 117.

[0140] Further describing the operation, the host server processor 115 calculates the second team first average percentage 335. The second team first average percentage 335 is the percentage of the first combined team average summation 327 that is contributed from the second team. The host server processor 115 calculates the second team first average cognitive parameter summation 323 as illustrated in figure 3B. The host server processor 115 calculates the first combined team average summation 327 as illustrated in figure 3B. The host server processor 115 divides the second team first average cognitive parameter summation 323 by the first combined team average summation 327 and multiplies the resulting fraction by 100 to generate the second team first average percentage 335. The host server processor 115 stores the second team first average percentage 335 in the combined real time challenge data table for a first and second team 292 in the host server memory 117. This process of calculating and storing

second team average percentages is repeated throughout the challenge duration 244 until a second team final average percentage 336 is calculated and stored in the combined real time challenge data table for a first and second team 292 in the host server memory 117.

[0141] Further describing the operation, the host server processor 115 transmits select fields to the user interfaces of users listed in the challenge participants data table 241 and viewers of public challenges for real time display. In one embodiment where the type of score 343 is "highest total score", the host server processor 115 retrieves the first team first cognitive parameter summation 309 from the real time challenge data table for a first team 290. The host server processor 115 retrieves the second team first cognitive parameter summation 321 from the real time challenge data table for a second team 291. The host server processor 115 retrieves the first combined team summation 325, the first team first percentage 329, and the second team first percentage 329 from the combined real time challenge data table for a first and second team 292. The host server processor transmits the first team first cognitive parameter summation 309, the second team first cognitive parameter summation 321, the first combined team summation 325, the first team first percentage 329, and the second team first percentage 329 to the graphical processors of the smart phone devices of users in the challenge participants data table 241 and viewers of public challenges to generate computer graphic images in the same manner as illustrated in figure 7.

[0142] Figure 4A illustrates the components of the announcements data table 400 according to an embodiment of the present invention. The announcements data table 400

includes the following fields: an announcement date 402, an announcement time 403, and an announcement 404.

[0143] In operation, the host server processor 115 automatically generates the announcement 404 following the creation of a public challenge (further illustrated in figure 9)

[0144] In the preferred embodiment, the announcement 404 is in alphanumeric string format. The announcement date 402 is in a format which includes a month, followed by a day, followed by a year, or "mm/dd/yyyy". The announcement time is in 403 is in a format which includes an hour, followed by minutes, or "hh:mm" (further illustrated in figure 11).

[0145] Figure 4B illustrates the components of the messages data table 401 according to an embodiment of the present invention. The messages data table 401 includes the following fields: a sender username 406, a recipient username 407, a message date 408, a message time 409, a message 410.

[0146] In operation, the host server processor 115 retrieves the sender username 406, recipient username 407, and message 410 from a user interface. For example, a first user desires to message a second user. In such case, the sender username 406 is the first username 202. The recipient username 407 is the second username 203. The host server processor 115 retrieves the message 410 from the first user interface 113. In particular, the first smart phone device processor 108 retrieves the sender username 406, recipient username 407, and message 410 from the first user interface 113. The first smart phone internal clock 110 generates a signal, or time

pulse, that corresponds with the message 410. The first smart phone device transceiver 107 retrieves the sender username 406, recipient username 407, message 410, and time pulse from the first smart phone device processor 108. The first smart phone device transceiver 107 transmits the sender username 406, recipient username 407, message 410, and time pulse to the host server transceiver 118 through a network connection 135. The host server processor 115 retrieves the sender username 406, recipient username 407, message 410, and time pulse from the host server transceiver 118. The host server internal clock 116 retrieves the time pulse and generates the message date 408 and the message time 409. The host server processor 115 stores the sender username 406, recipient username 407, message 410, message date 408, and message time 409 in the messages data table 401 in the host server memory 117.

[0147] Further describing the operation, the host server processor 115 transmits a signal, or notification, to the user interface associated with the recipient username 407, in this case, the second user interface 133. Upon request from the second user interface 133, the host server processor transmits the sender username 406, recipient username 407, message 410, message date 408, and message time 409 to the second smart phone device transceiver 127 through a network connection 135. The second smart phone device transceiver 127 transmits the sender username 406, recipient username 407, message 410, message date 408, and message time 409 to the second user interface 133.

[0148] In the preferred embodiment, the sender username 406, recipient username 407, and the message 410 are in alphanumeric string format. The message date 408 is in a format

which includes a month, followed by a day, followed by a year, or "mm/dd/yyyy". The message time 409 is in a format which includes an hour, followed by minutes, or "hh:mm".

[0149] Figure 5 illustrates the components of the challenge history data table for a first user 500 according to an embodiment of the present invention. The challenge history data table 500 includes the following fields: a first user total number of challenges 501, a first user challenge outcome ratio 502, a first user challenge terms summary data table of the previous 10 challenges 504, a first user average cognitive parameter summation for the previous 10 challenges 504, a first user challenge terms summary table for all challenges 505, a first user average cognitive parameter summation for all challenges 506.

[0150] The first user total number of challenges 501 is the total number of challenges the first user has participated in since the first user account creation date 220. The first user total number of challenges 501 is equal to the number of real time challenge data tables for the first user generated and stored in the host server memory 117. In operation, the host server processor 115 retrieves every real time challenge data table for the first user from the host server memory 117 and determines the total number of data tables. The host server processor 115 generates the first user total number of challenges 501 equal to the total number of real time challenge data tables for the first user. The host server processor 115 stores the first user total number of challenges 501 in the challenge history data table for a first user 500 in the host server memory 117. The host server processor 115 updates the first user total number of challenges 501 following the conclusion of each subsequent challenge.

[0151] The first user challenge outcome ratio 502 indicates the number of challenges in which the first user had the greater final cognitive parameter summation. In operation, the host server processor 115 retrieves the challenge outcome 287 from every challenge outcomes data table 286 that has the first user listed in the challenge participants data table 241. The host server processor 115 summates the number of times the first user is listed in the challenge outcome 287 field and generates the first user challenge outcome ratio 502. In the preferred embodiment, the first user challenge outcome ratio 502 is in the form of a fraction.

[0152] The first user challenge terms summary data table of the previous 10 challenges 504 includes the 10 most recent challenge outcomes data tables 286 in which the challenge participants data table 241 includes the first user. Likewise, the first user challenge terms summary table for all challenges 505 includes every challenge outcomes data table 286 since the first user account creation date 220 in which the challenge participants data table 241 includes the first user.

[0153] The first user average cognitive parameter summation for the previous 10 challenges 504 is the average of the first user final cognitive parameter summation 250 values from the first user's 10 most recent challenges. In operation, the host server processor 115 retrieves the first user final cognitive parameter summation 250 values from the 10 most recent real time challenge data tables for a first user 243 in the host server memory 117. The host server processor 115 calculates the average of the 10 most recent first user final cognitive parameter summation 250 values to generate the first user average cognitive parameter summation for the previous 10 challenges 504. The host server processor 115 stores the first user average cognitive

parameter summation for the previous 10 challenges 504 in the challenge history data table for a first user 500. The host server processor 115 updates the first user average cognitive parameter summation for the previous 10 challenges 504 following the conclusion of subsequent challenges.

[0154] Likewise, the first user average cognitive parameter summation for all challenges 506 is the average of the first user final cognitive parameter summation 250 values for every challenge the first user has participated in since the first user account creation date 220. In operation, the host server processor 115 retrieves the first user final cognitive parameter summation 250 values from all real time challenge data tables for a first user 243 in the host server memory 117. The host server processor 115 calculates the average of all first user final cognitive parameter summation 250 values to generate the first user average cognitive parameter summation for all challenges 504. The host server processor 115 stores the first user average cognitive parameter summation for all challenges 504 in the challenge history data table for a first user 500. The host server processor 115 updates the first user average cognitive parameter summation for all challenges 504 following the conclusion of subsequent challenges.

[0155] Figure 6 illustrates a flowchart 600 of a process of retrieving challenge terms from a first user interface 113 and transmitting a challenge request to a second user interface 133 according to an embodiment of the present invention. The process shown in flowchart 600 involves steps at the first smart phone device 106, host server 114, second smart phone device 126, and cryptocurrency server 140.

[0156] At the first step 601, the host server processor 115 retrieves the challenge name 232 from the first user interface 113. At the next step 603, the host server processor 115 retrieves the challenge start date 233 from the first user interface 113. At the next step 605, the host server processor 115 retrieves the challenge start time 234 from the first user interface 113. At the next step 607, the host server processor 115 retrieves the time data from the host server internal clock 116 to verify that the challenge start date 233 and challenge start time 234 are in the future. If no 609, then the challenge cannot take place, and the host server processor 115 transmits a signal to the first smart phone device 106 to repeat steps 603 - 607. If yes 611, then the host server processor 115 proceeds to step 613. In step 613, the host server processor retrieves the challenge type 235 from the first user interface 113. At the next step 615, the host server processor determines whether the challenge type 235 requires a challenge wager 239. If no 617, the host server processor 115 proceeds to step 625. If yes 618, the host server processor retrieves the challenge wager 239 from the first user interface 113. At the next step 619, the host server processor 115 determines whether the challenge wager 239 is sufficient. In the preferred embodiment, the challenge wager 239 is between 1/10,000 BTC and 10 BTC. If no 621, then the challenge cannot take place, and the host server processor 115 transmits a signal to the first smart phone device 106 to repeat steps 615 - 619. If yes 623, the host server processor 115 proceeds to step 625. At the next step 625, the host server processor 115 retrieves a challenge duration 244 from the first user interface 113. At the next step 627, the host server processor 115 determines whether the challenge duration 244 is sufficient. In the preferred embodiment, the challenge duration 244 is between 10-10,000 seconds. If no 629, the challenge cannot take place, and the host server processor 115 transmits a signal to the first smart phone device 106 to repeat steps 625-627. If yes 631, then the host server processor 115 proceeds to step 633. At the next step

633, the host server processor retrieves the challenge privacy 236 from the first user interface 113. At the next step 635, the host server processor determines whether the challenge privacy 236 requires a challenge admission fee 237 and challenge admission fee split 238. If no 637, the host server processor 115 proceeds to step 647. If yes 638, the host server processor retrieves the challenge admission fee 237 from the first user interface 113. At the next step 639, the host server processor retrieves the challenge admission fee split 238 from the first user interface 113. In the preferred embodiment, the challenge admission fee split 238 is a percentage between 1-99%, with the default challenge admission fee split 238 as 50%. At the next step 641, the host server processor 115 determines whether the challenge admission fee 237 is sufficient. In the preferred embodiment, the minimum challenge admission fee 237 is $1. If no 643, the host server processor 115 transmits a signal to the first smart phone device 106 to repeat steps 633-641. If yes 645, the host server processor 115 proceeds to step 647. At the next step 647, the server processor 115 retrieves a team challenge field 240 from the first user interface 113. At the next step 649, the host server processor 115 determines whether the team challenge field 240 requires additional terms. If no 651, then the challenge is between individual users, and the host server processor 115 proceeds to step 669. If yes 653, the host server processor 115 proceeds to step 655 to retrieve additional challenge terms. At step 655, the host server processor 115 retrieves a first team name 340 from the first user interface 113. At step 657, the host server processor 115 retrieves a number of users in the first team 341 from the first user interface 113. At step 659, the host server processor 115 determines whether the number of users in the first team 341 is sufficient. In the preferred embodiment, the number of users in the first team is between 1 and 99 users. If yes 661, the host server processor 115 proceeds to step 665. If no 663, the host server processor 115 transmits a signal to the first smart phone device 106 to repeat

steps 657-659. At step 665, the host server processor 115 retrieves the first team members data table 342 from the first user interface 113. At the next step 667, the host server processor 115 retrieves the type of score 343 from the first user interface 113. At the next step 669, the host server processor 115 transmits the challenge terms from the first user interface 113 to the second user interface 133. At the next step 671, the host server processor 115 retrieves a second team name 344 from the second user interface 133. At the next step 673, the host server processor 115 retrieves a number of users in the second team 345 from the second user interface 133. At step 675, the host server processor 115 determines whether the number of users in the second team 345 is sufficient. In the preferred embodiment, the number of users in the second team is between 1 and 99 users. If yes 677, the host server processor 115 proceeds to step 681. If no 679, the host server processor 115 transmits a signal to the second smart phone device 126 to repeat steps 673-675. At step 681, the host server processor 115 retrieves a second team members data table 346 from the second user interface 133. At the next step 683, the host server processor 115 retrieves a challenge status 242 from the second user interface 133. At the next step 685, the host server processor 115 determines whether the challenge status 242 is "accepted" and permitted to proceed. If no 687, the challenge status 242 is "rejected" and the challenge cannot take place. If yes 689, the host server processor 115 transmits a signal to the cryptocurrency server 140 to transfer the challenge wager 239 from each user's cryptocurrency wallets to the cryptocurrency holding wallet address 143. At the next step 291, the host server processor 115 transmits a signal to the cryptocurrency gateway 119 to retrieve a confirmation from the cryptocurrency server 140 that the challenge holding wager 147 is successfully transferred to the cryptocurrency holding wallet address 143. If yes 693, then the challenge is permitted to proceed. If no 695, then the challenge cannot take place.

