

# **PATROLL Winning Submission**

### U.S. Patent 8,572,571

U.S. Patent 8,572,571 ("S3G Technology" or the "patent-at-issue") was filed on July 21, 2010 and claims the benefit of U.S. Provisional Pat. App. No. 61/228,140, filed July 23, 2009, and U.S. Provisional Pat. App. No. 61/325,212, filed April 16, 2010. Claim 1 of the patent-atissue is generally directed to a method of conducting a dialogue between a terminal machine and a service provider machine. The method comprises displaying prompts on a terminal display using a terminal application with a set of computer-executable instructions and code for the terminal machine's portion of the dialogue. Data entries associated with the prompts are accepted using the terminal machine, and information is sent over a wireless network to the service provider machine. The service provider machine uses a provider application that comprises its own set of computer-executable instructions and code for its portion of the dialogue. The terminal machine receives a terminal dialogue module over a wireless network from an update server machine. The terminal dialogue module updates its set of code, which adapts the terminal application to use another sequence of prompts and data entries for its portion of the modified dialogue sequence without modifying its set of computer-executable instructions. The service provider machine receives over the wireless network from the update server machine a provider dialogue module that updates its set of code, which adapts the provider application to use another sequence of prompts and data entries for its portion of the modified dialogue sequence without modifying the second set of computer-executable instructions.

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.

The primary reference, U.S. Patent 7,080,371 ("*Oracle*"), was filed on September 1, 2000 and claims the benefit of U.S. Provisional Pat. App. No. 60/076,667, filed March 3, 1998. The patent generally relates to distributing and instantiating software version upgrades in a distributed computing environment. This includes defining the required versions of software as the contents of a software version upgrade kit. This is written, e.g., as a table of contents or a list,



to a database to generate software version upgrade kit tables. These tables are used to generate software version upgrade kits. The kits are then used as a source to download copies of the upgrade kits to clients to be upgraded. This enables upgrading the software on the client.

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



<b>U\$8572571</b> ("S3G Technology")	<ul> <li>A. EP1980986A2 ("Firethorn Holdings")</li> <li>B. US7080371B1 ("Oracle")</li> </ul>
1.pre. A method of conducting a dialogue between a terminal machine and a service provider machine, the method comprising:	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 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 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; 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
	"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 "According to one embodiment of the present invention, the



(cont.) 1.pre. A method of conducting a dialogue between a terminal machine and a service provider machine, the method comprising:	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." <i>Firethorn Holdings</i> at par. 0150
	<b>B. US7080371B1</b> "1. A method for a server computer to distribute and install software upgrades on client computers, comprising:" <i>Oracle</i> at claim 1
	"This invention relates to a system, method, and program product for providing software updates online. The updates may be provided to one or more of a sequence of individual computers, or to a network of computers. In a preferred exemplification, the software updates are provided to individual clients in a client server-network, for example a client-server network of the type executing a partially replicated relational database or transaction processing system, an enterprise on a WAN or a LAN." <i>Oracle</i> at col. 1:18-26
	That is, the sol, are provider or the upgrader, e.g., the database administrators must be able to upgrade all types of the installations in an enterprise, including connected clients, remote clients, regional servers and application servers." Oracle at col. 2:3-8
1.a. displaying a prompt, of a first sequence of prompts, on a terminal display of the terminal machine by running a terminal application,	<ul> <li>A. EP1980986A2</li> <li>"34. A mobile device for selecting a payment source for making a mobile financial payment via a wireless network, comprising:</li> <li>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</li> <li>mobile device software operative on the mobile device processor comprising program code for carrying out the computer-implemented steps of:</li> </ul>



1.a. displaying a prompt, of a first sequence of prompts, on a terminal display of the terminal machine by running a terminal application, 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;" *Firethorn Holdings* 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**, ...." *Firethorn Holdings* 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." *Firethorn Holdings* at par. 0105





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

### B. US7080371B1

"The client automatically detects and applies upgrades as needed. If an upgrade is detected, the client notifies the user of the software components to upgrade, encourages the user to apply the upgrade and prompts the user to start the upgrade. The system automatically downloads the appropriate upgrade kits to the local disk if the upgrade kit does not already exist on the local disk." Oracle at col. 14:4-



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

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"After the upgrade kit is available on the local machine, the client invokes the upgrade wizard to apply the upgrade. The upgrade wizard displays the upgrade kit items and prompts the user to start the upgrade. The upgrade wizard starts processing the upgrade kit items and regularly informs the user of the progress. When the upgrade wizard is complete, it restarts the original program." *Oracle* at col. 14:38-44

"After the upgrader, e.g., the database administrator, "releases" the upgrade kit, any mobile or connected user can download and apply the upgrade kit to the local machine. The user navigates this applet and double clicks on an upgrade kit. If the upgrade kit archive file is not accessible on the local machine (i.e. mobile user), then the applet asks the user whether they want to submit a request to download the upgrade kit archive file in the next synchronization session. If the upgrade kit is already accessible on the local machine, then the applet invokes the upgrade wizard to apply the upgrade kit to the local machine. The upgrade wizard waits for the client to exit before starting the upgrade." *Oracle* at col. 16:12-23

