

PATROLL Winning Submission

U.S. Patent 9,940,124

U.S. Patent 9,940,124 (“*S3G Technology*” or the “patent-at-issue”) was filed on March 9, 2016 and claims the benefit of U.S. Provisional Pat. App. No. 61/325,212, filed April 16, 2010, and U.S. Provisional Pat. App. No. 61/228,140, filed July 23, 2009. Claim 1 of the patent-at-issue is generally directed to a method of conducting a dialogue between a terminal machine and a service provider machine. The method comprises displaying a first prompt on a terminal display of a terminal machine by running a terminal application comprising first computer-executable instructions and first code that conduct the terminal machine's portion of the dialogue. A first data entry associated with the first prompt is accepted at the terminal machine. Information associated with the first data entry from the terminal machine is communicated to the service provider machine. The service provider machine uses a provider application comprising second computer-executable instructions and second code that conduct the service provider machine's portion of the dialogue. The provider application is capable of sending an authorization code to the terminal machine. The method further comprises storing at least a portion of the information associated with the first data entry in memory for analysis and receiving, at the terminal machine, a terminal dialogue module that updates at least a portion of the first code to produce first updated code that adapts the terminal application to display a second prompt for the terminal machine's portion of a modified dialogue sequence with the service provider machine. At least one of the first code, the second code, and the first updated code comprises intermediate code.

The primary reference, EP1980986A2 (“*Firethorn Holdings*”), was filed on July 6, 2007 and published on October 15, 2008. The patent generally relates to methods and systems for selecting a payment source for use in making a mobile financial payment utilizing a mobile device such as a mobile telephone (cellphone) or wireless connected personal digital assistant (PDA). A mobile financial transaction system (MFTS) is coupled for electronic communications with one or more financial service providers with which the user maintains one or more accounts, and also for wireless communications with mobile devices. The mobile device displays information corresponding to accounts available to the user as a payment source for use in connection with making a payment using the mobile device. The user selects a payment source for making a payment. The mobile device generates a mobile payment instruction comprising information corresponding to the payment and a selected payment source. The mobile payment instruction is wirelessly communicated to the MFTS. The MFTS generates an MFTS payment instruction that includes an amount, information corresponding to the identified payee, and information indicating the selected payment source. The MFTS payment instruction is communicated to the payment instruction recipient, which effects the payment utilizing the selected payment source.

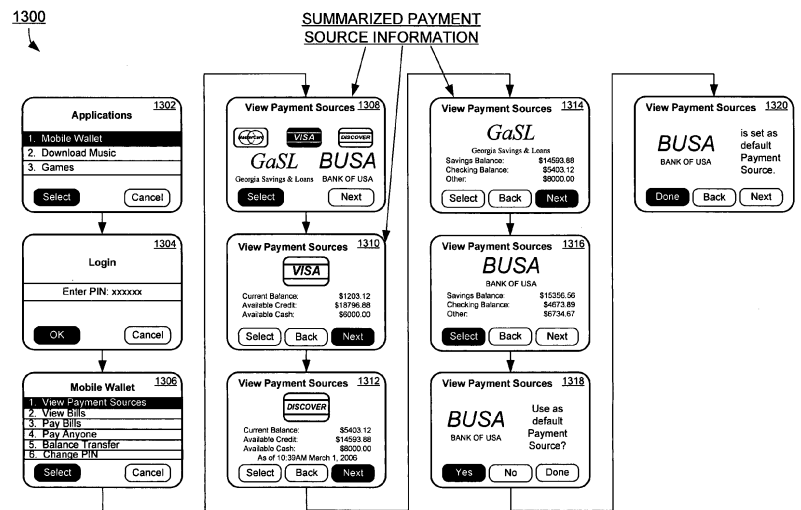
A sample claim chart comparing claim 1 of *S3G Technology* to *Firethorn Holdings* is provided below.

US9940124 (“S3G Technology”)	A. EP1980986A2 (“Firethorn Holdings”)
<p>1.pre. A method of conducting a dialogue between a terminal machine and a service provider machine, the method comprising:</p>	<p>A. EP1980986A2</p> <p>"1. A mobile financial transaction system operative for allowing user selection of a payment source for use in making a mobile financial payment using a mobile device connected for communications with a wireless network, comprising the steps of:</p> <p>a user mobile device coupled for wireless communications with a mobile financial transaction system (MFTS), the mobile device operative for wirelessly receiving summarized payment source information from the MFTS, displaying one or more selectable accounts for making the payment, receiving user input corresponding to selection of a payment source for making a payment, generating a mobile payment instruction to the MFTS indicating a payment to make, and wirelessly communicating the mobile payment instruction to the MFTS;</p> <p>a mobile financial transaction system (MFTS) database associated with the MFTS for storing user information, payment to make information associated with the one or more payees, and payment source information associated with at least one account associated with at least one financial service provider of a user;</p> <p>a mobile financial transaction system (MFTS) computer system for maintaining the MFTS database and conducting electronic communications between entities involved in mobile financial payments; and" <i>Firethorn Holdings</i> at claim 1</p> <p>"Still referring to FIG. 1, the major output from the MFTS system 18 comprises a subset of information related to one or more payments to make (PM), a subset of information related to one or more payment sources (PS), both of which are provided from the MFTS 18 to an individual mobile device 15 and displayed and/or presented to a user 12 for reaction and response. In response to presentation of a PM (or initiation of a PM), the mobile device 15 provides a payment instruction to a payment instruction recipient such as a financial service provider or financial institution to make a payment, in accordance with the information in the payment instruction." <i>Firethorn Holdings</i> at par. 0106</p> <p>"According to one embodiment of the present invention, the software of the MFTS comprises two major components: a</p>