[0157] Further describing step 689, the preferred embodiment provides users with the option to use the private wallet balance 225 towards the challenge wager 239. For example, if the first user prefers to use the private wallet balance towards the challenge wager 239, then the host server processor 115 updates the first user private wallet balance 225 in the first user profile data table 213. The host server processor 115 subtracts the challenge wager 239 amount from the existing first user private wallet balance 225. In this case, the host server processor 115 *does not* transmit a signal to the cryptocurrency gateway 119 to transfer the challenge wager 239 from the first user cryptocurrency wallet address 222 to the cryptocurrency holding wallet address 143.

[0158] In the preferred embodiment, users are provided with the option to revoke the challenge at any time before the challenge start date 233 and challenge start time 234. Revoking a challenge occurs when the users no longer wish to engage in a challenge where the challenge terms have already been set and agreed upon. In operation, the host server processor 115 receives a request to revoke a challenge from a user interface. The host server processor 115 retrieves the challenge terms/request data table 231 from the host server memory 117 and updates the challenge status 242 as "revoked".

[0159] In one embodiment, the challenge is revokable up until one hour prior to the challenge start date 233 and challenge start time 234. When the host server processor 115 receives a request from a user interface to revoke the challenge, the host server processor 115 retrieves the time data from the host server internal clock 116 and verifies that the challenge start date 233 and challenge start time 234 are more than one hour from the time data.

[0160] In an alternate embodiment, the challenge wager 239 need not be restricted to a range of 1/10,000 - 10 BTC.

[0161] In an alternate embodiment, the challenge duration 244 need not be restricted to a range of 10 - 10,000 seconds.

[0162] In an alternate embodiment, the challenge admission fee 237 need not be restricted to a minimum of $1.

[0163] Figure 7 illustrates a flowchart 700 of a process of measuring cognitive parameters for a first and second user and displaying corresponding computer graphic images onto a first and second user interface in real time according to an embodiment of the present invention. The process shown in flowchart 700 involves steps at the first measuring device 101, first smart phone device 106, host server 114, second measuring device 121, and second smart phone device 126.

[0164] At the first step 701, the first measuring device plurality of EEG sensors 102 detects electrical signals from the surface of a first user's head. Simultaneously, the second measuring device plurality of EEG sensors 122 detects electrical signals from the surface of a second user's head. At the next step 703, the first measuring device plurality of EEG sensors 102 creates an analog measurement of the electrical signal from the surface of the first user's head. Simultaneously, the second measuring device plurality of EEG sensors 122 creates an analog

measurement of the electrical signal from the surface of the second user's head. At the next step 705, the first ADC 104 converts the analog electrical signal from the surface of the first user's head to a digital electrical signal. Simultaneously, the second ADC 124 converts the analog electrical signal from the surface of the second user's head to a digital electrical signal. At the next step 707, the first measuring device processor 103 calculates a first user first cognitive parameter 246 and transmits the first user first cognitive parameter 246 to the first smart phone device 106. Simultaneously, the second measuring device processor 123 calculates a second user first cognitive parameter 253 and transmits the second user first cognitive parameter 253 to the second smart phone device 126. At the next step 709, the first smart phone device processor 108 retrieves a time pulse from the first smart phone internal clock 110 (as described in figure 2D). Simultaneously, the second smart phone device processor 128 retrieves a time pulse from the second smart phone internal clock 130. At the next step 711, the first smart phone device processor 108 transmits the first user first cognitive parameter 246 and time pulse to the host server processor 115. Simultaneously, the second smart phone device processor 128 transmits the second user first cognitive parameter 253 and time pulse to the host server processor 115. At the next step 713, the host server processor calculates a first user first cognitive parameter summation 249 and a second user first cognitive parameter summation 256. At the next step 715, the host server processor 115 retrieves a first user first time point 245 and a second user first time point 252 from the host server internal clock 116. In the preferred embodiment, the first user first time point 245 and second user first time point 252 are equal. At the next step 717, the host server processor calculates the first combined user summation 259. At the next step 719, the host server processor calculates the first user first percentage 261 and the second user first percentage 262. At the next step 721, the host server processor transmits the first user first cognitive

parameter summation 249, second user first cognitive parameter summation 256, first user first percentage 261, the second user first percentage 262, first user first time point 245, and the second user first time point 252 to the first graphical processor 111 and second graphical processor 131. At the next step 723, the first graphical processor 111 generates a computer graphic image representative of the first user first cognitive parameter summation 249, the second user first cognitive parameter summation 256, the first user first percentage 261, and the second user first percentage 262. Simultaneously, the second graphical processor 131 generates a computer graphic image representative of the first user first cognitive parameter summation 249, the second user first cognitive parameter summation 256, the first user first percentage 261, and the second user first percentage 262. In the preferred embodiment, the first graphical processor 111 and second graphical processor 131 generate the same computer graphic image. At the next step 725, the first graphical processor 111 transmits the computer graphic image to the first user interface 113 for real time display. Simultaneously, the second graphical processor 131 transmits the computer graphic image to the second user interface 133 for real time display. At the next step 727, the host server processor 115 transmits a signal to the first measuring device 101 and the second measuring device 121 to repeat steps 701-725 throughout the challenge duration 224 until the host server processor 115 calculates the first user final cognitive parameter summation 250, the second user final cognitive parameter summation 257, the first user final percentage 263, and the second user final percentage 264.

[0165] In an alternate embodiment, a process of measuring cognitive parameters for a first and second team is analogous to the process of measuring cognitive parameters for a first and second user. In the alternate embodiment, the host server processor 115 retrieves data from

the real time challenge data table for a first team 290, the real time challenge data table for a second team 291, and the combined real time challenge data table for a first and second team 292.

[0166] Figure 8 illustrates a flowchart 800 of a process of concluding a challenge and transferring the challenge wager 239 to a user according to an embodiment of the present invention. The process shown in flowchart 800 involves steps at the host server 114 and the cryptocurrency server 140.

[0167] At the first step 801, the host server processor 115 determines the challenge outcome 287. In the preferred embodiment, the challenge outcome 287 indicates the user with the greatest final cognitive parameter summation (as described in figure 2F). In the next step 803, the host server processor 115 updates the challenge history data tables for the first and second user (as described in figure 5). At the next step 805, the host server processor 115 retrieves the challenge wager 239 from the challenge terms/request data table 231 in the host server memory 117. The host server processor 115 determines if the challenge wager 239 field is populated. If yes 807, then the host server processor 115 updates the first user private wallet balance 225 with the challenge holding wager 147 amount from the cryptocurrency holding wallet address 143. In particular, the host server processor 115 summates the amount of the challenge holding wager 147 to the existing first user private wallet balance 225. At the next step 811, the host server processor 115 updates the subscription balance fields in the first user profile data table 213 and second user profile data table 226 (as described in figure 2B). At the next step 813, the host server processor 115 determines whether the first user interface 113 transmits a

signal to transfer the first user private wallet balance 225 from the cryptocurrency holding wallet address 143 to the first user cryptocurrency wallet address 222 in the cryptocurrency server 140. If yes 815, then the host server processor 115 transmits a signal to the cryptocurrency server 140 to transfer the first user private wallet balance 225 from the cryptocurrency holding wallet address 143 to the first user cryptocurrency wallet address 222. If no 817, then the challenge holding wager 147 remains in the cryptocurrency holding wallet address 143 and the challenge holding wager 147 amount remains reflected in the first user private wallet balance 225. In step 809, the challenge did not require a challenge wager 239, and the host server processor 115 updates the subscription balance fields in the first user profile data table 213 and second user profile data table 226 (as described in figure 2B).

[0168] Further describing step 807, the preferred embodiment includes a processing fee of 4% of the challenge holding wager 147 plus $0.50. The processing fee is retained in the cryptocurrency holding wallet address 143. The difference between the challenge holding wager 147 and processing fee is transferred from the cryptocurrency holding wallet address 143 to the cryptocurrency wallet address of the user with the greatest final cognitive parameter summation.

[0169] Further describing step 817, the challenge holding wager 147 amount remains reflected in the first user private wallet balance 225. The updated private wallet balance 225 is stored in the first user profile data table 213. In the preferred embodiment, users can use the balance reflected in their private wallet balance in subsequent challenges.

[0170] An alternate embodiment includes a team challenge where the cryptocurrency transfers occur between one user on a first team and one user on a second team.

[0171] Figure 9 illustrates a flowchart 900 of a process for generating an announcement for a public challenge and collecting a challenge admission fee 237 according to an embodiment of the present invention. The process shown in flowchart 900 involves steps at the host server 114 and the payment server 144.

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[0172] In the preferred embodiment, the host server processor 115 automatically generates announcements advertising public challenges after the challenge terms/request data table for a public challenge is stored in the host server memory 117.

[0173] At the first step 901, the host server processor 115 retrieves the challenge privacy 236 from the challenge terms/request data table 231 in the host server memory 117. At the next step 903, the host server processor 115 determines that the challenge privacy 236 requires a challenge admission fee 237. In the preferred embodiment, public challenges require a challenge admission fee 237 (as described in figure 2C). At the next step 905, the host server processor 115 retrieves a payment portal for collecting the challenge admission fee 237 from the payment gateway 120. In the preferred embodiment, the payment portal is pre-populated with the challenge admission fee 237 stored in the challenge terms/request data table 231. At the next step 907, the host server processor 115 generates an announcement 404 which includes the payment portal (further illustrated in figure 11). At the next step 909, the host server processor 115 stores the announcement 404 which includes the payment portal in the announcements data table 400 in

the host server memory 117. At the next step 911, the host server processor 115 determines whether there is a request from a user interface to view the announcement 404. If yes 913, the host server processor 115 transmits the announcement 404 from the host server memory 117 to the user interface. If no 914, the host server processor 115 does not transmit the announcement to the user interface. At the next step 915, the host server processor 115 retrieves the user's payment information from the user interface. At the next step 917, the host server processor 115 transmits a signal to the payment server 144 to transfer the challenge admission fee 237 amount from the user's payment wallet address to the payment holding wallet address 146. The host server processor 115 repeats steps 911-917 upon receiving a request from a user interface to view the announcement 404. At the next step 920, the host server processor 115 retrieves the total collected admission fee amount from the payment holding wallet address 146 and stores the amount in the total collected admission fee 288 field in the payment challenge outcomes data table 286 in the host server memory 117. In the preferred embodiment, step 920 occurs at the end of the challenge duration 244. At the next step 921, the host server memory 115 transmits a signal to the payment server 144 to transfer the total collected admission fee 288 to the payment wallets of the users in the challenge participants data field 241 according to the challenge admission fee split 238 (as described in figure 2C).

[0174] Further describing step 921, the preferred embodiment includes a convenience fee of 10% to transfer the total collected admission fee 288 to the payment wallets of the users in the challenge participants data table 241. The convenience fee is retained in the payment holding wallet address 146. The difference between the total collected admission fee 288 and

convenience fee is transferred to the payment wallets of the users in the challenge participants data table 241 according to the challenge admission fee split 238.

[0175] In the preferred embodiment, users are provided with the option to revoke the challenge at any time before the challenge start date 233 and challenge start time 234 (as described in figure 2C). In the case of a revoked challenge, the challenge admission fee 237 is refunded from the payment holding wallet address to the user payment wallet addresses.

[0176] Figure 10A illustrates a user interface presented to the user on the smart phone device upon opening the application on the smart phone device according to an embodiment of the present invention. In the preferred embodiment, figure 10A illustrates a home page, or lobby 1000. The lobby 1000 includes navigation options in the form of touch screen buttons that direct users to additional user interfaces (further described in figures 10B - 12). The navigation options include announcements 1001, make a challenge 1002, open challenges 1003, enter challenge 1004, message 1005, and profile 1006.

[0177] In the present embodiment, the announcements 1001 navigation option directs users to an interface, which includes fields that represent data associate with the announcements data table 400. The make a challenge 1002 navigation option directs users to an interface, which includes fields that represent data associated with the challenge terms/request data table 231. The open challenge 1003 navigation option directs users to an interface, which displays fields that represent data associated with the challenge terms/request data table 231. In the preferred embodiment, the challenge opponent, or second user, receives challenge requests from the first

user in the open challenge 1003 navigation option. The second user then selects the challenge status 242. The enter challenge 1004 navigation option directs users to an interface, which includes a real time display of users' cognitive parameters during a challenge (further described in figure 12). In the preferred embodiment, users participate in or view accepted challenges using the enter challenge 1004 navigation option. The messages 1005 navigation option directs users to an interface, which includes input fields that represent data associated with the messages data table 401. In the preferred embodiment, users transmit private messages in alphanumeric format to other users using the messages 1005 navigation option.