"A major component of the system, method, apparatus, and program product of our invention is the upgrade wizard. The primary function of the upgrade wizard is to apply upgrade kits. In a preferred exemplification of our invention the upgrade wizard has very simple user interface. When the upgrade wizard first starts up, it displays the title and description of the upgrade kit to the user. After the user presses the OK or other similar button, the upgrade wizard then displays a list of upgrade kit items to the user. The upgrade wizard displays the title of the upgrade kit item. When the user highlights a specific upgrade kit item, the upgrade wizard also displays the description of the chosen item in the bottom frame." Oracle at col. 18:8-20

"After the user reviews the upgrade kit items and presses the START or other similar button, the upgrade wizard performs each of the upgrade kit items in order. A bar indicator may show an estimate of the progress of the upgrade. The upgrade wizard may also highlight the upgrade kit item after the item is completed." *Oracle* at col. 18:21-27



1.b. the terminal application comprising a first set of computer- executable instructions and a first set of code that conduct the terminal machine's portion of the dialogue;	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;" <i>Firethorn</i> <i>Holdings</i> at claim 34
	"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, <b>the inventions will be described in the general context of</b> <b>computer-executable instructions, such as program</b> <b>modules, being executed by computers in networked</b> <b>environments</b> . 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. <b>Computer-executable</b> <b>instructions, associated data structures, and program</b> <b>modules represent examples of the program code for</b> <b>executing steps of the methods disclosed herein</b> . 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
	"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



1.b. the terminal application comprising a first set of computerexecutable instructions and a first set of code that conduct the terminal machine's portion of the dialogue; **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



FIG. 13

"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

"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



1.b. the terminal application comprising a first set of computerexecutable instructions and a first set of code that conduct the terminal machine's portion of the dialogue; 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





1.b. the terminal application comprising a first set of computerexecutable instructions and a first set of code that conduct the terminal machine's portion of the dialogue; 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

### B. US7080371B1

"1. A method for a server computer to distribute and install software upgrades on client computers, comprising:

for each of the multiple client computers,

for each of the downloaded software upgrade kits, invoking the upgrade wizard for that software upgrade kit on that client computer to upgrade one of the not-up-to-date software components on that client computer, the upgrade wizard performing the software component upgrade by performing the actions of the upgrade kit and using the files of the upgrade kit, the upgrade wizard keeping track of the upgrade's progress and, if an error is detected during the upgrade, automatically rolling back the changes and restoring the client computer to a pre-upgrade state; and" Oracle at claim 1

"The upgrade wizard is preferably a standalone single executable (no DLLs required) that can read and apply an upgrade kit to the local machine. The upgrade wizard keeps track of the upgrade's progress and automatically recovers from errors. For example, it creates a back up of the local database and local files while applying an upgrade kit. If an error occurs anytime during the upgrade, the upgrade wizard attempts to rollback all the changes and restores the local machine to the original state." Oracle at col. 6:46-54

"Each upgrade kit must contain all the files and commands needed to install the software components. For example, an upgrade kit can be used to install Microsoft Word 7.0.2 on all clients. This upgrade kit must contain all the files (e.g. executables, sample files, templates, etc.) and commands



(cont.) 1.b. <b>the terminal application</b>	(e.g. update the registry, build short cuts, etc.) to install Microsoft Word 7.0.2." Oracle at col. 8:6-12
comprising a first set of computer- executable instructions and a first set of code that conduct the terminal machine's portion of the dialogue;	"After the upgrade kit is accessible on the local machine, the upgrade wizard applies the upgrade. The upgrade wizard extracts files from the upgrade kit archive file, then performs each of the upgrade kit actions in sequence. If an error occurs, the upgrade wizard rolls back the upgrade kit actions and displays an error to the user. The program detects and invokes upgrades again the next time." Oracle at col. 10:11-17
	"After the upgrade kit is available on the local machine, the client invokes the upgrade wizard to apply the upgrade. The upgrade wizard displays the upgrade kit items and prompts the user to start the upgrade. The upgrade wizard starts processing the upgrade kit items and regularly informs the user of the progress. When the upgrade wizard is complete, it restarts the original program." Oracle at col. 14:38-44
1.c. accepting a data entry, of a first sequence of data entries, using the terminal machine, wherein the first sequence of data entries is associated with the first sequence of prompts;	<b>A. EP1980986A2</b> "9. After the PIN is received and stored, the mobile device is ready for use, and displays a main menu screen that allows entry of billing entities, payment sources, viewing of balances in accounts that were previously entered by the user via the user site web application 153, etc." <i>Firethorn</i> <i>Holdings</i> at par. 0200
	"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." <i>Firethorn Holdings</i> at par. 0245



1.c. accepting a data entry, of a first sequence of data entries, using the terminal machine, wherein the first sequence of data entries is associated with the first sequence of prompts;



FIG. 13

"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



1.c. accepting a data entry, of a first sequence of data entries, using the terminal machine, wherein the first sequence of data entries is associated with the first sequence of prompts; 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 data entry, of a first sequence of data entries, using the terminal machine, wherein the first sequence of data entries is associated with the first sequence of prompts; of the software components to upgrade, encourages the user to apply the upgrade and prompts the user to start the upgrade. The system automatically downloads the appropriate upgrade kits to the local disk if the upgrade kit does not already exist on the local disk." *Oracle* at col. 14:4-11

"After the upgrade kit is available on the local machine, the client invokes the upgrade wizard to apply the upgrade. The upgrade wizard displays the upgrade kit items and prompts the user to start the upgrade. The upgrade wizard starts processing the upgrade kit items and regularly informs the user of the progress. When the upgrade wizard is complete, it restarts the original program." *Oracle* at col. 14:38-44