<p>(cont.) 1.pre. A method of conducting a dialogue between a terminal machine and a service provider machine, the method comprising:</p>	<p>mobile device application 400 ("Mobile Wallet") and MFTS software 500. The mobile device application 400 resides on a mobile device and is accessed by the owner of the mobile device. The MFTS software application 500 resides on a server computer connected to the Internet and it is accessed by users through their Mobile Wallet application and web browsers." <i>Firethorn Holdings</i> at par. 0150</p>
<p>1.a. displaying a first prompt on a terminal display of a terminal machine by running a terminal application,</p>	<p>A. EP1980986A2 "34. A mobile device for selecting a payment source for making a mobile financial payment via a wireless network, comprising: a mobile device connected for wireless communications via a mobile communication service provider to a mobile financial transaction system (MFTS), the mobile device including a display, user input means, a processor, and a memory; and mobile device software operative on the mobile device processor comprising program code for carrying out the computer-implemented steps of: . . . displaying information corresponding to a plurality of accounts available to the user as a payment source for use in connection with making the payment; receiving user selection of a payment source from the plurality of available accounts;" <i>Firethorn Holdings</i> at claim 34 "As will be known by those skilled in the art, such mobile devices are essentially small, hand-held computing devices that include features such as microphones and speakers (to enable telephone usage), a wireless signal circuit such as a digital radio, a microprocessor as a central processing unit (CPU), a color or other display," <i>Firethorn Holdings</i> at par. 0090 "Generally speaking, information associated with a payment source (PS) 30 includes the name(s) of the account owner(s) (i.e. the person who owns or controls the funds), account numbers, account balances, credit available and credit limits for a credit card or other credit facilities, available cash advance amount, names of other authorized users or co-owners of the account, special personal identification numbers (PIN), restrictions on use of the account, etc." <i>Firethorn Holdings</i> at par. 0105</p>

(cont.)

1.a. displaying a first prompt on a terminal display of a terminal machine by running a terminal application,



VIEW PAYMENT SOURCES & ACCOUNT BALANCE

FIG. 13

"Referring now to FIG. 13, a series of user screen views 1300 of a mobile device as the user views the Payment Sources (PS) is presented according an exemplary aspect of the invention. Typically, a user is presented with a selection screen on their mobile device, for example screen 1302, allowing selection of an application for execution on the mobile device. As shown in the screen view 1302, "Mobile Wallet" is one of the options of applications. The user can use a stylus, multifunction button, trackwheel, or other navigation input device or control to highlight the selection, or use the numeric keypad to make the selection by numeric entry. For example, the user can use arrow keys on the mobile device to navigate and highlight the "Mobile Wallet" and press "Select" Key to go to the "Mobile Wallet" application. Alternatively, the user may press the numeric "1" key to go directly to the "Mobile Wallet" application." *Firethorn Holdings* at par. 0245

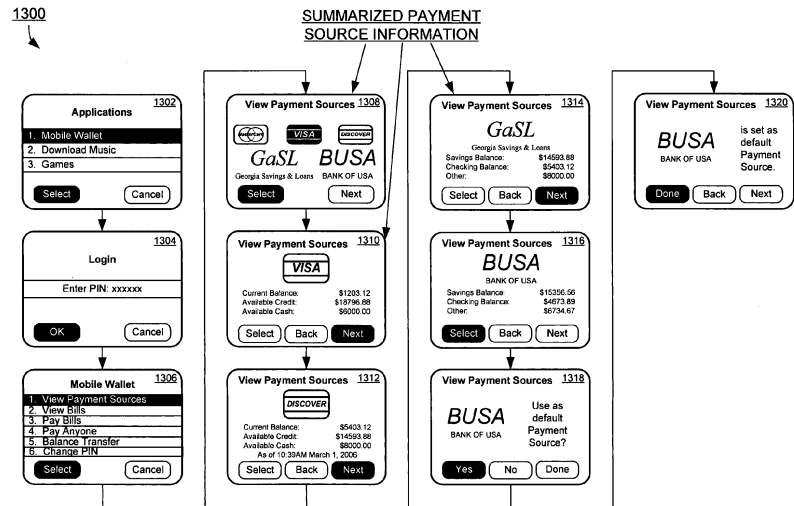
"In response to selection of the Mobile Wallet application in screen 1302, a login screen 1304 is displayed. In this screen, the user is prompted to enter a predetermined number of digits as a PIN or pass-code to enter the "Mobile Wallet" as a security measure. In alternative embodiments, a login screen 1304 or equivalent functionality can be placed at other locations of the screen or in other situations, as when a user turns on the mobile device, chooses applications, selects "Mobile Wallet", views bills, pays bills, or

<p>(cont.) 1.a. displaying a first prompt on a terminal display of a terminal machine by running a terminal application,</p>	<p>other appropriate location and/or circumstance." <i>Firethorn Holdings</i> at par. 0247</p> <p>"When the user uses the "Mobile Wallet" application to view the bills, he/she selects the "Mobile Wallet" option from the mobile device screen view 1502 and is presented with a login screen view 1504. After the user logs in and provides a valid password (or is otherwise authenticated to the mobile device 15), he/she is presented with a number of choices as shown in screen 1506, e.g. View Payment Sources, View Bills, Pay Bills, etc, "PayAnyone", Balance Transfer, Change PIN, etc." <i>Firethorn Holdings</i> at par. 0264</p>
<p>1.b. the terminal application comprising first computer-executable instructions and first code that conduct the terminal machine's portion of the dialogue;</p>	<p>A. EP1980986A2</p> <p>"34. A mobile device for selecting a payment source for making a mobile financial payment via a wireless network, comprising: a mobile device connected for wireless communications via a mobile communication service provider to a mobile financial transaction system (MFTS), the mobile device including a display, user input means, a processor, and a memory; and mobile device software operative on the mobile device processor comprising program code for carrying out the computer-implemented steps of: . . . displaying information corresponding to a plurality of accounts available to the user as a payment source for use in connection with making the payment;" <i>Firethorn Holdings</i> at claim 34</p> <p>"Those skilled in the art will understand the features and aspects of a suitable computing environment in which aspects of the invention may be implemented. Although not required, the inventions will be described in the general context of computer-executable instructions, such as program modules, being executed by computers in networked environments. Such program modules are often reflected and illustrated by flow charts, sequence diagrams, exemplary screen displays, and other techniques used by those skilled in the art to communicate how to make and use such computer program modules. Generally, program modules include routines, programs, objects, components, data structures, etc. that perform particular tasks or implement particular abstract data types, within the computer. Computer-executable instructions, associated data structures, and program</p>

(cont.)