[0178] Figure 10B illustrates a user interface presented to the user on the smart phone device to create a profile 1006 according to an embodiment of the present invention. For a first user, each input field represents data that is associated with the first user profile data table 213. The input fields include a username 1007, a password 1008, a first name 1009, a last name 1010, a date of birth 1011, a sex 1012, a mobile phone number 1013, a cryptocurrency wallet address 1014, a subscription 1015, and a measuring device ID number 1017.

[0179] In operation, the host server processor 115 retrieves the username 1007, the password 1008, the first name 1009, the last name 1010, the date of birth 1011, the sex 1012, the mobile phone number 1013, the cryptocurrency wallet address 1014, the subscription 1015, and the measuring device ID number 1017 from the profile 1006 on the first user interface 113. The host server processor 115 stores the input fields from the profile 1006 as the first username 202, the first encrypted password 214, the first user first name 215, the first user last name 216, the first user date of birth 217, the first user sex 218, the first user mobile phone number 219, the

cryptocurrency wallet address 222, the first user subscription 212, and the first user measuring device identification number 221 in the first user profile data table 213 in the host server memory 117.

[0180] Figure 10C illustrates a user interface presented to the user on the smart phone device after the profile 1006 is created according to an embodiment of the present invention. For a first user, each field represents data that is associated with the first user profile data table 213 and the challenge history data table for a first user 500. The fields include a username 1007, a first name 1009, a last name 1010, an account creation date 1016, a measuring device ID number 1017, a cryptocurrency wallet address 1014, a subscription balance 1018, a private wallet balance 1019, and a challenge history 1020.

[0181] In operation, the host server processor 115 retrieves the first username 202, the, the first user first name 215, the first user last name 216, the first user account creation date 220, the first user measuring device identification number 221, a first user cryptocurrency wallet address 222, the first user subscription balance 224, and the first user private wallet balance 225 from the first user profile data table 213 from the host server memory 117. The host server processor retrieves the challenge history data table for a first user 500 from the host server memory 117. The host server processor 115 transmits the first username 202, the, the first user first name 215, the first user last name 216, the first user account creation date 220, the first user measuring device identification number 221, a first user cryptocurrency wallet address 222, the first user subscription balance 224, and the challenge history data table for a first user 500 to the first graphical processor 111. The first graphical processor 111 generates the username 1007, the

first name 1009, the last name 1010, the account creation date 1016, the measuring device ID number 1017, the cryptocurrency wallet address 1014, the subscription balance 1018, the private wallet balance 1019, and the challenge history 1020 for transmit to the first user interface 113.

[0182] In the present embodiment, the challenge history 1020 is a navigation option in the form of a touch screen button that directs users to an interface, which includes fields that represent data associated with the challenge history data table for a first user 500.

[0183] Figure 10D illustrates a user interface presented to the user on the smart phone device to send challenge terms and request a challenge to an opponent according to an embodiment of the present invention. In the preferred embodiment, figure 10D illustrates a make a challenge 1002 user interface. Each input field represents data that is associated with the challenge terms/request data table 231. The input fields include a challenge name 1021, a challenge opponent 1022, a challenge start date 1023, a challenge start time 1024, a challenge type 1025, a challenge privacy 1026, a challenge admission fee 1027, a challenge admission fee split 1028, a challenge duration 1029, a challenge wager 1030, a team challenge field 1031, and a challenge status 1032. The challenge status 1032 input remains inoperable until the second user accepts the challenge (described in the next paragraph). Once the second user accepts the challenge, the first and second user are able to revoke the challenge by selecting "revoke" from the challenge status 1032 input prior to the challenge start date 233 and challenge start time 233 (as described in figure 2C).

- Must include ability TO REVOKE Before acceptance by 2nd user

[0184] In operation, the host server processor 115 retrieves the challenge name 1021, the challenge opponent 1022, the challenge start date 1023, the challenge start time 1024, the challenge type 1025, the challenge privacy 1026, the challenge admission fee 1027, the challenge admission fee split 1028, the challenge duration 1029, the challenge wager 1030, and the team challenge field 1031 from the first user interface 113. The host server processor 115 store the input fields as the challenge name 232, the challenge participants data table 241, the challenge start date 233, a challenge start time 234, the challenge type 235, the challenge privacy 236, the challenge admissions fee 237, the challenge admission fee split 238, the challenge duration 244, the challenge wager 239, and the team challenge field 240 respectively in the challenge terms/request data table 231 in the host server memory 117.

[0185] Additionally, the host server processor 115 retrieves and transmits the make a challenge 1002 interface from the first user interface 113 to the second graphical processor 131. The second graphical processor 131 updates the make a challenge 1002 interface by generating an input field for the challenge status 1032. The second graphical processor transmits the updated make a challenge 1002 interface to the open challenges 1003 interface on the second user interface 133. The second user inputs the challenge status 1032, which is then retrieved by the host server processor 115 and stored as the challenge status 242.

[0186] Figure 11 illustrates a user interface presented to the user on the smart phone device upon request to view an announcement according to an embodiment of the present invention. The announcements 1001 page includes fields that represent data associated with the announcements data table. The fields include an announcement 1101, an announcement date

1102, an announcement time 1103, and a payment portal 1104. In the preferred embodiment, the announcement 1101 is in alphanumeric format. The announcement date 1102 is in a format that includes a month, followed by a day, followed by a year, or "mm/dd/yyyy" format. The announcement time 1103 is in a format that includes an hour, followed by minutes, or "hh:mm" format, followed by "AM" or "PM". The payment portal 1104 further includes input fields for the user to input payment information.

[0187] In operation, the first user requests to view the announcements by selecting the announcements 1001 navigation option from the lobby 1000. The host server processor retrieves the announcements data table 400 from the host server memory 117. The host server processor transmits the announcements data table 400 to the first graphical processor 111. The first graphical processor 111 generates the fields on the announcements 1001 page as they correspond with the fields in the announcements data table 400. In the present embodiment, the fields in the announcements data table 400 are displayed in the same format (as described in figure 4A). Additionally, the first graphical processor 111 generates a computer graphic image including the input fields of a payment portal from the payment server 114. The first graphical processor 111 transmits the announcement 1101, the announcement date 1102, announcement time 1103, and payment portal 1104 to the first user interface 113.

[0188] Figure 12 illustrates a user interface presented to the user on the smart phone device for real time display of the challenge participants' cognitive parameters throughout the challenge duration 244. The real time display includes computer graphic images generated from the smart phone device graphical processors. In the preferred embodiment, figure 12 illustrates

the enter challenge 1004 page. The computer graphic images represent data that is associated with the real time challenge data table for a first user 243, the real time challenge data table for a second user 251, and a combined real time challenge data table for a first and second user 258. The computer graphic images of the real time display include a first user total score 1201, a second user total score 1202, a first user graphic 1203, a second user graphic 1204, a first user percentage 1205, a second user percentage 1206, and a bar display 1207.

[0189] In operation, the host server processor 115 retrieves the first user first cognitive parameter summation 249 from the real time challenge data table for a first user 243. The host server processor 115 transmits the first user first cognitive parameter summation 249 to the first graphical processor 111 to generate the first user total score 1201. In the same manner, the host server processor 115 retrieves and transmits the second user first cognitive parameter summation 256, the first user first percentage 261, and the second user first percentage 262 to the first graphical processor 111. The first graphical processor 111 generates a second user total score 1202, the first user percentage 1205, and the second user percentage 1206. In the present embodiment, the first user total score 1201, the second user total score 1202, the first user percentage 1205, and the second user percentage 1206 are displayed as integer numeric values.

[0190] Additionally, the first graphical processor 111 generates the first user graphic 1203 and the second user graphic 1204, which remains on the first user interface 113 throughout the challenge duration 244. Furthermore, the first graphical processor 111 generates a bar display 1207 that illustrates the quantities of the first user percentage 1205 and the second user percentage 1206 relative to each other. This bar display 1207 is newly generated for each

subsequent first user percentage and second user percentage throughout the challenge duration 244. The process of generating computer graphic images of the users' cognitive parameters for real time display is further illustrated and described in figure 7.

[0192] In an alternate embodiment, the real time display graphic need not be limited to a bar display.

Need Boilplate #P

CLAIMS

1. A system comprising:

a first measuring device comprising a plurality of electroencephalogram (EEG) sensors that detects an electrical signal from the surface of a first user's head,

wherein said first measuring device converts the said electrical signal to digital cognitive parameter measurements; and

a second measuring device comprising a plurality of electroencephalogram (EEG) sensors that detects an electrical signal from the surface of a second user's head,

wherein said second measuring device converts the said electrical signal to digital cognitive parameter measurements; and

a first smart phone device ~~comprising a transceiver~~ that receives ~~an input of~~ said cognitive parameter measurements from said first measuring device; and

a second smart phone device ~~comprising a transceiver~~ that receives ~~an input of~~ said cognitive parameter measurements from the said second measuring device; and

a host server comprising ~~a transceiver~~ that receives ~~a first input of~~ said cognitive parameter measurements from ~~the~~ said first smart phone device and ~~a second input of~~ said cognitive parameter measurements from the said second smart phone device,

wherein the said first and second inputs are received at the same time,

wherein said first and second inputs are received in 0.5 second intervals throughout a finite duration in seconds,

wherein said host server further comprises a processor that performs calculations on said first and second inputs according to instructions from said first and second users,

wherein said instructions are received from user interfaces on said first and second smart phone devices,

wherein said host server further comprises a memory that stores said cognitive parameter measurements and said performed calculations on said cognitive parameter measurements,

wherein said transceiver transmits data from said memory to a smart phone device that generates computer graphic images representative of said data for real time display on a user interface of said smart phone device; and

a cryptocurrency server that is in communication with ~~a cryptocurrency gateway on~~ said host server, wherein said cryptocurrency gateway transmits a signal from said processor to process the transfer of cryptocurrency among user cryptocurrency wallet addresses,

wherein said transfer occurs upon a triggering event.

2. The system of claim 1, wherein said host server receives additional inputs of cognitive parameter measurements from additional smart phone devices,

wherein each smart phone device of said additional smart phone devices receives said input of cognitive parameter measurements from a measuring device comprising a plurality of EEG sensors.

3. The system of claim 1, wherein the said first and second inputs are received in 0.1 second intervals throughout a finite duration in seconds.

4. A server apparatus comprising:

a processor, wherein said processor receives a first input of cognitive parameter measurements from a first smart phone device and a second input of cognitive parameter measurements from a second smart phone device,

wherein said first smart phone device received said first input from a first set of electroencephalogram (EEG) sensors and the said second smart phone device received said second input from a second set of EEG sensors,

wherein said processor receives said first and second inputs at the same time,

wherein said processor receives said first and second inputs in 0.5 second intervals throughout a finite duration in seconds,

wherein said processor stores said first and second inputs throughout said finite duration in a server memory,

wherein said processor transmits said first and second inputs from the said server memory to a graphical processor that generates computer graphic images representing said first and second inputs and transmits said computer graphic images for real time display throughout the said finite duration on a smart phone device user interface; and

a cryptocurrency gateway, wherein said cryptocurrency gateway is electronically coupled with said processor and in communication with a cryptocurrency server,

wherein said cryptocurrency gateway transmits a signal from said processor to process the transfer of cryptocurrency among user cryptocurrency wallet addresses,

wherein said transfer occurs upon a triggering event.

5. The apparatus of claim 4, wherein the said processor receives additional inputs of cognitive parameter measurements from additional smart phone devices,

wherein each smart phone device of said additional smart phone devices receives said input of cognitive parameter measurements from a set of EEG sensors.

6. The apparatus of claim 4, wherein the said processor receives the first and second inputs in 0.1 second intervals throughout a finite duration in seconds.

7. A method comprising:

receiving a first input of cognitive parameter measurements from a first user of a plurality of EEG sensors; and

receiving a second input of cognitive parameter measurements from a second user of a plurality of EEG sensors,

wherein the said second input is received at the same time as the said first input,

wherein the said first and second inputs are received in 0.5 second intervals throughout a finite duration in seconds; and

transmitting said cognitive parameter measurements from said first and second inputs to a smart phone device,

wherein said smart phone device generates computer graphic images representing said cognitive parameter measurements from said first and second inputs,

wherein said smart phone device transmits said computer graphic images to a user interface for real time display throughout said finite duration; and

processing a transfer of cryptocurrency among user cryptocurrency wallet addresses on a cryptocurrency server,

wherein said transfer occurs upon a triggering event.