"After the upgrader, e.g., the database administrator, "releases" the upgrade kit, any mobile or connected user can download and apply the upgrade kit to the local machine. The user navigates this applet and double clicks on an upgrade kit. If the upgrade kit archive file is not accessible on the local machine (i.e. mobile user), then the applet asks the user whether they want to submit a request to download the upgrade kit archive file in the next synchronization session. If the upgrade kit is already accessible on the local machine, then the applet invokes the upgrade wizard to apply the upgrade kit to the local machine. The upgrade wizard waits for the client to exit before starting the upgrade." Oracle at col. 16:12-23

"A major component of the system, method, apparatus, and program product of our invention is the upgrade wizard. The primary function of the upgrade wizard is to apply upgrade kits. In a preferred exemplification of our invention the upgrade wizard has very simple user interface. When the upgrade wizard first starts up, it displays the title and description of the upgrade kit to the user. After the user presses the OK or other similar button, the upgrade wizard then displays a list of upgrade kit items to the user. The upgrade wizard displays the title of the upgrade kit item. When the user highlights a specific upgrade kit item, the upgrade wizard also displays the description of the chosen item in the bottom frame." Oracle at col. 18:8-20

"After the user reviews the upgrade kit items and presses



(cont.)	the START or other similar button, the upgrade wizard
1.c. accepting a data entry, of a first	performs each of the upgrade kit items in order. A bar
sequence of data entries, using the	indicator may show an estimate of the progress of the
terminal machine, wherein the first	upgrade. The upgrade wizard may also highlight the
sequence of data entries is associated	upgrade kit item after the item is completed." Oracle at col.
with the first sequence of prompts;	18:21-27
1.d. communicating information over a wireless network from the terminal machine to the service provider machine, the information regarding the first sequence of data entries;	A. EP1980986A2 "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." <i>Firethorn Holdings</i> at par. 0031 "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." <i>Firethorn Holdings</i> 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 providing a communication con authentication confirmation message (ACM) 1410 back to 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." <i>Firethorn Holdings</i> at par. 0256



1.d. communicating information over a wireless network from the terminal machine to the service provider machine, the information regarding the first sequence of data entries;





1.d. communicating information over a wireless network from the terminal machine to the service provider machine, the information regarding the first sequence of data entries; *Oracle* at col. 1:18-26

"The client automatically detects and applies upgrades as needed. If an upgrade is detected, the client notifies the user of the software components to upgrade, encourages the user to apply the upgrade and prompts the user to start the upgrade. The system automatically downloads the appropriate upgrade kits to the local disk if the upgrade kit does not already exist on the local disk." *Oracle* at col. 14:4-11

"After the upgrade kit is available on the local machine, the client invokes the upgrade wizard to apply the upgrade. The upgrade wizard displays the upgrade kit items and prompts the user to start the upgrade. The upgrade wizard starts processing the upgrade kit items and regularly informs the user of the progress. When the upgrade wizard is complete, it restarts the original program." *Oracle* at col. 14:38-44

"After the upgrader, e.g., the database administrator, "releases" the upgrade kit, any mobile or connected user can download and apply the upgrade kit to the local machine. The user navigates this applet and double clicks on an upgrade kit. If the upgrade kit archive file is not accessible on the local machine (i.e. mobile user), then the applet asks the user whether they want to submit a request to download the upgrade kit archive file in the next synchronization session. If the upgrade kit is already accessible on the local machine, then the applet invokes the upgrade wizard to apply the upgrade kit to the local machine. The upgrade wizard waits for the client to exit before starting the upgrade." Oracle at col. 16:12-23

"A major component of the system, method, apparatus, and program product of our invention is the upgrade wizard. The primary function of the upgrade wizard is to apply upgrade kits. In a preferred exemplification of our invention the upgrade wizard has very simple user interface. When the upgrade wizard first starts up, it displays the title and description of the upgrade kit to the user. After the user presses the OK or other similar button, the upgrade wizard then displays a list of upgrade kit items to the user. The upgrade wizard displays the title of the upgrade kit item. When the user highlights a specific upgrade kit item, the upgrade wizard also displays the



(cont.) 1.d. communicating information over a wireless network from the	<b>description of the chosen item in the bottom frame</b> ." <i>Oracle</i> at col. 18:8-20
terminal machine to the service provider machine, the information regarding the first sequence of data entries;	"After the user reviews the upgrade kit items and presses the START or other similar button, the upgrade wizard performs each of the upgrade kit items in order. A bar indicator may show an estimate of the progress of the upgrade. The upgrade wizard may also highlight the upgrade kit item after the item is completed." Oracle at col. 18:21-27
1.e. the service provider machine using a provider application, the provider application comprising a second set of computer-executable instructions and a second set of code that conduct the service provider machine's portion of the dialogue:	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:
and	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 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," <i>Firethorn</i> <i>Holdings</i> 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



1.e. the service provider machine using a provider application, the provider application comprising a second set of computer-executable instructions and a second set of code that conduct the service provider machine's portion of the dialogue; and 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 150 interface first establishes communication link to the mobile 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



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





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

"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 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

### B. US7080371B1

"1. A method for a server computer to distribute and install software upgrades on client computers, comprising: **under control of the server computer**,

defining contents of software version upgrade kits of software installed on client computers, the software version upgrade kits each being self-contained and comprising files, actions, and an upgrade wizard to upgrade a software component from one version to another version;" Oracle at claim 1