1.b. **the terminal application comprising first computer-executable instructions and first code that conduct the terminal machine's portion of the dialogue;**

modules represent examples of **the program code** for executing steps of the methods disclosed herein. The particular sequence of such executable instructions or associated data structures represent examples of corresponding acts for implementing the functions described in such steps." *Firethorn Holdings* at par. 0093



VIEW PAYMENT SOURCES & ACCOUNT BALANCE

FIG. 13

"Referring now to FIG. 13, a series of user screen views 1300 of a **mobile device** as the user views the Payment Sources (PS) is presented according an exemplary aspect of the invention. Typically, a user is presented with a selection screen on their **mobile device**, for example screen 1302, allowing selection of **an application** for execution on the **mobile device**. As shown in the screen view 1302, "**Mobile Wallet**" is one of the options of applications. The user can use a stylus, multifunction button, trackwheel, or other navigation input device or control to highlight the selection, or use the numeric keypad to make the selection by numeric entry. For example, the user can use arrow keys on the **mobile device** to navigate and highlight the "**Mobile Wallet**" and press "Select" Key to go to the "**Mobile Wallet**" application. Alternatively, the user may press the numeric "1" key to go directly to the "**Mobile Wallet**" application." *Firethorn Holdings* at par. 0245

"In response to selection of **the Mobile Wallet application** in screen 1302, a login screen 1304 is displayed. In this screen, **the user is prompted to enter a predetermined**

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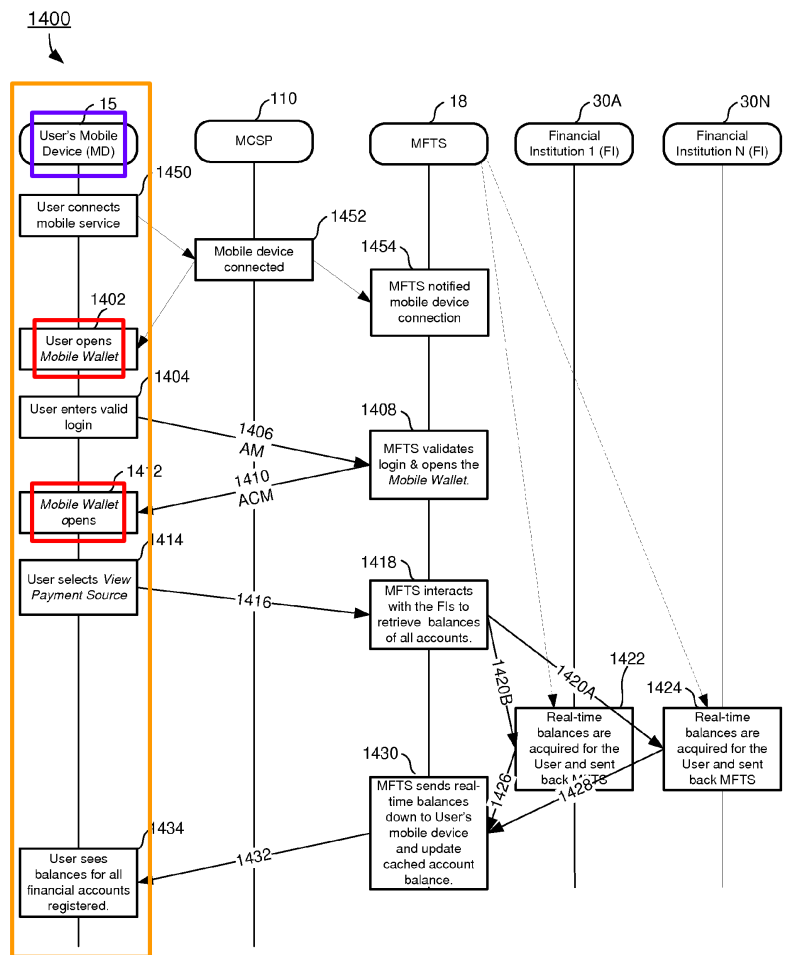
1.b. **the terminal application comprising first computer-executable instructions and first code that conduct the terminal machine's portion of the dialogue;**

number of digits as a PIN or pass-code to enter the "Mobile Wallet" as a security measure. In alternative embodiments, a login screen 1304 or equivalent functionality can be placed at other locations of the screen or in other situations, as when a user turns on the mobile device, chooses applications, selects "Mobile Wallet", views bills, pays bills, or other appropriate location and/or circumstance." *Firethorn Holdings* at par. 0247

"When the user uses **the "Mobile Wallet" application to view the bills, he/she selects the "Mobile Wallet" option from the mobile device screen view 1502 and is presented with a login screen view 1504. After the user logs in and provides a valid password (or is otherwise authenticated to the mobile device 15), he/she is presented with a number of choices** as shown in screen 1506, e.g. View Payment Sources, View Bills, Pay Bills, etc, "PayAnyone", Balance Transfer, Change PIN, etc." *Firethorn Holdings* at par. 0264

(cont.)

1.b. **the terminal application comprising first computer-executable instructions and first code that conduct the terminal machine's portion of the dialogue;**



SEQUENCE DIAGRAM FOR VIEWING PAYMENT SOURCES AND ACCOUNT BALANCES

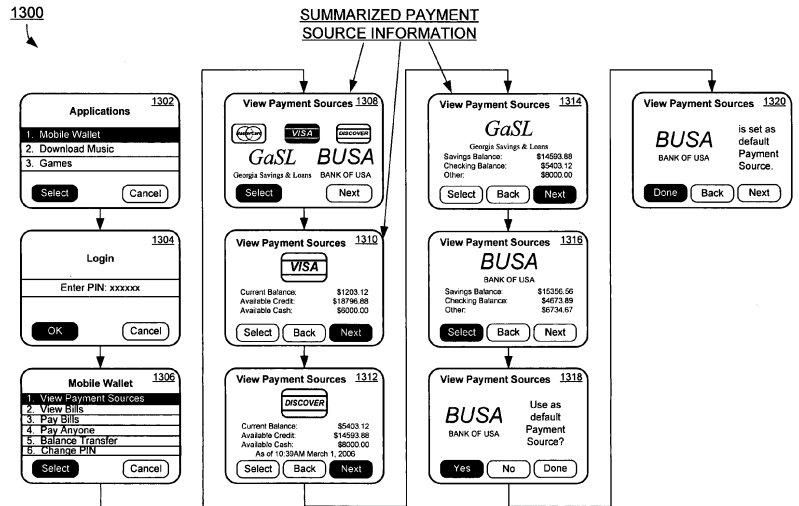
FIG. 14

"Starting in FIG. 14 at step 1402, the user opens a **"Mobile Wallet"** application on the mobile device 15; he/she is preferably required to **log in by providing a password or PIN** for verification as indicated at step 1404. **The password or PIN is entered by the user**, is validated locally and the signed, encrypted messages are sent to the MFTS for authentication via an authentication message (AM) 1406. At step 1408, the MFTS 18 validates the login and allows **the Mobile Wallet application** to execute, for example, by providing a communication or authentication confirmation message (ACM) 1410 back to **the mobile device 15** that includes a signal or validation code that allows **the Mobile Wallet application** to execute on **the mobile device 15**. If the user enters an incorrect password or