8. The method of claim 7 further comprising additional steps of receiving additional inputs of cognitive parameter measurements from additional smart phone devices,

wherein each smart phone device of said additional smart phone devices receives said input of cognitive parameter measurements from a set of EEG sensors.

9. The method of claim 7, wherein the said first and second inputs are received in 0.1 second intervals throughout a finite duration in seconds.

10. The method of claim 7, wherein the step of processing a transfer of cryptocurrency is replaced by a step of processing an exchange of fiat currency.

ABSTRACT

A [method or system] is provided, which [describe the invention as claimed].

Figure 1A

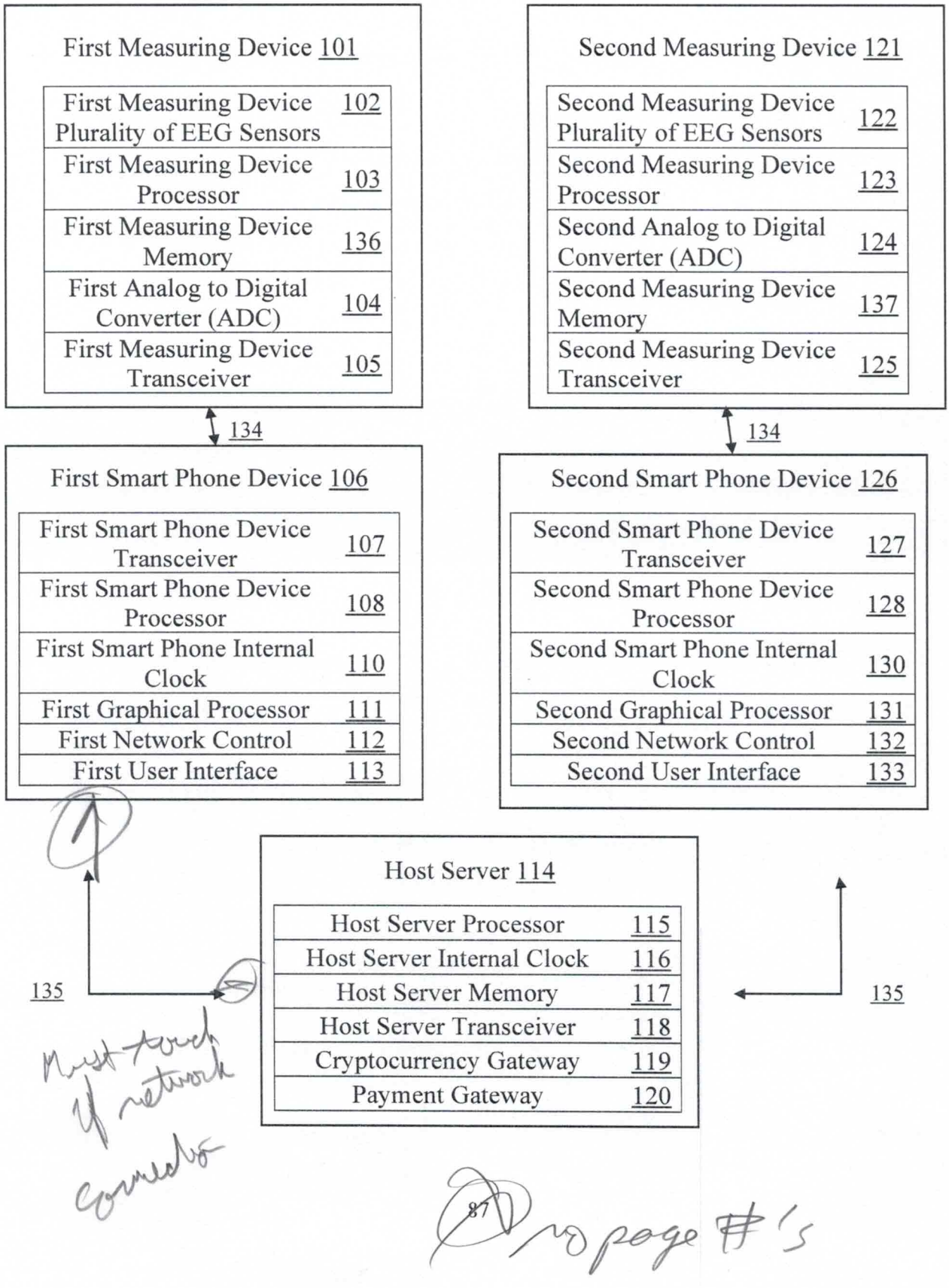

First Measuring Device 101
First Measuring Device Plurality of EEG Sensors 102
First Measuring Device Processor 103
First Measuring Device Memory 136
First Analog to Digital Converter (ADC) 104
First Measuring Device Transceiver 105
Second Measuring Device 121
Second Measuring Device Plurality of EEG Sensors 122
Second Measuring Device Processor 123
Second Analog to Digital Converter (ADC) 124
Second Measuring Device Memory 137
Second Measuring Device Transceiver 125
134
134
First Smart Phone Device 106
First Smart Phone Device Transceiver 107
First Smart Phone Device Processor 108
First Smart Phone Internal Clock 110
First Graphical Processor 111
First Network Control 112
First User Interface 113
Second Smart Phone Device 126
Second Smart Phone Device Transceiver 127
Second Smart Phone Device Processor 128
Second Smart Phone Internal Clock 130
Second Graphical Processor 131
Second Network Control 132
Second User Interface 133
Host Server 114
Host Server Processor 115
Host Server Internal Clock 116
Host Server Memory 117
Host Server Transceiver 118
Cryptocurrency Gateway 119
Payment Gateway 120
135
135

Figure 1B

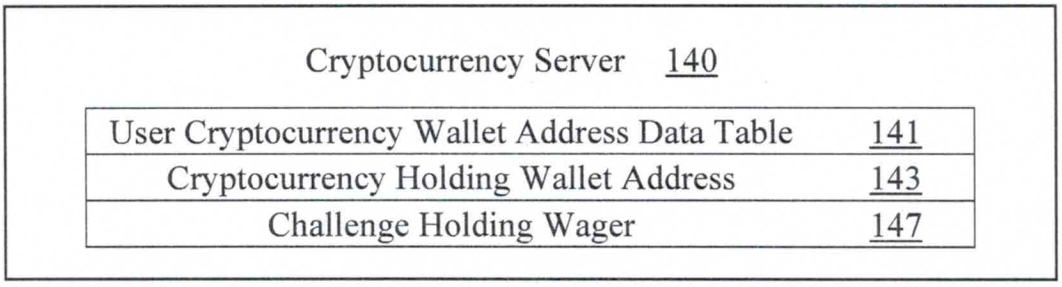


Figure 1C

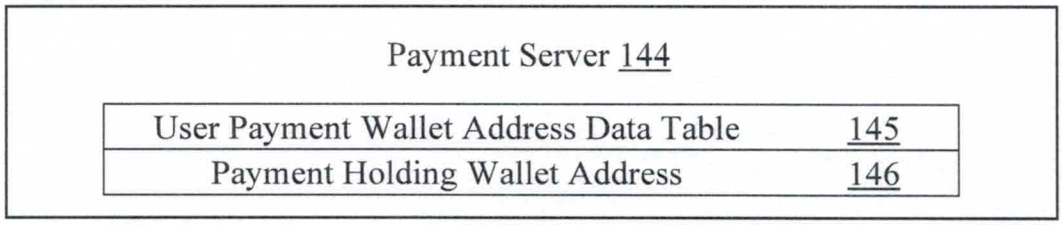


Figure 1D

Host Server Memory 117

User Repository Data Tables	150
First User Profile Table	213
Second User Profile Table	226
First Team Data Table	205
Second Team Data Table	206
Challenge Terms/Request Repository Table	155
Challenge Terms/Request Table	231
Real Time Challenge Repository Data Table	160
Real Time Challenge Data for First User	243
Real Time Challenge Data for Second User	251
Combined Real Time Challenge Data for 1st and 2nd User	258
Real Time Challenge Data for First Team	290
Real Time Challenge Data for Second Team	291
Combined Real Time Challenge Data for 1st and 2nd Teams	292
Challenge Outcomes Repository Data Table	165
Announcements Repository Data Table	170
Announcements Data Table	400
Messages Repository Data Table	175
Messages Data Table	401
Challenge History Repository Data Table	180
Challenge History Data Table for a First User	500

Figure 2A

User Repository Data Table	201
First User Profile Data Table	213
Second User Profile Data Table	226
N-User Profile Data Table	
First Team Profile Data Table	205
Second Team Profile Data Table	206
N-Team Profile Data Table	

Figure 2B

First User Profile Data Table	213
Username-1	202
Encrypted Password	214
First Name	215
Last Name	216
Date of Birth	217
Sex	218
Mobile Phone Number	219
Account Creation Date	220
Measuring Device ID Number	221
Cryptocurrency Wallet Address	222
Subscription	212
Subscription Balance	224
Private Wallet Balance	225

Second User Profile Data Table	226
Username-2	203
Encrypted Password	227
First Name	228
Last Name	229
Date of Birth	230
Sex	265
Mobile Phone Number	266
Account Creation Date	267
Measuring Device ID Number	268
Cryptocurrency Wallet Address	269
Subscription Balance	271
Private Wallet Balance	272

Figure 2C

Challenge Terms/Request Data Table	231
Challenge Name	232
Challenge Start Date	233
Challenge Start Time	234
Challenge Type	235
Challenge Privacy	236
Challenge Admission Fee	237
Challenge Admission Fee Split	238
Challenge Duration	244
Challenge Wager	239
Team Challenge Field	240
Challenge Participants Data Table	241
Challenge Status	242

Figure 2D

Real Time Data Table for a First User	243
Challenge Name	232
Challenge Start Date	233
Challenge Start Time	234
Challenge Duration	244
Username-1 Time Point-1	245
Username-1 Cognitive Parameter-1	246
Username-1 Time Point-n	247
Username-1 Cognitive Parameter-n	248
Username-1 Cognitive Parameter Summation-1	249
Username-1 Cognitive Parameter Summation-n	250

Real Time Data Table for a Second User	251
Challenge Name	232
Challenge Start Date	233
Challenge Start Time	234
Challenge Duration	244
Username-2 Time Point-1	252
Username-2 Cognitive Parameter-1	253
Username-2 Time Point-n	254
Username-2 Cognitive Parameter-n	255
Username-2 Cognitive Parameter Summation-1	256
Username-2 Cognitive Parameter Summation-n	257

Figure 2E

Combined Real Time Data Table For a First and Second User	258
User Total Summation-1	259
User Total Summation-n	260
Username-1 Percentage-1	261
Username-2 Percentage-1	262
Username-1 Percentage-n	263
Username-2 Percentage-n	264

Figure 2F

Challenge Outcomes Data Table	286
Challenge Name	232
Challenge Start Date	233
Challenge Start Time	234
Challenge Duration	244
Challenge Wager	239
Challenge Type	235
Challenge Privacy	236
Team Challenge Field	240
Challenge Participants	241
Challenge Outcome	287
Total Collected Admission Fee	288
Username-1 Cognitive Parameter Summation-n	250
Username-2 Cognitive Parameter Summation-n	257
Team Name-1 Cognitive Parameter Summation-n	310
Team Name-2 Cognitive Parameter Summation-n	322
Team Name-1 Average Cognitive Parameter Summation-n	312
Team Name-2 Average Cognitive Parameter Summation-n	324

Figure 3A

First Team Data Table	205
Team Name-1	340
Number of Users in Team Name-1	341
Team Name-1 Members	342
Type of score	343

Second Team Data Table	206
Team Name-2	344
Number of Users in Team Name-2	345
Team Name-2 Members	346
Type of score	343

Figure 3B

Real Time Challenge Data Table for a First Team	290
Challenge Name	232
Challenge Start Date	233
Challenge Start Time	234
Challenge Duration	244
Team Name-1 Cognitive Parameter-1	305
Team Name-1 Cognitive Parameter-n	306
Team Name-1 Average Cognitive Parameter-1	307
Team Name-1 Average Cognitive Parameter-n	308
Team Name-1 Cognitive Parameter Summation-1	309
Team Name-1 Cognitive Parameter Summation-n	310
Team Name-1 Average Cognitive Parameter Summation-1	311
Team Name-1 Average Cognitive Parameter Summation-n	312

Real Time Challenge Data Table For a Second Team	291
Challenge Name	232
Challenge Start Date	233
Challenge Start Time	234
Challenge Duration	244
Team Name-2 Cognitive Parameter-1	317
Team Name-2 Cognitive Parameter-n	318
Team Name-2 Average Cognitive Parameter-1	319
Team Name-2 Average Cognitive Parameter-n	320
Team Name-2 Cognitive Parameter Summation-1	321
Team Name-2 Cognitive Parameter Summation-n	322
Team Name-2 Average Cognitive Parameter Summation-1	323
Team Name-2 Average Cognitive Parameter Summation-n	324