### **"Upgrade Wizard**

The server invokes an upgrade wizard to apply an upgrade kit. After invoking the upgrade wizard, the program exits so as to release any locks on database tables or files that



(cont.) 1.e. the service provider machine using a provider application, the provider application comprising a second set of computer-executable instructions and a second set of code that conduct the service provider machine's portion of the dialogue; and	need to be upgraded. For example, the client invokes the upgrade wizard and exits. The Server sends a shutdown messages to all currently active server components, waits for all server components to stop, invokes the upgrade wizard and exits. The upgrade wizard is preferably a standalone single executable (no DLLs required) that can read and apply an upgrade kit to the local machine. The upgrade wizard keeps track of the upgrade's progress and automatically recovers from errors. For example, it creates a back up of the local database and local files while applying an upgrade kit. If an error occurs anytime during the upgrade, the upgrade wizard attempts to rollback all the changes and restores the local machine to the original state." <i>Oracle</i> at col. 6:38-54 "Each upgrade kit must contain all the files and commands needed to install the software components. For example, an upgrade kit can be used to install Microsoft Word 7.0.2 on all clients. This upgrade kit must contain all the files (e.g. executables, sample files, templates, etc.) and commands (e.g. update the registry, build short cuts, etc.) to install Microsoft Word 7.0.2." <i>Oracle</i> at col. 8:6-12
1.f. receiving, at the terminal machine, a terminal dialogue module over a wireless network, from an update server machine,	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;" <i>Firethorn</i> <i>Holdings</i> at claim 34



1.f. receiving, at the terminal machine, a terminal dialogue module over a wireless network, from an update server machine, "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.." Firethorn Holdings at par. 0031

"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 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

"Secure Mobile Client Delivery: In accordance with one aspect of the invention, the mobile application is delivered (e.g. by downloading) into a mobile device via a secure



1.f. receiving, at the terminal machine, a terminal dialogue module over a wireless network, from an update server machine, wireless delivery method. In accordance with this aspect, the mobile application is constructed as a wirelesslydeliverable or downloadable application or "applet" that is downloaded into a mobile phone from a central site, e.g. from the MFTS 18. Those skilled in the art will understand that a number of different but generally equivalent programming environments currently exist to develop applications for various types of mobile phones and wireless data communication technologies." *Firethorn Holdings* at par. 0186

"The MFTS identifies the type of mobile device possessed by the payee and an appropriate Mobile Wallet application code, that is executable on the payee's mobile device, is sent to the mobile device, and a self installation process starts on the mobile device after the Mobile Wallet application code is downloaded to the mobile device." *Firethorn Holdings* at par. 0379

### B. US7080371B1

"This invention relates to a system, method, and program product for providing software updates online. The updates may be provided to one or more of a sequence of individual computers, or to a network of computers. In a preferred exemplification, the software updates are provided to individual clients in a client server-network, for example a client-server network of the type executing a partially replicated relational database or transaction processing system, an enterprise on a WAN or a LAN." *Oracle* at col. 1:18-26

"Our invention provides software version upgrades and database schema synchronization. The software provider or upgrader, e.g., the database administrator, applies and distributes database schema changes to all remote databases including mobile databases and regional databases. Moreover, the software provider or upgrader, e.g., the database administrator, applies minor schema changes (e.g. database extensions), patches and major schema changes without manual intervention." Oracle at col. 2:35-43

"In one exemplification of our invention the distributed computing environment is database management system having replicated or partially replicated databases, and the database schema version on the client is compared to the



(cont.) 1.f. receiving, at the terminal machine, a terminal dialogue module over a wireless network, from an update server machine,	database schema version on server, with reinitialization of the database version on the client if the database schema version on the client and the server do not match, and synchronization of the database the client with the database on the server if the database schema versions on the client and server match." Oracle at col. 3:5-14
	"For example, in the case of Siebel Remote, the Siebel Client checks the versions of the Siebel Schema and Siebel Client components, but does not necessarily check the Siebel Server component." <i>Oracle</i> at col. 6:23-27
	"Schema. The schema is the database schema, also referred to as a meta-database. This includes the database tables, indexes, views, seed data and repository data that must be installed in the database to run." <i>Oracle</i> at col. 7:50-53
	"After the docking client connects to the docking server, the docking client asks docking server for the server database schema versions." Oracle at col. 11:27-29
	"The Schema upgrade kit consists of one or more of the following items:
	DDL file to make schema changes
	DAT files to install seed data
	Repimexp files to install Repository
	SQL scripts to perform special upgrade steps, convert data, and the like
	SQL script to update version numbers in the S_APP_VER
	table
	Files to update software components. This includes adding, deleting and updating software component information. At the minimum, the file must update required versions of the components (e.g. you must use the new version of Tools against the new schema). Files to install upgrade kits that defines. For example, upgrade kits to install a new version of Tools, Server and the like " Oracle at col. 12:18-24
1.g. wherein the terminal dialogue module modifies the first set of code to produce a first set of 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



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(cont.) 1.g. wherein the terminal dialogue module modifies the first set of code to produce a first set of updated code,	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</i> <i>Holdings</i> 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." <i>Firethorn Holdings</i> 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 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



# **Unified**Patents

(cont.)