PIN a predetermined number of times in a row, preferably he/she is denied service and the mobile device is locked. In this case the user is required to take steps (not shown) to access the User Site 153 or contact a customer service representative to unlock the mobile device." *Firethorn Holdings* at par. 0256

1.c. accepting a first data entry at the terminal machine, wherein the first data entry is associated with the first prompt;

A. EP1980986A2



VIEW PAYMENT SOURCES & ACCOUNT BALANCE

FIG. 13

"Referring now to FIG. 13, a series of user screen views 1300 of a mobile device as the user views the Payment Sources (PS) is presented according an exemplary aspect of the invention. Typically, a user is presented with a selection screen on their mobile device, for example screen 1302, allowing selection of an application for execution on the mobile device. As shown in the screen view 1302, "Mobile Wallet" is one of the options of applications. The user can use a stylus, multifunction button, trackwheel, or other navigation input device or control to highlight the selection, or use the numeric keypad to make the selection by numeric entry. For example, the user can use arrow keys on the mobile device to navigate and highlight the "Mobile Wallet" and press "Select" Key to go to the "Mobile Wallet" application. Alternatively, the user may press the numeric "1" key to go directly to the "Mobile Wallet" application." *Firethorn Holdings* at par. 0245

"In response to selection of the Mobile Wallet application in screen 1302, a login screen 1304 is displayed. In this screen, the user is prompted to enter a predetermined

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l.c. accepting a **first data entry at the terminal machine**, wherein the **first data entry is associated with the first prompt**;

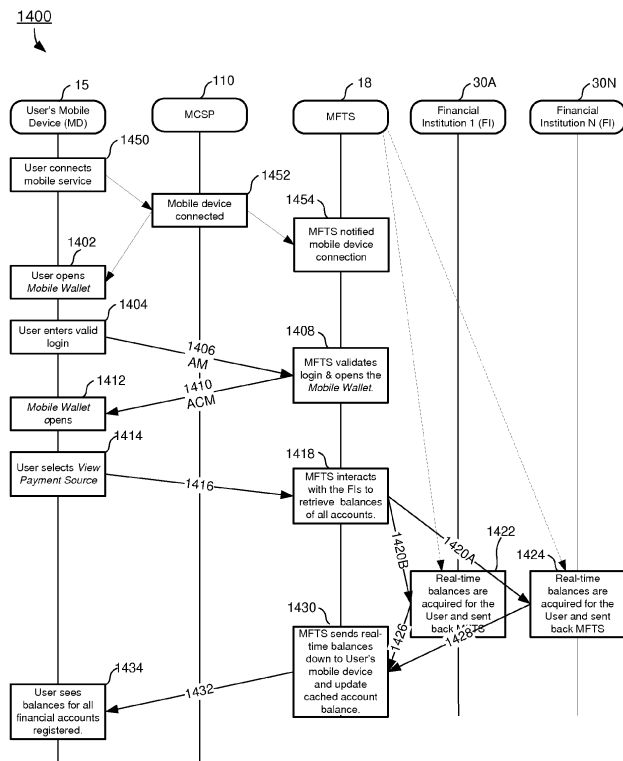
number of digits as a PIN or pass-code to enter the "Mobile Wallet" as a security measure. In alternative embodiments, a login screen 1304 or equivalent functionality can be placed at other locations of the screen or in other situations, as when a user turns on the mobile device, chooses applications, selects "Mobile Wallet", views bills, pays bills, or other appropriate location and/or circumstance." *Firethorn Holdings* at par. 0247

"In response to **entry of a valid login or PIN**, screen 1306 is displayed on **the mobile device**. This screen 1306 preferably comprises a menu of available options of the Mobile Wallet application according to an exemplary aspect of the invention." *Firethorn Holdings* at par. 0248

"Starting in FIG. 14 at step 1402, **the user opens a "Mobile Wallet" application on the mobile device** 15; he/she preferably required to **log in by providing a password or PIN for verification** as indicated at step 1404. **The password or PIN is entered** by the user, is validated locally and the signed, encrypted messages are sent to the MFTS for authentication via an authentication message (AM) 1406. At step 1408, the MFTS 18 validates the login and allows the Mobile Wallet application to execute, for example, by providing a communication or authentication confirmation message (ACM) 1410 back to the mobile device 15 that includes a signal or validation code that allows the Mobile Wallet application to execute on the mobile device 15. **If the user enters an incorrect password or PIN a predetermined number of times in a row, preferably he/she is denied service and the mobile device is locked.** In this case the user is required to take steps (not shown) to access the User Site 153 or contact a customer service representative to unlock the mobile device." *Firethorn Holdings* at par. 0256

(cont.)

1.c. accepting a **first data entry at the terminal machine**, wherein the **first data entry is associated with the first prompt**;



SEQUENCE DIAGRAM FOR VIEWING PAYMENT SOURCES AND ACCOUNT BALANCES

FIG. 14

1.d. communicating **information associated with the first data entry from the terminal machine to the service provider machine**,

A. EP1980986A2

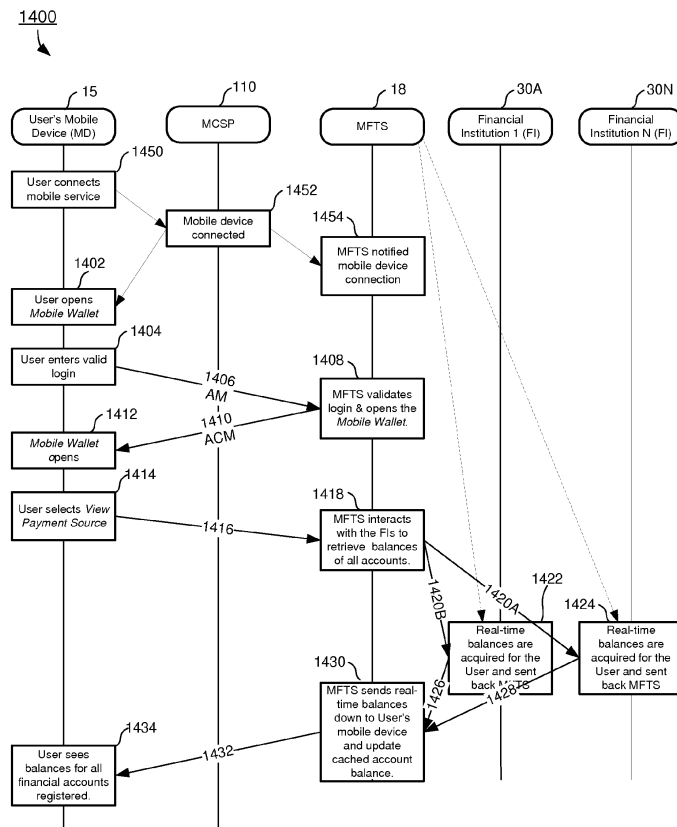
"According to one embodiment of the present invention, **the software of the MFTS** comprises two major components: a **mobile device application 400 ("Mobile Wallet")** and **MFTS software 500**. The mobile device application 400 resides on **a mobile device** and is accessed by the owner of **the mobile device**. The MFTS software application 500 resides on **a server computer** connected to the Internet and it is accessed by users through their **Mobile Wallet application** and web browsers." *Firethorn Holdings* at par. 0150