Figure 3C

Combined Real Time Challenge Data Table For a First and Second Team	292
Combined Team Summation-1	325
Combined Team Summation-n	326
Combined Team Average Summation-1	327
Combined Team Average Summation-n	328
Team Name-1 Percentage-1	329
Team Name-1 Percentage-n	330
Team Name-2 Percentage-1	331
Team Name-2 Percentage-n	332
Team Name-1 Average Percentage-1	333
Team Name-1 Average Percentage-n	334
Team Name-2 Average Percentage-1	335
Team Name-2 Average Percentage-n	336

Figure 4A

Announcements Data Table	400
Announcement Date	402
Announcement Time	403
Announcement	404

Figure 4B

Messages Data Table	401
Sending User Username-1	406
Recipient User Username-2	407
Message Date	408
Message Time	409
Message	410

Figure 5

Challenge History Data Table for a First User	500
Total number of challenges	501
Challenge outcome ratio	502
challenge terms summary table of last 10 challenges	503
Average cognitive parameter summation for last 10 challenges	504
challenge terms summary table of all challenges	505
Average cognitive parameter summation for all challenges	506

Figure 6 (Continued onto next page)

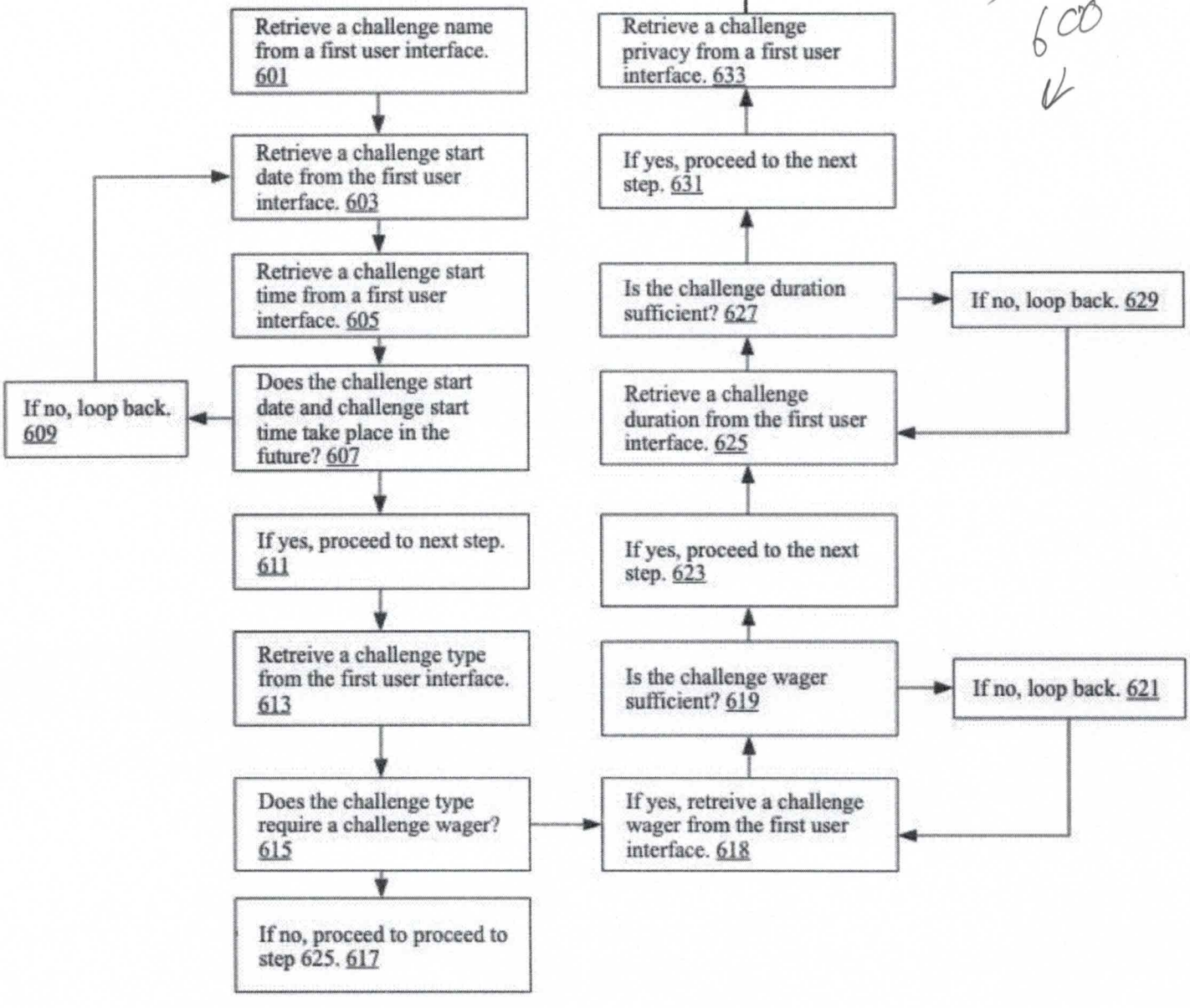


Figure 6 (Continued onto next page)

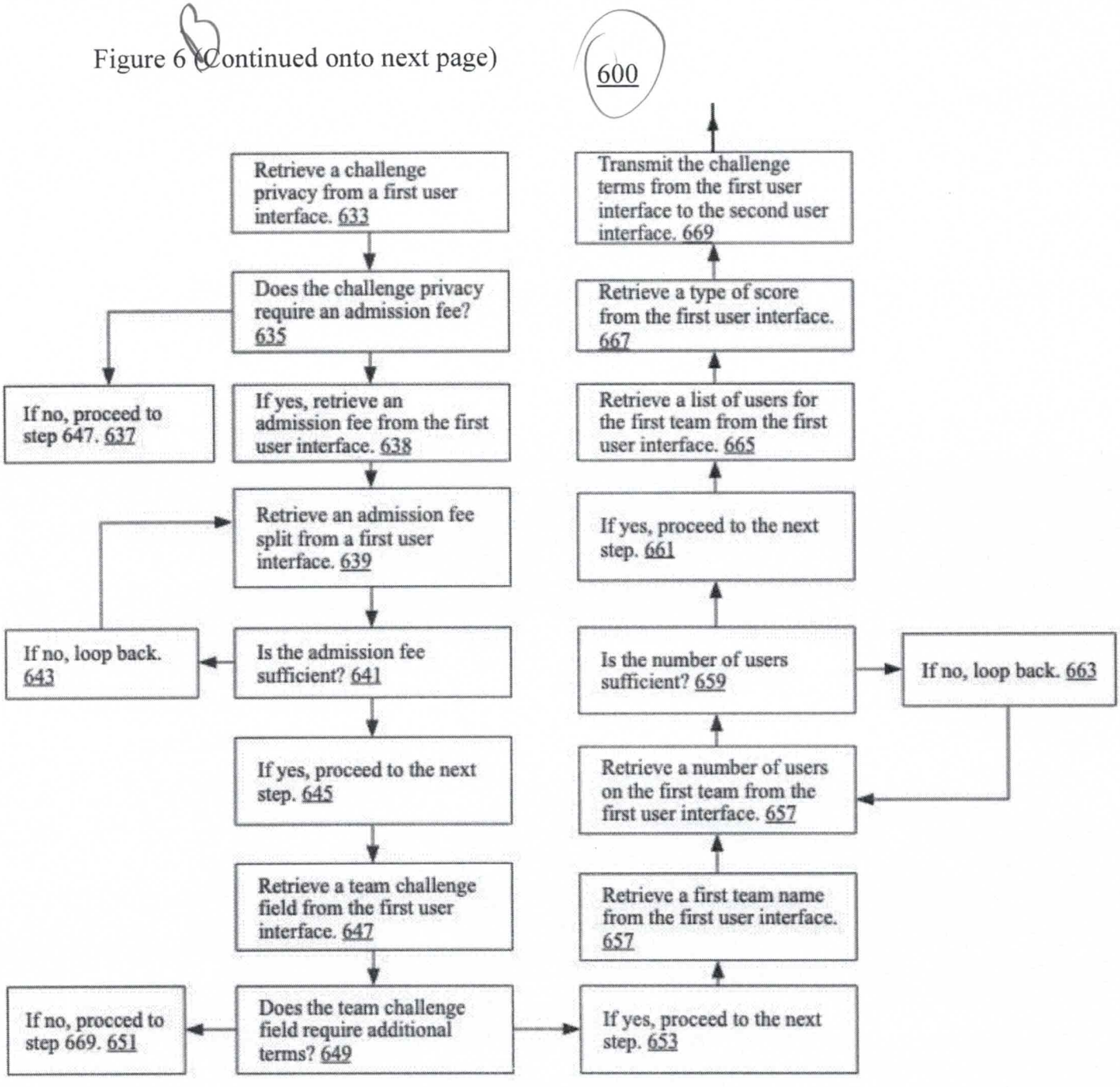


Figure 6 (Continued from previous page)