1.g. wherein the terminal dialogue module modifies the first set of code to produce a first set of updated code, **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

# B. US7080371B1

"6. A client-server computing system comprising a server computer and at least one client computer that periodically docks with the server computer, the server computer including a database management system and a database, the database being partially replicated from the server computer to the client computer during docking, the client-server system being configured to perform a method to apply upgrades from the server computer to software components resident on the client computer, the method comprising:

defining contents of version upgrade kits that each include files and actions and an indication of an upgrade wizard to upgrade one or more software components from one version to another version, the software components to be upgraded by at least some of the upgrade kits including database schema for the partially replicated database on the client computer;

writing the contents of the version upgrade kits to a database as a table of contents, the table of contents showing the contents of each upgrade kit and software components required by an upgrade using an upgrade kit; determining one or more software components for a currently running database management software program on the client computer that are not up-to-date, the database management software program interacting with the partially replicated database on the client computer, those one or more software components including at least one of the database schema for the partially replicated database on the client computer;

retrieving identifications from the table of contents of one or more version upgrade kits to download from the server computer to the client computer to effect upgrades of the determined software components from installed versions to required versions, the identified upgrade kits including one or more of the at least some upgrade kits that upgrade the database schema for the partially replicated database on the client computer;

building copies of the identified upgrade kits and of



(cont.) 1.g. wherein the terminal dialogue module modifies the first set of code to produce a first set of updated code,	additional upgrade kits based on the table of contents, the additional upgrade kits for performing upgrades of software components on the client computer that are not needed for the database management software program;" Oracle at claim 6
1.h. wherein the first set of updated code adapts the terminal application, to use a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine,	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 (MIFTS), 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</i> <i>Holdings</i> 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." <i>Firethorn Holdings</i> at par. 0033 "9 After the PIN is received and stored the mobile device



1.h. wherein the first set of updated code adapts the terminal application, to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine. is ready for use, and displays a main menu screen that allows entry of billing entities, payment sources, viewing of balances in accounts that were previously entered by the user via the user site web application 153, etc." *Firethorn Holdings* at par. 0200



VIEW PAYMENT SOURCES & ACCOUNT BALANCE

"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

"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." *Firethorn Holdings* at par. 0257

"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



1.h. wherein the first set of updated code adapts the terminal application, to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine. 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." *Firethorn Holdings* at par. 0253





(cont.) 1.h. wherein the first set of updated code adapts the terminal application, to use a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine,	par. 0261 B. US7080371B1 "1. A method for a server computer to distribute and install software upgrades on client computers, comprising:
	for each of the multiple client computers, for each of the downloaded software upgrade kits, invoking the upgrade wizard for that software upgrade kit on that client computer to upgrade one of the not-up-to-date software components on that client computer, the upgrade wizard performing the software component upgrade by performing the actions of the upgrade kit and using the files of the upgrade kit, the upgrade wizard keeping track of the upgrade's progress and, if an error is detected during the upgrade, automatically rolling back the changes and restoring the client computer to a pre-upgrade state; and" Oracle at claim 1
	"The upgrade wizard is preferably a standalone single executable (no DLLs required) that can read and apply an upgrade kit to the local machine. The upgrade wizard keeps track of the upgrade's progress and automatically recovers from errors. For example, it creates a back up of the local database and local files while applying an upgrade kit. If an error occurs anytime during the upgrade, the upgrade wizard attempts to rollback all the changes and restores the local machine to the original state." Oracle at col. 6:46-54
	"Each upgrade kit must contain all the files and commands needed to install the software components. For example, an upgrade kit can be used to install Microsoft Word 7.0.2 on all clients. This upgrade kit must contain all the files (e.g. executables, sample files, templates, etc.) and commands (e.g. update the registry, build short cuts, etc.) to install Microsoft Word 7.0.2." Oracle at col. 8:6-12
	"After the upgrade kit is accessible on the local machine, the upgrade wizard applies the upgrade. The upgrade wizard extracts files from the upgrade kit archive file, then performs each of the upgrade kit actions in sequence. If an error occurs, the upgrade wizard rolls back the upgrade kit

actions and displays an error to the user. The program detects and invokes upgrades again the next time." Oracle



1.h. wherein the first set of updated code adapts the terminal application, to use a second sequence of prompts and a second sequence of data entries for the terminal machine's portion of a modified dialogue sequence with the service provider machine,

### at col. 10:11-17

"After the upgrade kit is available on the local machine, the client invokes the upgrade wizard to apply the upgrade. The upgrade wizard displays the upgrade kit items and prompts the user to start the upgrade. The upgrade wizard starts processing the upgrade kit items and regularly informs the user of the progress. When the upgrade wizard is complete, it restarts the original program." *Oracle* at col. 14:38-44

"After the upgrader, e.g., the database administrator, "releases" the upgrade kit, any mobile or connected user can download and apply the upgrade kit to the local machine. The user navigates this applet and double clicks on an upgrade kit. If the upgrade kit archive file is not accessible on the local machine (i.e. mobile user), then the applet asks the user whether they want to submit a request to download the upgrade kit archive file in the next synchronization session. If the upgrade kit is already accessible on the local machine, then the applet invokes the upgrade wizard to apply the upgrade kit to the local machine. The upgrade wizard waits for the client to exit before starting the upgrade." Oracle at col. 16:12-23