"Starting in FIG. 14 at step 1402, the user opens a "Mobile Wallet" application on **the mobile device** 15; he/she is preferably required to log in by providing **a password or PIN** for verification as indicated at step 1404. **The password or PIN** is entered by the user, is validated locally and the signed, encrypted messages are sent to **the MFTS** for authentication via an authentication message (AM) 1406. At step 1408, **the MFTS** 18 validates the login and allows the **Mobile Wallet** application to execute, for example, by

(cont.)

1.d. communicating information associated with the first data entry from the terminal machine to the service provider machine,

providing a communication or authentication confirmation message (ACM) 1410 back to the mobile device 15 that includes a signal or validation code that allows the Mobile Wallet application to execute on the mobile device 15. If the user enters an incorrect password or PIN a predetermined number of times in a row, preferably he/she is denied service and the mobile device is locked. In this case the user is required to take steps (not shown) to access the User Site 153 or contact a customer service representative to unlock the mobile device." *Firethorn Holdings* at par. 0256



SEQUENCE DIAGRAM FOR VIEWING PAYMENT SOURCES AND ACCOUNT BALANCES

FIG. 14

1.e. wherein the service provider machine uses a provider application comprising second computer-executable instructions and second code that conduct the service provider machine's portion of the dialogue, and

A. EP1980986A2

"1. A mobile financial transaction system operative for allowing user selection of a payment source for use in making a mobile financial payment using a mobile device connected for communications with a wireless network, comprising the steps of:

...

a mobile financial transaction system (MFTS) computer

(cont.)

i.e. wherein **the service provider machine** uses a **provider application** comprising **second computer-executable instructions** and **second code** that conduct **the service provider machine's portion of the dialogue**, and

system for maintaining the MFTS database and conducting electronic communications between entities involved in mobile financial payments; and

MFTS software operative on **the MFTS computer system** comprising **program code** for carrying out **the computer-implemented steps** of:

providing information to a user mobile device **corresponding to a payment to make**;

providing information to a user mobile device **corresponding to a plurality of accounts available to the user as a payment source for use in connection with making the payment**;

...

communicating the MFTS payment instruction from the MFTS to the payment instruction recipient," *Firethorn Holdings* at claim 1

"Those skilled in the art will understand the features and aspects of a suitable computing environment in which aspects of the invention may be implemented. Although not required, **the inventions will be described in the general context of computer-executable instructions, such as program modules, being executed by computers in networked environments**. Such program modules are often reflected and illustrated by flow charts, sequence diagrams, exemplary screen displays, and other techniques used by those skilled in the art to communicate how to make and use such computer program modules. Generally, program modules include routines, programs, objects, components, data structures, etc. that perform particular tasks or implement particular abstract data types, within the computer. **Computer-executable instructions, associated data structures, and program modules** represent examples of **the program code** for **executing steps of the methods disclosed herein**. The particular sequence of such executable instructions or associated data structures represent examples of corresponding acts for implementing the functions described in such steps." *Firethorn Holdings* at par. 0093

"A flowchart of **the MFTS mobile device communication interface** 150 is shown in FIG. 8. It will be understood that this process 150 on **the MFTS** side communicates with similar processes in the mobile device, via the mobile device communication interface 339 in a mobile device. In this flowchart, **the MFTS mobile device communication interface** 150 first establishes communication link to the mobile

(cont.)

i.e. wherein **the service provider machine** uses a **provider application comprising second computer-executable instructions and second code** that conduct **the service provider machine's portion of the dialogue**, and

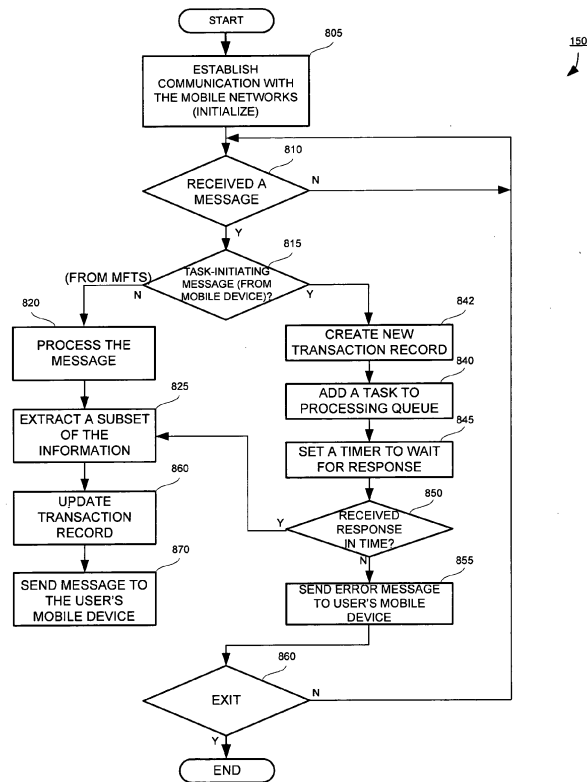
communication service provider (MCSP) the user subscribed in step 805. **The mobile device communication interface** is set up between a mobile device and the MCSP and **the interface** receives data communication from both sides. **The mobile device communication interface** 150 comprises a continuous loop shown in step 810 to check if any new message is received from either the MCSP or a mobile device. If no message is received, the loop continues until a new message is received. When the mobile device communication interface 150 receives a message, it checks in step 815 to determine where the message comes from by checking the sender/receiver information. **If the message comes from a mobile device that is requesting information from the MFTS server**, the mobile device application proceeds to step 840 to add a task to processing queue and set a timer to wait for a response from **the MFTS server** through the MCSP in step 845. **The mobile device communication interface** waits until it receives **a response from the MFTS server** or the timer times out, whichever comes first. **If the mobile device communication interface receives a response within a predetermined timeout period, the message is sent to the mobile device in step 850.** Otherwise, if **the MFTS mobile device communication interface** 150 does not receive **any response** in time, then **an error message** is sent to the mobile device notifying the user a failure occurred. Both step 850 and step 820 converge in step 825 to extract **a subset of information from the message or the response** received from the MCSP. **The information extracted** in step 825 is sent to the user's mobile device for display in step 830. After **the message is displayed, the mobile device communication interface** goes back to wait for **next message** in step 860 until the user turns off the mobile device and terminates the mobile device application." *Firethorn Holdings* at par. 0184