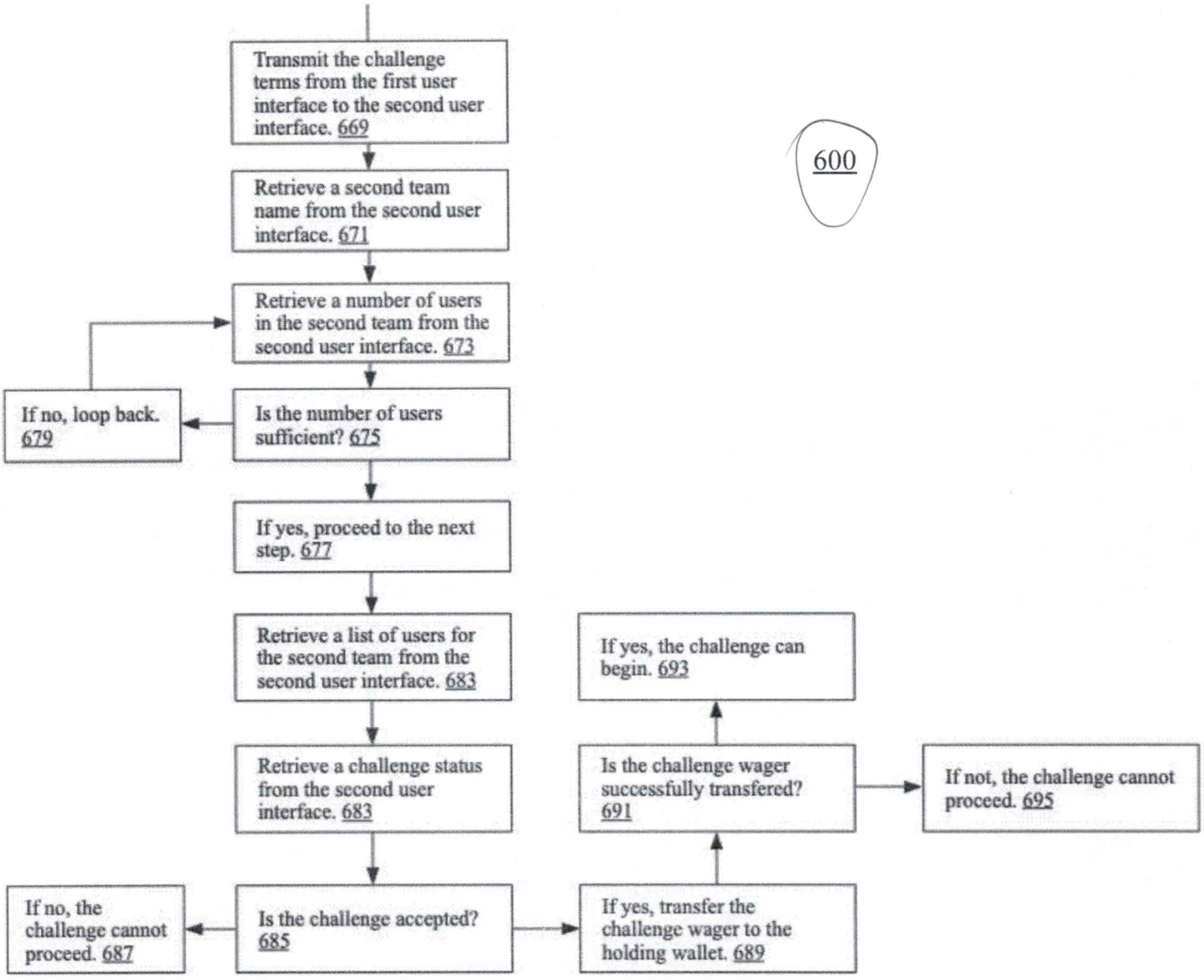


Figure 7

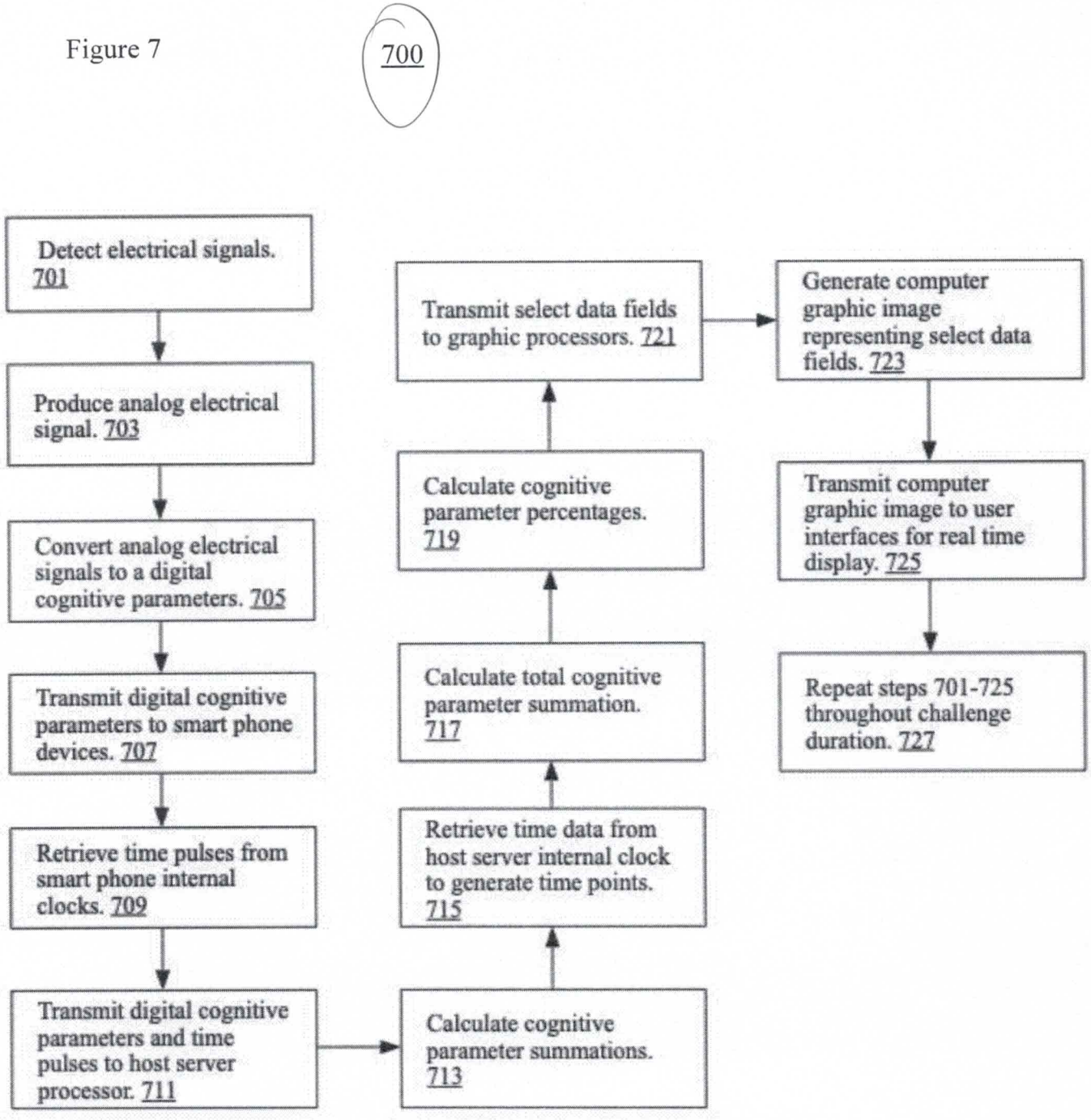

700
Detect electrical signals. 701
Produce analog electrical signal. 703
Convert analog electrical signals to a digital cognitive parameters. 705
Transmit digital cognitive parameters to smart phone devices. 707
Retrieve time pulses from smart phone internal clocks. 709
Transmit digital cognitive parameters and time pulses to host server processor. 711
Calculate cognitive parameter summations. 713
Retrieve time data from host server internal clock to generate time points. 715
Calculate total cognitive parameter summation. 717
Calculate cognitive parameter percentages. 719
Transmit select data fields to graphic processors. 721
Generate computer graphic image representing select data fields. 723
Transmit computer graphic image to user interfaces for real time display. 725
Repeat steps 701-725 throughout challenge duration. 727

Figure 8

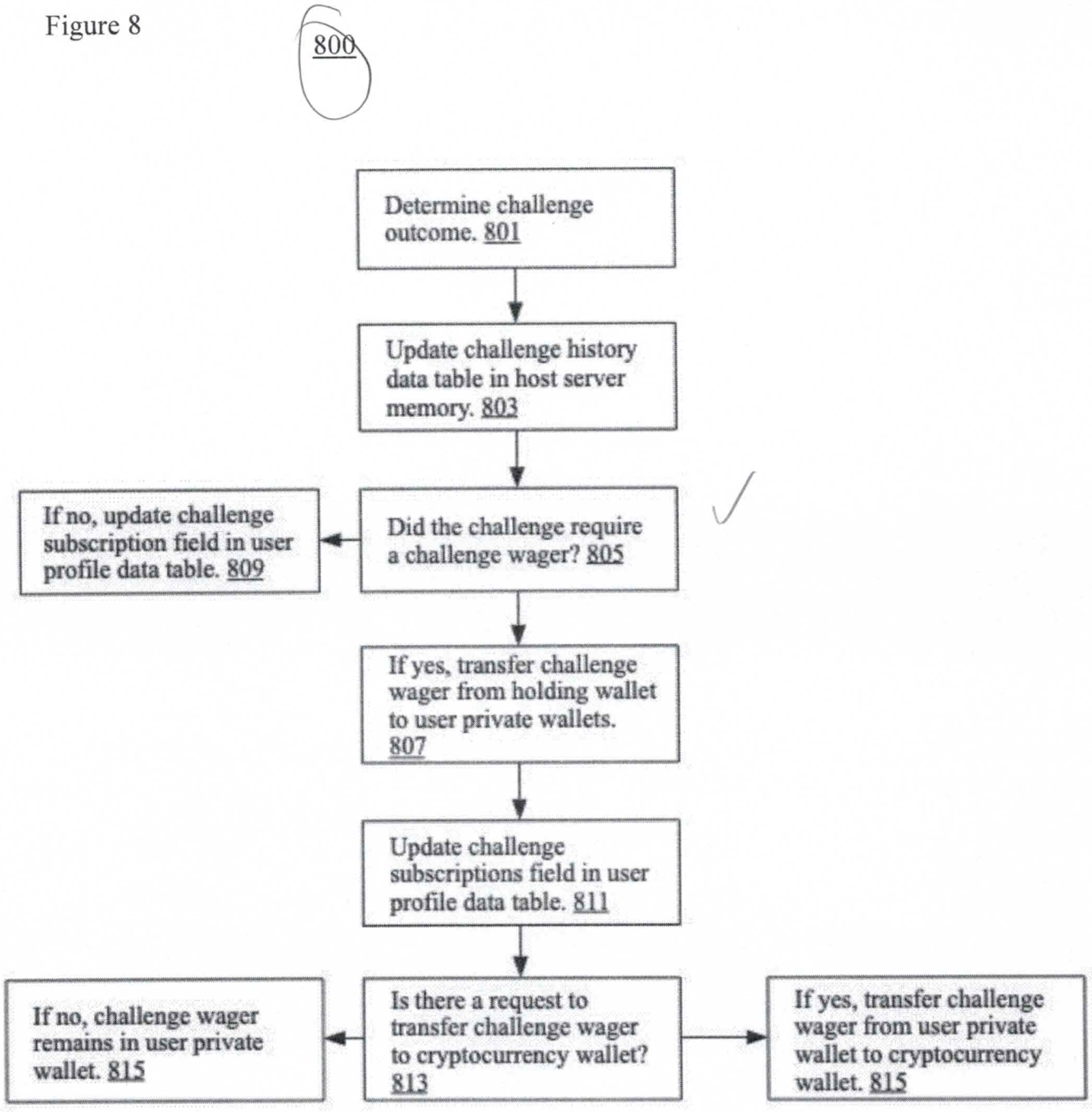

800
Determine challenge outcome. 801
Update challenge history data table in host server memory. 803
Did the challenge require a challenge wager? 805
If no, update challenge subscription field in user profile data table. 809
If yes, transfer challenge wager from holding wallet to user private wallets. 807
Update challenge subscriptions field in user profile data table. 811
Is there a request to transfer challenge wager to cryptocurrency wallet? 813
If no, challenge wager remains in user private wallet. 815
If yes, transfer challenge wager from user private wallet to cryptocurrency wallet. 815

Figure 9

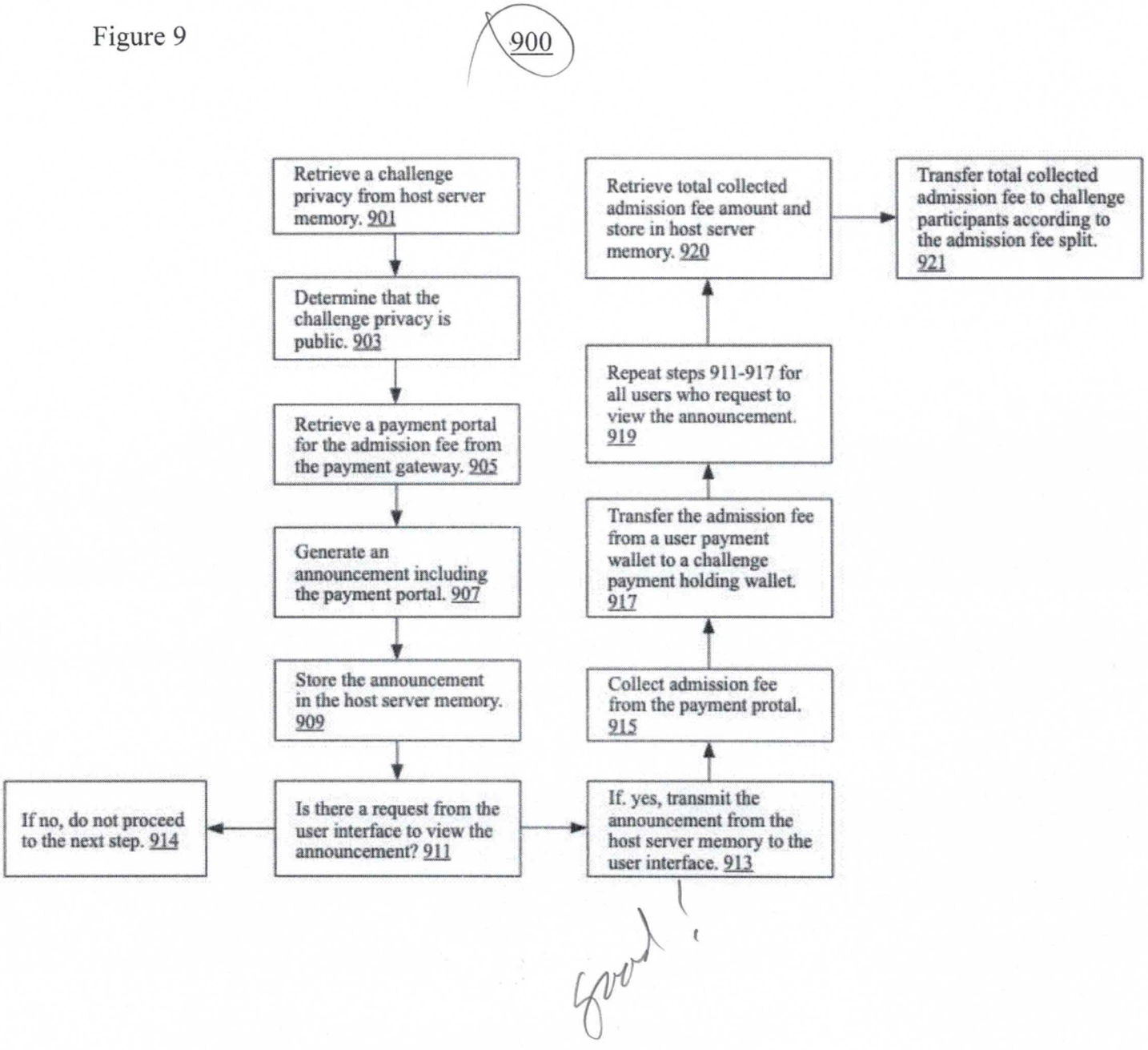

900
Retrieve a challenge privacy from host server memory. 901
Determine that the challenge privacy is public. 903
Retrieve a payment portal for the admission fee from the payment gateway. 905
Generate an announcement including the payment portal. 907
Store the announcement in the host server memory. 909
Is there a request from the user interface to view the announcement? 911
If no, do not proceed to the next step. 914
If. yes, transmit the announcement from the host server memory to the user interface. 913
Collect admission fee from the payment protal. 915
Transfer the admission fee from a user payment wallet to a challenge payment holding wallet. 917
Repeat steps 911-917 for all users who request to view the announcement. 919
Retrieve total collected admission fee amount and store in host server memory. 920
Transfer total collected admission fee to challenge participants according to the admission fee split. 921