"A major component of the system, method, apparatus, and program product of our invention is the upgrade wizard. The primary function of the upgrade wizard is to apply upgrade kits. In a preferred exemplification of our invention the upgrade wizard has very simple user interface. When the upgrade wizard first starts up, it displays the title and description of the upgrade kit to the user. After the user presses the OK or other similar button, the upgrade wizard then displays a list of upgrade kit items to the user. The upgrade wizard displays the title of the upgrade kit item. When the user highlights a specific upgrade kit item, the upgrade wizard also displays the description of the chosen item in the bottom frame." Oracle at col. 18:8-20

"After the user reviews the upgrade kit items and presses the START or other similar button, the upgrade wizard performs each of the upgrade kit items in order. A bar indicator may show an estimate of the progress of the upgrade. The upgrade wizard may also highlight the upgrade kit item after the item is completed." Oracle at col. 18:21-27



1.i. wherein the terminal dialogue module does not modify the first set of computer-executable instructions;	<b>B. US7080371B1</b> <b>"The upgrade wizard is preferably a standalone single</b> <b>executable (no DLLs required) that can read and apply an</b> <b>upgrade kit to the local machine. The upgrade wizard</b> <b>keeps track of the upgrade's progress and automatically</b> <b>recovers from errors. For example, it creates a back up of</b> <b>the local database and local files while applying an upgrade</b> <b>kit. If an error occurs anytime during the upgrade, the</b> <b>upgrade wizard attempts to rollback all the changes and</b> <b>restores the local machine to the original state</b> ." <i>Oracle</i> at col. 6:46-54
	"The upgrade wizard initializes new remote databases, performs database re-extracts, and handles database schema upgrades." <i>Oracle</i> at col. 10:25-27
	"Major Schema Change. If the major and minor schema versions of the local database and the server database do not match, then a database re-initialization is "required". A change in the major or minor schema versions implies that the server database has undergone a major schema change. The docking client discards all pending transactions to upload. The docking client informs the mobile user and invokes the upgrade wizard to initialize the local database and upgrade sol, ware components (if any)." Oracle at col. 11:30-38
	"Upgrade wizard. The upgrade wizard is a simple, standalone program whose sole function is to apply upgrade kits to a local machine. <u>The upgrade wizard does</u> <u>not connect to or require the Database to run</u> ." <i>Oracle</i> at col. 19:21-24
	" <u>The upgrade wizard has no dependencies on any other</u> <u>program.</u> It does not load CFG files or DLLs." <i>Oracle</i> at col. 20:4-6
1.j. wherein the service provider machine receives, over the wireless network from the update server machine, a provider dialogue module that modifies the second set of code to produce a second set of updated code	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:
upuateu coue,	a mobile financial transaction system (MFTS) database associated with the MFTS for storing user information, payment to make information associated with the one or



# **Unified**Patents

(cont.)

1.j. wherein the service provider machine receives, over the wireless network from the update server machine, a provider dialogue module that modifies the second set of code to produce a second set of updated code, more payees, and payment source information associated with at least one account associated with at least one financial service provider of a user;

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

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

. . .

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;" *Firethorn Holdings* at claim 1

"Another aspect of the invention relates to methods and systems for obtaining real time account balance information for a plurality of financial accounts maintained at one or more financial service providers utilizing a mobile device. A mobile financial transaction system (MFTS) is coupled for wireless communications with a mobile device of a user and is also coupled for electronic communication with one or more financial service providers with which the user maintains one or more accounts. The mobile device stores a cached account balance representative of the balance in each account as of a particular date. The MFTS communicates with financial service providers to obtain updated account balance information for a user's accounts. The updated account balance information is wirelessly communicated to a user's mobile device. In response to receipt of updated account balance information from the MFTS, the mobile device displays updated account balance information corresponding to the plurality of user accounts." Firethorn Holdings at par. 0040

"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



# **Unified**Patents

(cont.)

1.j. wherein the service provider machine receives, over the wireless network from the update server machine, a provider dialogue module that modifies the second set of code to produce a second set of updated code, 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

"The computer system of the MFTS connects to the computer systems of financial entities through various types of computer networks, such as a frame secured dedicated path 160, local-area networks (LANs), wide-area networks (WANs), etc. as well as the known Internet 120." *Firethorn Holdings* at par. 0121

"If an appropriate response from the queued task is received within the predetermined time (e.g. a response from the FSP containing information about the user's account balance, a payment confirmation, or other information), control from step 950 passes to step 960, where the transaction record created in conjunction with the incoming message is updated with any information that resulted from processing the queued task. For example, if the task involved making a payment using a particular payment source to a particular payee, and the payment is accepted and timely handled by the selected financial service provider, the transaction record may be updated to indicate confirmation of the payment. As discussed in connection with FIG. 8, the **MFTS** mobile device communication interface 150 may be responsible for updating the corresponding transaction record, but it will be appreciated that other circumstances may require that the FSP communication interface update a transaction record." Firethorn Holdings at par. 0223

"From the foregoing, those skilled in the art will understand and appreciate how the FSP communication interface 156 is operative to process messages from various MFTS processes (such as from the MFTS mobile device communication interface 150), communicate relevant information to a selected FSP, receive a response message, update any corresponding transaction or user database records, and/or communicate appropriate return messages to a user's mobile device or other message-delivering



1.j. wherein the service provider machine receives, over the wireless network from the update server machine, a provider dialogue module that modifies the second set of code to produce a second set of updated code,



transaction system (MFTS) includes a mobile financial transaction system (MFTS) database for storing user information and payment source information associated with at least one account associated with at least one



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### (cont.)