"Turn next to FIG. 8 for a description of the MFTS mobile device communication interface software or routine 150 in accordance with an aspect of the invention. **The MFTS mobile device interface software** 150 preferably runs as a continuous independent process on **the MFTS server computer**, asynchronous to other processes, and provides for handling of **communications and messages** between **the MFTS** 18 and the mobile devices of users. By use of the term "**interface**," we mean **a computer program or routine** 150 and associated hardware such as a communications component or storage element that is driven by **the**

(cont.)

i.e. wherein **the service provider machine** uses **a provider application comprising second computer-executable instructions and second code** that **conduct the service provider machine's portion of the dialogue**, and

program. The interface 150 handles messaging between the various processes in **the MFTS 18** and mobile devices, for example, when a user at a mobile device generates a command to "View Bills" or "Pay Bills," that command is received over a wireless network and processed by **the MFTS mobile device communication interface 150** as described herein, to cause **the MFTS 18** to carry out functions in accordance with the invention." *Firethorn Holdings* at par. 0208



MOBILE DEVICE COMMUNICATION INTERFACE (MFTS)

FIG. 8

"Turn next to FIG. 10 for a description of the web application interface software or routine 154 in accordance with an aspect of the invention. **The web application interface 154** preferably runs as a continuous independent process on **the MFTS server computer**, asynchronous to other processes, and provides for handling of **communications and messages** between **the MFTS 18** and users who access **the MFTS** via the Internet 120 using a web browser on a computer 140 (FIG. 2), as opposed to a mobile device. As will be understood by those skilled in the art, **the web application interface** serves as the main program loop for

(cont.)

1.e. wherein **the service provider machine** uses **a provider application comprising second computer-executable instructions and second code** that conduct **the service provider machine's portion of the dialogue**, and

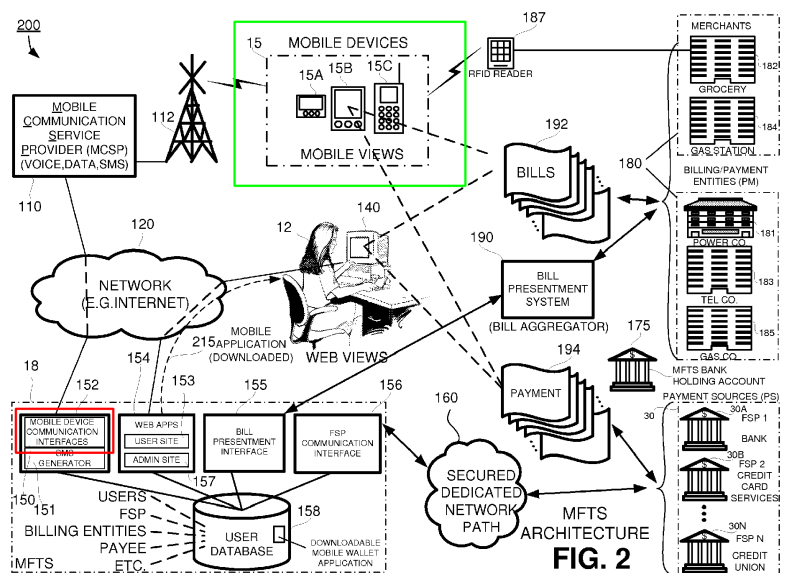
displaying an Internet-accessible web page (such as the User Site shown in FIG. 37) for user access to **the MFTS** 18 via the Internet to conduct transactions, view account history, add payees, add financial institutions and accounts, etc." *Firethorn Holdings* at par. 0227

1.f. wherein **the provider application** is capable of sending an **authorization code** to **the terminal machine**;

A. EP1980986A2

"The mobile device communication interface 150 comprises a continuous loop shown in step 810 to check if any new message is received from either the MCSP or a mobile device. If no message is received, the loop continues until a new message is received. When the mobile device communication interface 150 receives a message, it checks in step 815 to determine where the message comes from by checking the sender/receiver information. If the message comes from a mobile device that is requesting information from the MFTS server, the mobile device application proceeds to step 840 to add a task to processing queue and set a timer to wait for a response from the MFTS server through the MCSP in step 845. The mobile device communication interface waits until it receives a response from the MFTS server or the timer times out, whichever comes first. If the mobile device communication interface receives a response within a predetermined timeout period, the message is sent to the mobile device in step 850."

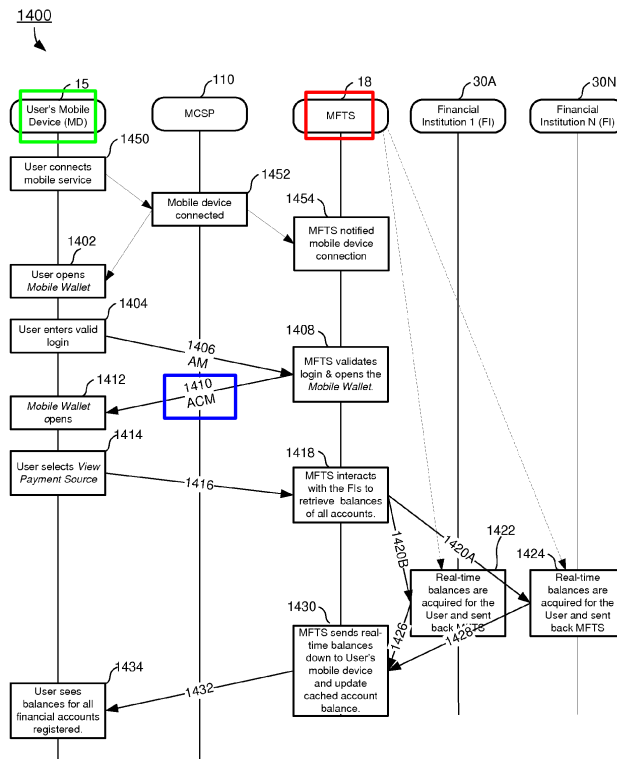
Firethorn Holdings at par. 0184



(cont.)