Figure 10A

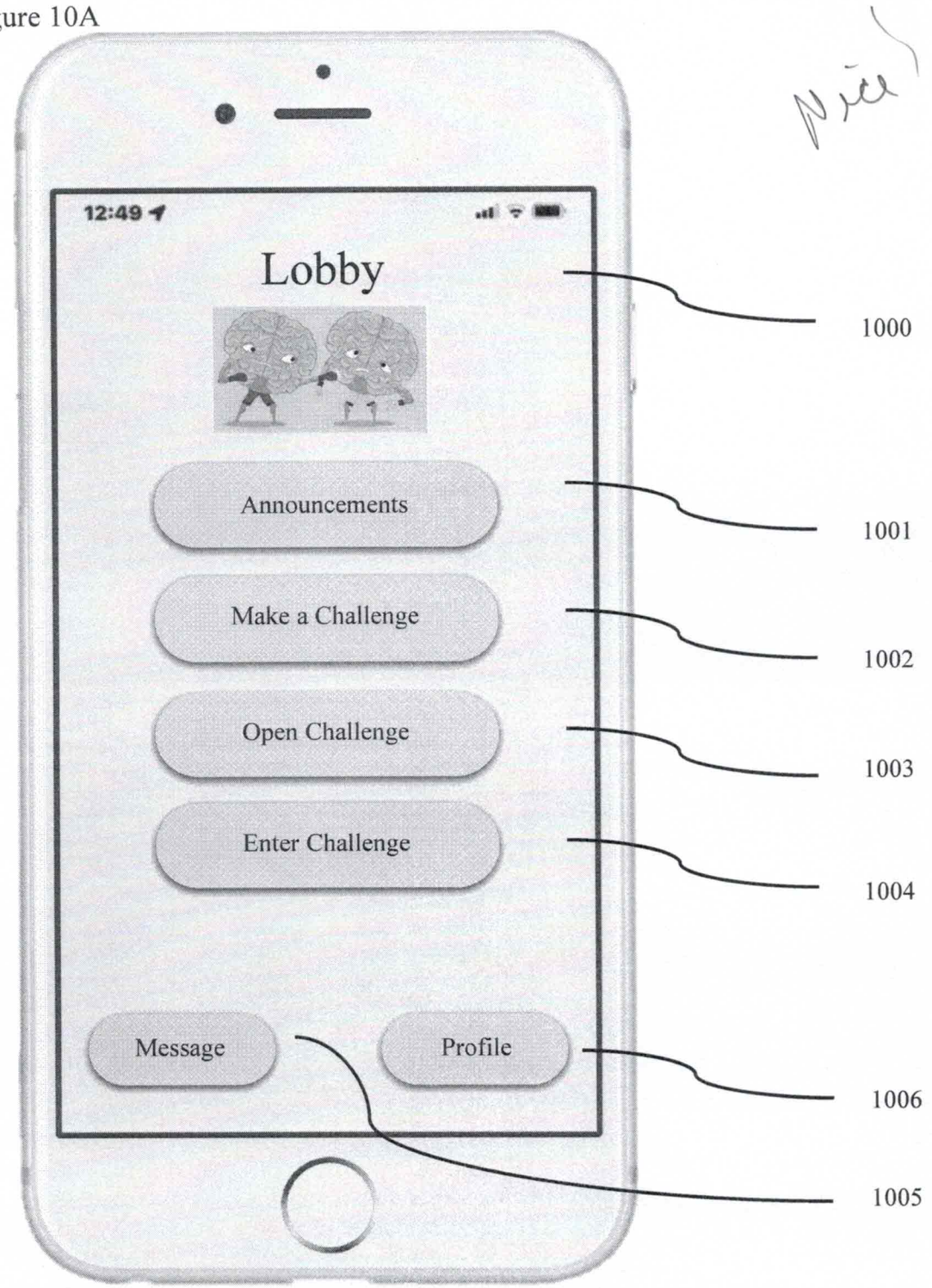

12:49
Lobby
Announcements
Make a Challenge
Open Challenge
Enter Challenge
Message
Profile
1000
1001
1002
1003
1004
1006
1005

Figure 10B

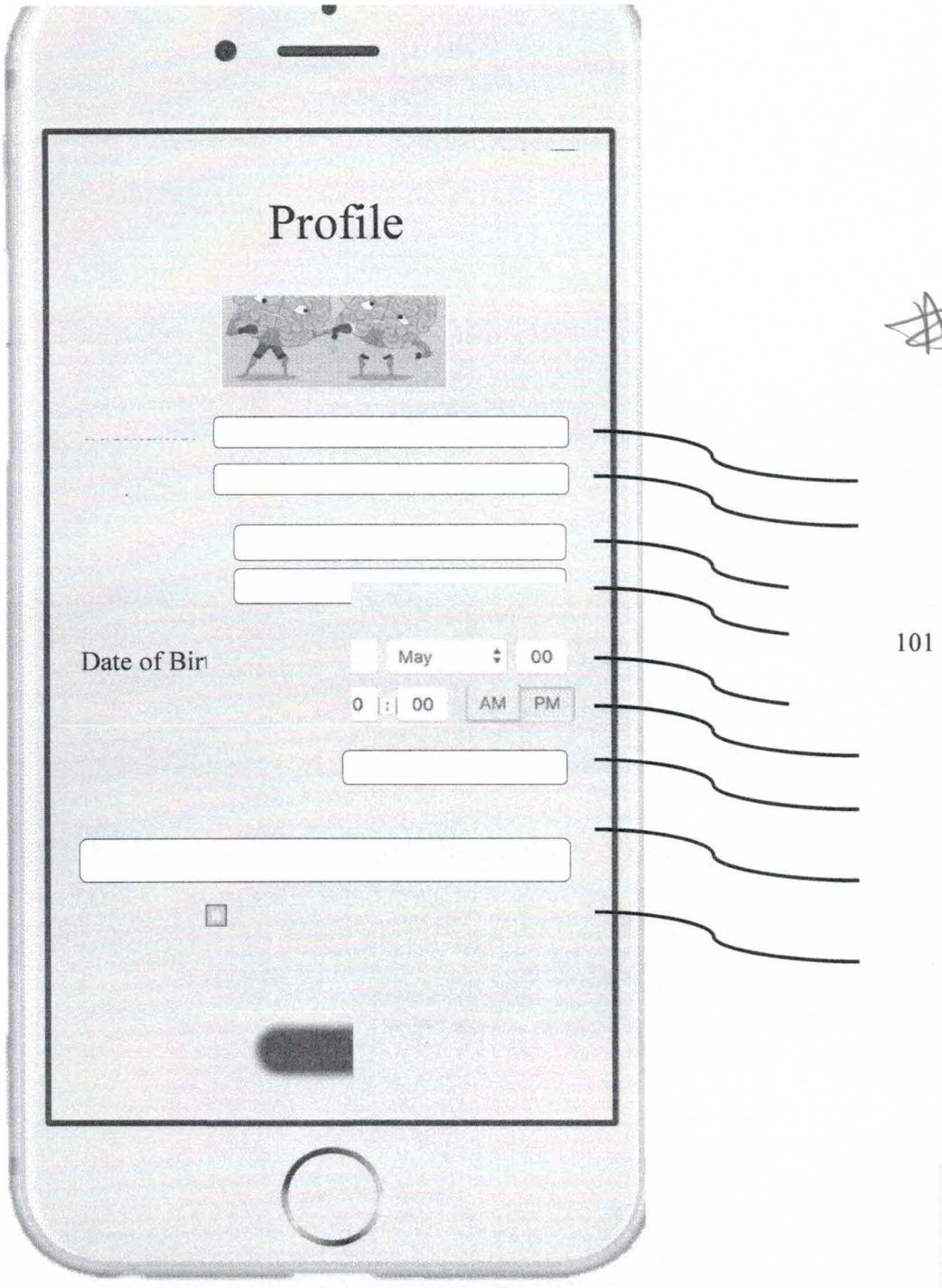


Figure 10C

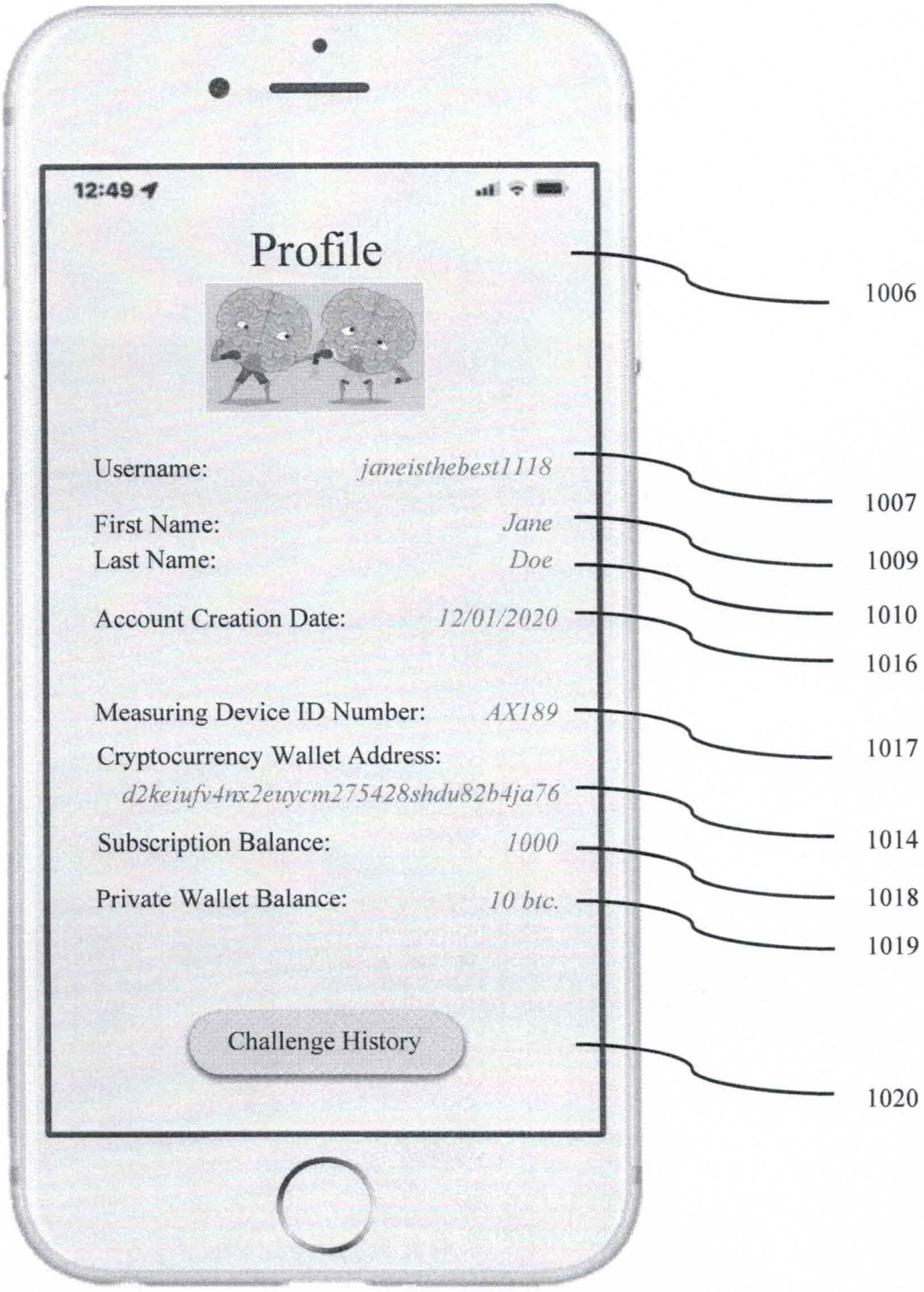

12:49
Profile
Username: janeisthebest1118
First Name: Jane
Last Name: Doe
Account Creation Date: 12/01/2020
Measuring Device ID Number: AX189
Cryptocurrency Wallet Address:
d2keiufv4nx2euycm275428shdu82b4ja76
Subscription Balance: 1000
Private Wallet Balance: 10 btc.
Challenge History
1006
1007
1009
1010
1016
1017
1014
1018
1019
1020