1.j. wherein the service provider machine receives, over the wireless network from the update server machine, a provider dialogue module that modifies the second set of code to produce a second set of updated code, **financial service provider**; and wherein the MFTS software is further operative for determining information corresponding to a selected account at a financial service provider identified in the payment instruction by retrieving said information from information prestored in the MFTS database." *Firethorn Holdings* at par. 0416

# B. US7080371B1

"1. A method for a server computer to distribute and install software upgrades on client computers, comprising: under control of the server computer,

defining contents of software version upgrade kits of software installed on client computers, the software version upgrade kits each being self-contained and comprising files, actions, and an upgrade wizard to upgrade a software component from one version to another version;" Oracle at claim 1

"This invention relates to a system, method, and program product for providing software updates online. The updates may be provided to one or more of a sequence of individual computers, or to a network of computers. In a preferred exemplification, the software updates are provided to individual clients in a client server-network, for example a client-server network of the type executing a partially replicated relational database or transaction processing system, an enterprise on a WAN or a LAN." *Oracle* at col. 1:18-26

"Our invention provides software version upgrades and database schema synchronization. The software provider or upgrader, e.g., the database administrator, applies and distributes database schema changes to all remote databases including mobile databases and regional databases. Moreover, the software provider or upgrader, e.g., the database administrator, applies minor schema changes (e.g. database extensions), patches and major schema changes without manual intervention." Oracle at col. 2:35-43

"Schema. The schema is the database schema, also referred to as a meta-database. This includes the database tables, indexes, views, seed data and repository data that must be installed in the database to run." *Oracle* at col. 7:50-53



1.j. wherein the service provider machine receives, over the wireless network from the update server machine, a provider dialogue module that modifies the second set of code to produce a second set of updated code, "Each upgrade kit must contain all the files and commands needed to install the software components. For example, an upgrade kit can be used to install Microsoft Word 7.0.2 on all clients. This upgrade kit must contain all the files (e.g. executables, sample files, templates, etc.) and commands (e.g. update the registry, build short cuts, etc.) to install Microsoft Word 7.0.2." Oracle at col. 8:6-12

"The upgrader, e.g., the database administrator, on the regional database runs standalone database initialization program to initialize a regional database. The program connects to the Remote server and downloads the database extract archive file from outbox directory. The program then invokes the upgrade wizard to initialize the regional database." *Oracle* at col. 11:65-67 through col. 12:1-4

"The Schema upgrade kit consists of one or more of the following items:

DDL file to make schema changes

DAT files to install seed data

**Repimexp files to install Repository** 

SQL scripts to perform special upgrade steps, convert data, and the like

SQL script to update version numbers in the S\_APP\_VER table

Files to update software components. This includes adding, deleting and updating software component information. At the minimum, the file must update required versions of the components (e.g. you must use the new version of Tools against the new schema).

Files to install upgrade kits that defines. For example, upgrade kits to install a new version of Tools, Server and the like." *Oracle* at col. 12:18-24

"At this point, the test/configuration database has the new schema and the software component required versions are set to the new versions. Any program that connects to the server database needs to apply one or more upgrade kits to get to the new required versions. For example, when the upgrader, e.g., the database administrator, logs in to the server database, the software used to login should detect a version mismatch and attempt to upgrade or call the upgrade. The upgrader, e.g., the database administrator, has two options to upgrade to the new Tools version: If an upgrade kit is available, download the upgrade kit and apply it to the local machine." *Oracle* at col. 12:54-65



1.k. wherein the second set of updated code adapts the provider application, to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine,

## A. EP1980986A2

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"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 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 computerimplemented 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



1.k. wherein the second set of updated code adapts the provider application, to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine,

"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 150 interface first establishes communication link to the mobile 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



1.k. wherein the second set of updated code adapts the provider application, to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine,



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 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



1.k. wherein the second set of updated code adapts the provider application, to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine, 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

"From the foregoing, those skilled in the art will understand and appreciate how the FSP communication interface 156 is operative to process messages from various MFTS processes (such as from the MFTS mobile device communication interface 150), communicate relevant information to a selected FSP, receive a response message, update any corresponding transaction or user database records, and/or communicate appropriate return messages to a user's mobile device or other message-delivering source." *Firethorn Holdings* at par. 0226

"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

"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." *Firethorn Holdings* at par. 0253

"Also at step 1412, the user can make a selection on screen 1306 (as shown in FIG. 13) to View Payment Sources. According to one exemplary aspect of the invention, the MFTS 18 automatically retrieves account balances for various payment sources (and retrieves bills to be paid), upon login at step 1412. According to another exemplary aspect of the invention, the MFTS retrieves such information in response to specific activation of the corresponding function, e.g. selection of View Payment



1.k. wherein the second set of updated code adapts the provider application, to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine, **Source (screen** 1306 in FIG. 13) sends a message to the **MFTS to cause retrieval of payment source information** such as account balances, and selection of View Bills (also screen 1306) sends a message to cause retrieval of payments to make." *Firethorn Holdings* at par. 0258

"At step 1430, the MFTS 18 collects and accumulates account balance information from the various financial institutions associated with the user, and sends one or more messages 1432 containing this information to the mobile device 15. According to one aspect of certain inventions, a collection of account balance information is accumulated and communicated to the mobile device in a single communication. According to another aspect, account balance information for a particular financial institution is communicated to the mobile device as quickly as possible after it is received, as the various systems of financial institutions are independent and operate asynchronously with respect to other systems." *Firethorn Holdings* at par. 0260

"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

"134. The system of clause 133, wherein the Mobile Wallet application provides a display on a mobile device of selectable commands including one or more of a View Bills command, a View Payment Sources command, and a Pay Bill(s) command.