1.f. wherein **the provider application is capable of sending an authorization code to the terminal machine;**

"Starting in FIG. 14 at step 1402, the user opens a "Mobile Wallet" application on the mobile device 15; he/she is preferably required to log in by providing a password or PIN for verification as indicated at step 1404. The password or PIN is entered by the user, is validated locally and the signed, encrypted messages are sent to the MFTS for authentication via an authentication message (AM) 1406. At step 1408, the MFTS 18 validates the login and allows the Mobile Wallet application to execute, for example, by providing a communication or authentication confirmation message (ACM) 1410 back to the mobile device 15 that includes a signal or validation code that allows the Mobile Wallet application to execute on the mobile device 15. If the user enters an incorrect password or PIN a predetermined number of times in a row, preferably he/she is denied service and the mobile device is locked. In this case the user is required to take steps (not shown) to access the User Site 153 or contact a customer service representative to unlock the mobile device." *Firethorn Holdings* at par. 0256



SEQUENCE DIAGRAM FOR VIEWING PAYMENT SOURCES AND ACCOUNT BALANCES

FIG. 14

<p>(cont.) 1.f. wherein the provider application is capable of sending an authorization code to the terminal machine;</p>	<p>"If password or PIN is entered correctly, the authentication confirmation message 1410 from the MFTS 18 informs the mobile device 15 that the login is valid and launches the "Mobile Wallet" application on the mobile device 15, as shown at step 1412. At step 1414, the user is presented with a screen (e.g. FIG. 13) that allows viewing and selection of payment sources and account balances." <i>Firethorn Holdings</i> at par. 0257</p>
<p>1.g. storing at least a portion of the information associated with the first data entry in memory for analysis; and</p>	<p>A. EP1980986A2</p> <p>"1. A mobile financial transaction system operative for allowing user selection of a payment source for use in making a mobile financial payment using a mobile device connected for communications with a wireless network, comprising the steps of:</p> <p>...</p> <p>a mobile financial transaction system (MFTS) database associated with the MFTS for storing user information, payment to make information associated with the one or more payees, and payment source information associated with at least one account associated with at least one financial service provider of a user;" <i>Firethorn Holdings</i> at claim 1</p> <p>"According to another aspect, the MFTS is further coupled for electronic communications with a user's computer via a data communications network such as the Internet. A method according this aspect comprises the steps of: (i) providing a web application in association with the MFTS, (ii) receiving user information via the web application corresponding to financial service providers, accounts at financial service providers, and payees, and (iii) storing the user information input via the web application in the MFTS database for use in connection with payments initiated via the user mobile device. In another embodiment, the method further comprises the steps of retrieving and displaying transaction information corresponding to transactions conducted via the user mobile device, via the web application, to a user via user's computer." <i>Firethorn Holdings</i> at par. 0031</p> <p>"Generally speaking, information associated with a payment source (PS) 30 includes the name(s) of the account owner(s) (i.e. the person who owns or controls the funds), account numbers, account balances, credit available and credit limits for a credit card or other credit facilities, available cash advance amount, names of other authorized users or co-owners</p>

(cont.)

1.g. **storing at least a portion of the information associated with the first data entry in memory for analysis;**
and

of the account, **special personal identification numbers (PIN)**, restrictions on use of the account, etc." *Firethorn Holdings* at par. 0105

"In response to selection of the Mobile Wallet application in screen 1302, a login screen 1304 is displayed. In this screen, **the user is prompted to enter a predetermined number of digits as a PIN or pass-code to enter the "Mobile Wallet" as a security measure.** In alternative embodiments, a login screen 1304 or equivalent functionality can be placed at other locations of the screen or in other situations, as when a user turns on the mobile device, chooses applications, selects "Mobile Wallet", views bills, pays bills, or other appropriate location and/or circumstance." *Firethorn Holdings* at par. 0247

"In response to **entry of a valid login or PIN**, screen 1306 is displayed on the mobile device. This screen 1306 preferably comprises a menu of available options of the Mobile Wallet application according to an exemplary aspect of the invention." *Firethorn Holdings* at par. 0248

"Starting in FIG. 14 at step 1402, **the user opens a "Mobile Wallet" application on the mobile device 15; he/she is preferably required to log in by providing a password or PIN for verification** as indicated at step 1404. **The password or PIN is entered** by the user, is validated locally and the signed, encrypted messages are sent to the MFTS for authentication via an authentication message (AM) 1406. At step 1408, the MFTS 18 **validates the login** and allows the Mobile Wallet application to execute, for example, by providing a communication or authentication confirmation message (ACM) 1410 back to the mobile device 15 that includes a signal or validation code that allows the Mobile Wallet application to execute on the mobile device 15. **If the user enters an incorrect password or PIN a predetermined number of times in a row, preferably he/she is denied service and the mobile device is locked.** In this case the user is required to take steps (not shown) to access the User Site 153 or contact a customer service representative to unlock the mobile device." *Firethorn Holdings* at par. 0256

1.h. receiving, at **the terminal machine, a terminal dialogue module that updates at least a portion of the first code to produce first updated code,**

A. EP1980986A2

"34. A mobile device for selecting a payment source for making a mobile financial payment via a wireless network, comprising:

a mobile device connected for wireless communications via a mobile communication service provider to a mobile financial transaction system (MFTS), **the mobile device** including a display, user input means, a processor, and a memory; and

mobile device software operative on **the mobile device** processor comprising **program code** for carrying out the computer-implemented steps of:

wirelessly receiving summarized payment source information from a mobile financial transaction system (MFTS), the summarized payment source information based on payment source information received from a financial service provider with whom a user maintains a relationship;

...

displaying information corresponding to a plurality of accounts available to the user as a payment source for use in connection with making the payment;" *Firethorn Holdings* at claim 34

"Another aspect of the invention relates to real time updating of account information to **a user's mobile device.**

A method according to this aspect comprises the steps of:

(i) storing **a cached account balance in the mobile device representative of the balance at least one account of the user as of a particular date,** (ii) communicating with the financial service provider to obtain **updated account balance information** for the account, (iii) wirelessly communicating **updated account balance information** from the MFTS to **the user mobile device,** and (iv) in response to receipt of **updated account balance information** from the MFTS, displaying **updated account balance information** corresponding to the account to the user via **the mobile device.**" *Firethorn Holdings* at par. 0033