Figure 10D

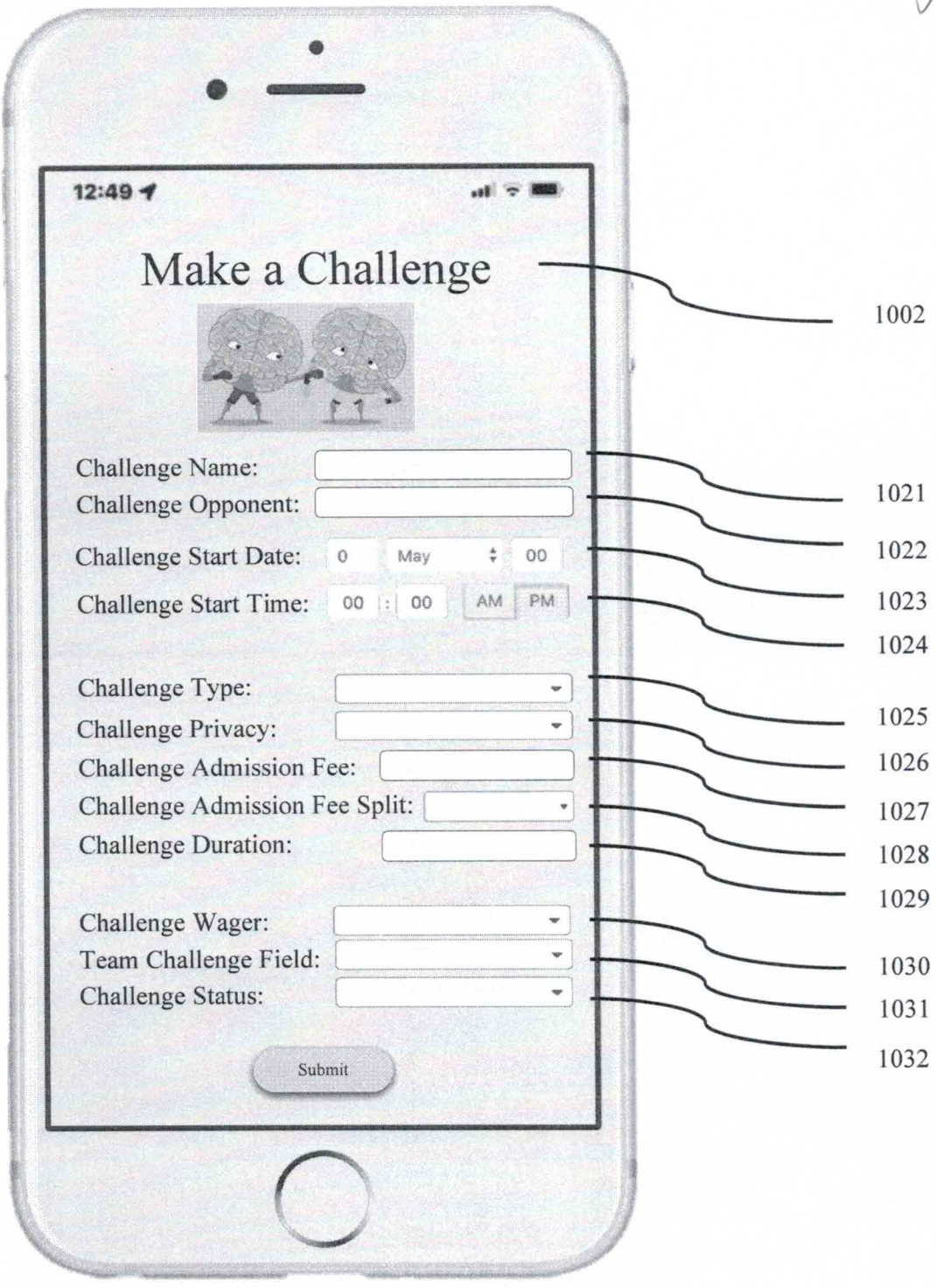

12:49
Make a Challenge
Challenge Name:
Challenge Opponent:
Challenge Start Date:
0
May
00
Challenge Start Time:
00
:
00
AM
PM
Challenge Type:
Challenge Privacy:
Challenge Admission Fee:
Challenge Admission Fee Split:
Challenge Duration:
Challenge Wager:
Team Challenge Field:
Challenge Status:
Submit
1002
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032

Figure 11

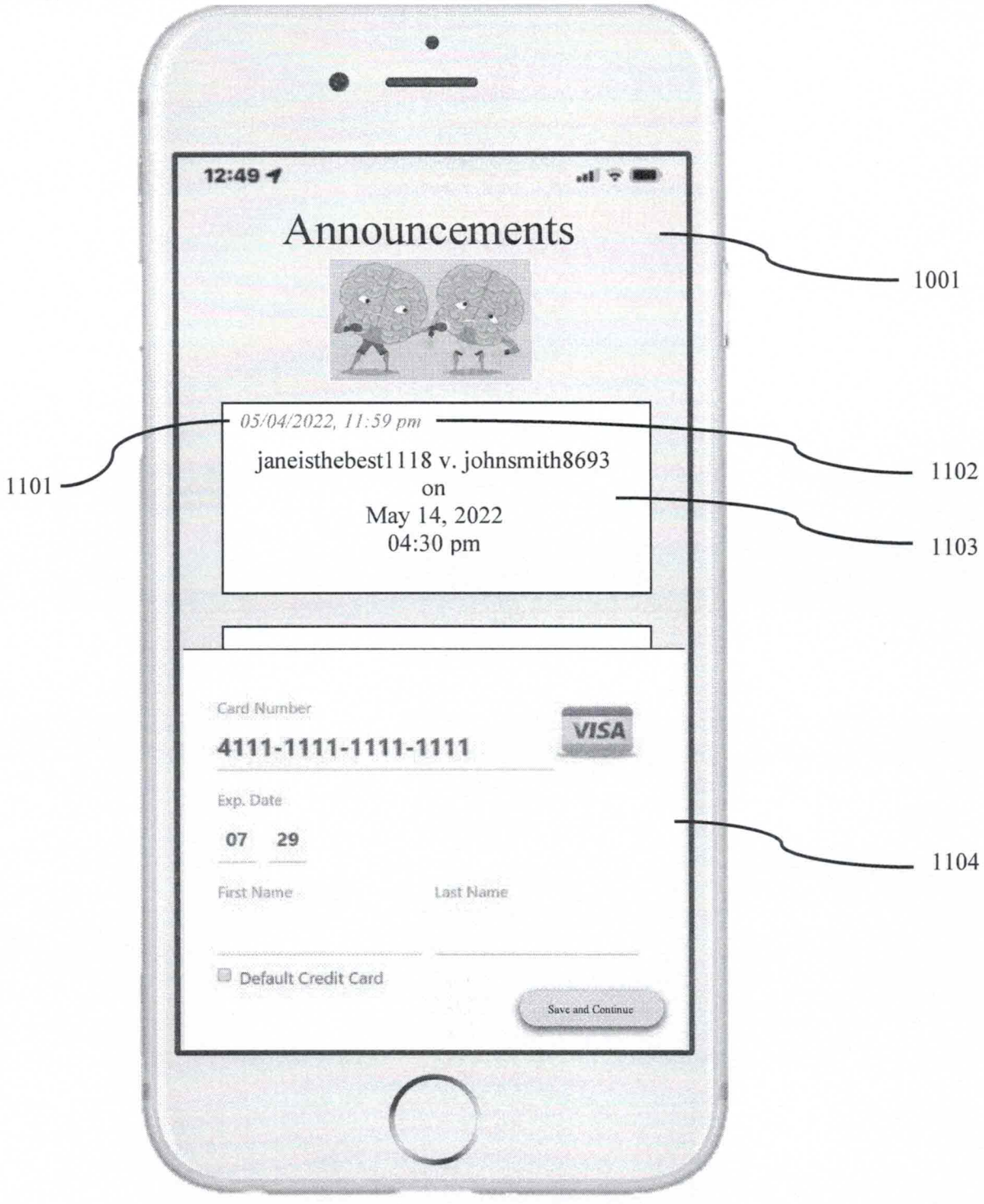
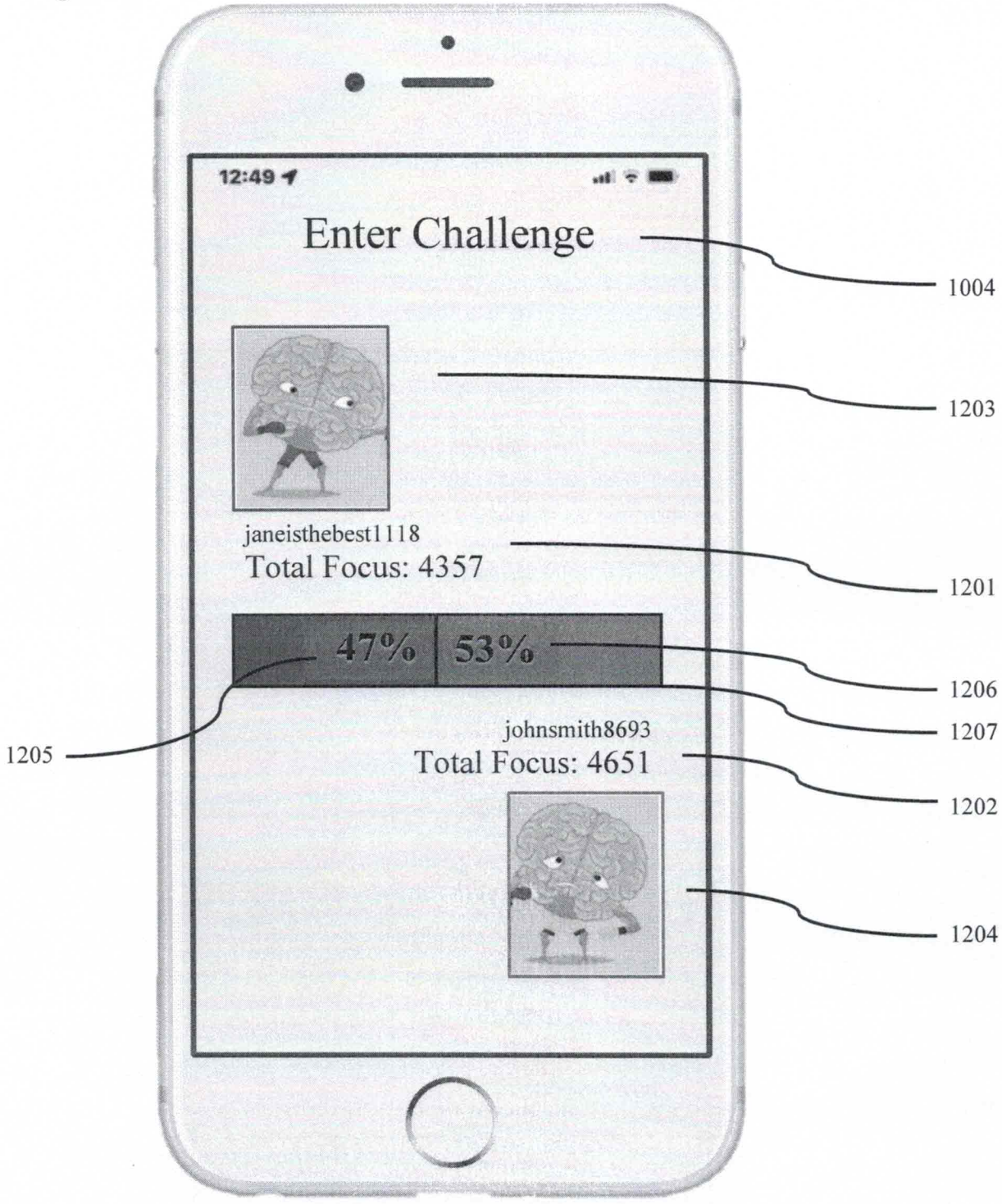

12:49
Announcements
1001
05/04/2022, 11:59 pm
janeisthebest1118 v. johnsmith8693
on
May 14, 2022
04:30 pm
1101
1102
1103
Card Number
4111-1111-1111-1111
VISA
Exp. Date
07
29
First Name
Last Name
Default Credit Card
Save and Continue
1104

Figure 12


12:49
Enter Challenge
1004
1203
janeisthebest1118
Total Focus: 4357
1201
47%
53%
1206
1207
1205
johnsmith8693
Total Focus: 4651
1202
1204