136. The system of clause 134, wherein the MFTS software is further operative for retrieving current account information from one or more financial service providers and communicating the current account information to the mobile device upon receipt of such information from the one or more financial service providers in response to user activation of the View Payment Sources command at the mobile device." *Firethorn Holdings* at par. 0416

### B. US7080371B1

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"1. A method for a server computer to distribute and install software upgrades on client computers, comprising:



1.k. wherein the second set of updated code adapts the provider application, to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine, under control of the server computer, defining contents of software version upgrade kits of software installed on client computers, the software version upgrade kits each being self-contained and comprising files, actions, and an upgrade wizard to upgrade a software component from one version to another version;" Oracle at claim 1

## **"Upgrade Wizard**

The server invokes an upgrade wizard to apply an upgrade kit. After invoking the upgrade wizard, the program exits so as to release any locks on database tables or files that need to be upgraded. For example, the client invokes the upgrade wizard and exits. The Server sends a shutdown messages to all currently active server components, waits for all server components to stop, invokes the upgrade wizard and exits.

The upgrade wizard is preferably a standalone single executable (no DLLs required) that can read and apply an upgrade kit to the local machine. The upgrade wizard keeps track of the upgrade's progress and automatically recovers from errors. For example, it creates a back up of the local database and local files while applying an upgrade kit. If an error occurs anytime during the upgrade, the upgrade wizard attempts to rollback all the changes and restores the local machine to the original state." *Oracle* at col. 6:38-54

"Each upgrade kit must contain all the files and commands needed to install the software components. For example, an upgrade kit can be used to install Microsoft Word 7.0.2 on all clients. This upgrade kit must contain all the files (e.g. executables, sample files, templates, etc.) and commands (e.g. update the registry, build short cuts, etc.) to install Microsoft Word 7.0.2." Oracle at col. 8:6-12

"The status is set 'Pending' when defining the upgrade kit. After the upgrader, e.g., the database administrator, presses the "Release" button, then the status changes to 'Active'. The status changes to 'Inactive' if the upgrader, e.g., the database administrator changes the status chooses the delete record action on the upgrade kit." Oracle at col. 15:66-67 through col. 16:1-5

"After the upgrader, e.g., the database administrator, "releases" the upgrade kit, any mobile or connected user can download and apply the upgrade kit to the local



(cont.) 1.k. wherein the second set of updated code adapts the provider application, to use the second sequence of prompts and the second sequence of data entries for the service provider machine's portion of the modified dialogue sequence with the terminal machine,	machine. The user navigates this applet and double clicks on an upgrade kit. If the upgrade kit archive file is not accessible on the local machine (i.e. mobile user), then the applet asks the user whether they want to submit a request to download the upgrade kit archive file in the next synchronization session. If the upgrade kit is already accessible on the local machine, then the applet invokes the upgrade wizard to apply the upgrade kit to the local machine. The upgrade wizard waits for the client to exit before starting the upgrade." Oracle at col. 16:12-23
	"A major component of the system, method, apparatus, and program product of our invention is the upgrade wizard. The primary function of the upgrade wizard is to apply upgrade kits. In a preferred exemplification of our invention the upgrade wizard has very simple user interface. When the upgrade wizard first starts up, it displays the title and description of the upgrade kit to the user. After the user presses the OK or other similar button, the upgrade wizard then displays a list of upgrade kit items to the user. The upgrade wizard displays the title of the upgrade kit item. When the user highlights a specific upgrade kit item, the upgrade wizard also displays the description of the chosen item in the bottom frame." Oracle at col. 18:8-20
1.1. wherein the provider dialogue module does not modify the second set of computer-executable instructions.	B. US7080371B1 "Our invention provides software version upgrades and database schema synchronization. The software provider or upgrader, e.g., the database administrator, applies and distributes database schema changes to all remote databases including mobile databases and regional databases. Moreover, the software provider or upgrader, e.g., the database administrator, applies minor schema changes (e.g. database extensions), patches and major schema changes without manual intervention." Oracle at col. 2:35-43
	"The upgrade wizard is preferably a standalone single executable (no DLLs required) that can read and apply an upgrade kit to the local machine. The upgrade wizard keeps track of the upgrade's progress and automatically recovers from errors. For example, it creates a back up of the local database and local files while applying an upgrade kit. If an error occurs anytime during the upgrade, the upgrade wizard attempts to rollback all the changes and



(cont.) 1.1. wherein the provider dialogue module does not modify the second	<b>restores the local machine to the original state</b> ." <i>Oracle</i> at col. 6:46-54
set of computer-executable instructions.	"The upgrade wizard initializes new remote databases, performs database re-extracts, and handles database schema upgrades." <i>Oracle</i> at col. 10:25-27
	"Upgrade wizard. The upgrade wizard is a simple, standalone program whose sole function is to apply upgrade kits to a local machine. <u>The upgrade wizard does</u> <u>not connect to or require the Database to run</u> ." <i>Oracle</i> at col. 19:21-24
	"The upgrade wizard has no dependencies on any other program. It does not load CFG files or DLLs." Oracle at col. 20:4-6