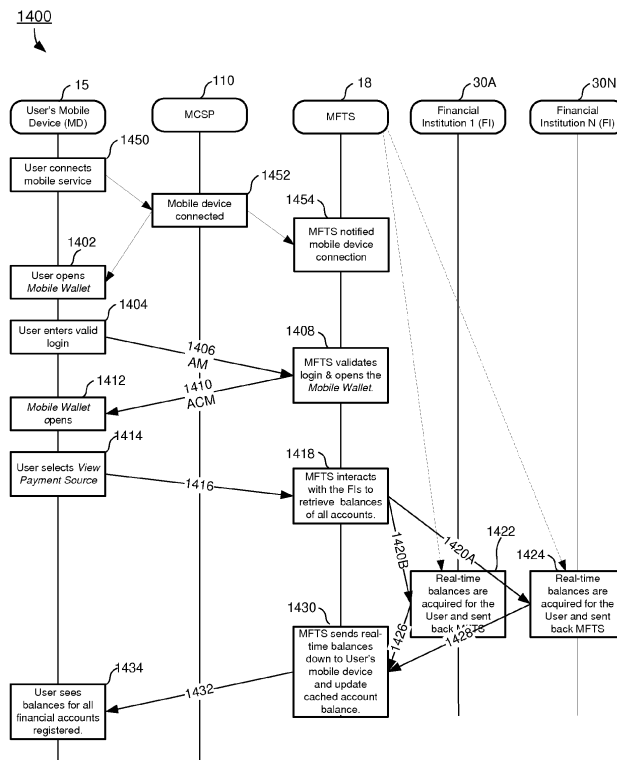
"Those skilled in the art will understand the features and aspects of a suitable computing environment in which aspects of the invention may be implemented. Although not required, the inventions will be described in the general context of **computer-executable instructions, such as program modules,** being executed by **computers** in networked environments. Such program modules are often reflected and

<p>(cont.) 1.h. receiving, at the terminal machine, a terminal dialogue module that updates at least a portion of the first code to produce first updated code,</p>	<p>illustrated by flow charts, sequence diagrams, exemplary screen displays, and other techniques used by those skilled in the art to communicate how to make and use such computer program modules. Generally, program modules include routines, programs, objects, components, data structures, etc. that perform particular tasks or implement particular abstract data types, within the computer. Computer-executable instructions, associated data structures, and program modules represent examples of the program code for executing steps of the methods disclosed herein. The particular sequence of such executable instructions or associated data structures represent examples of corresponding acts for implementing the functions described in such steps." <i>Firethorn Holdings</i> at par. 0093</p>
<p>1.i. wherein the first updated code adapts the terminal application to display a second prompt for the terminal machine's portion of a modified dialogue sequence with the service provider machine,</p>	<p>A. EP1980986A2 "34. A mobile device for selecting a payment source for making a mobile financial payment via a wireless network, comprising: a mobile device connected for wireless communications via a mobile communication service provider to a mobile financial transaction system (MFTS), the mobile device including a display, user input means, a processor, and a memory; and mobile device software operative on the mobile device processor comprising program code for carrying out the computer-implemented steps of: wirelessly receiving summarized payment source information from a mobile financial transaction system (MFTS), the summarized payment source information based on payment source information received from a financial service provider with whom a user maintains a relationship; ... displaying information corresponding to a plurality of accounts available to the user as a payment source for use in connection with making the payment;" <i>Firethorn Holdings</i> at claim 34</p> <p>"Another aspect of the invention relates to real time updating of account information to a user's mobile device. A method according to this aspect comprises the steps of: (i) storing a cached account balance in the mobile device representative of the balance at least one account of the user as of a particular date, (ii) communicating with the financial service provider to obtain updated account</p>

(cont.)

1.i. wherein **the first updated code** adapts **the terminal application** to display **a second prompt** for the **terminal machine's portion of a modified dialogue sequence** with the **service provider machine**,

balance information for the account, (iii) wirelessly communicating **updated account balance information** from **the MFTS** to the **user mobile device**, and (iv) in response to receipt of **updated account balance information** from **the MFTS**, displaying **updated account balance information** corresponding to the account to the user via **the mobile device**." *Firethorn Holdings* at par. 0033



SEQUENCE DIAGRAM FOR VIEWING PAYMENT SOURCES AND ACCOUNT BALANCES

FIG. 14

"According to an aspect of the invention, the user's selection and activation of a **View Payment Sources** command on the **Mobile Wallet** application causes the generation of a mobile payment instruction to the **MFTS**, which responds by requesting real time **updated account balance information** from the payment sources available to the user and provides such **updated account balance(s)** to the **user's mobile device**. It will be appreciated that such **updated account balance information** includes all types of payment sources including bank accounts, credit cards, credit unions, or any other financial account that can be accessed by a system and with methods as described herein."

<p>(cont.) 1.i. wherein the first updated code adapts the terminal application to display a second prompt for the terminal machine's portion of a modified dialogue sequence with the service provider machine,</p>	<p><i>Firethorn Holdings</i> at par. 0253</p> <p>"At step 1434, upon receipt of the account balances from financial institutions, information of all registered accounts is provided for the user to view. He/she can then use the navigation controls to view selected payment sources and account balances. The user can also perform other functions such as selecting a default payment method as described in connection with FIG. 13." <i>Firethorn Holdings</i> at par. 0261</p>
<p>1.j. wherein at least one of the first code, the second code, and the first updated code comprise intermediate code.</p>	<p>A. EP1980986A2</p> <p>"34. A mobile device for selecting a payment source for making a mobile financial payment via a wireless network, comprising:</p> <p>...</p> <p>mobile device software operative on the mobile device processor comprising program code for carrying out the computer-implemented steps of:" <i>Firethorn Holdings</i> at claim 34</p> <p>"Another delivery method is via a JAVA™ Archive file, also called a JAR, the platform for which is available from Sun Microsystems, Inc. In this case, the mobile application is constructed as a downloadable JAVA™ application that is downloaded into a JAVA-compatible mobile phone. Those skilled in the art will understand that the Java 2 Micro Edition (J2ME) programming environment may be used to develop applications for certain types of mobile phones (e.g. Motorola). Such applications are also called "applets" or "midlets", but essentially are computer programs that run within the specific operating environment of the particular type of mobile phone. Details of the J2ME application development environment are available from the manufacturer." <i>Firethorn Holdings</i> at par. 0188</p>