METHOD AND SYSTEM FOR INITIATING PAYMENT TRANSACTION USING DEDICATED PAY BUTTON

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TITLE “METHOD AND SYSTEM FOR INITIATING PAYMENT TRANSACTION USING DEDICATED PAY BUTTON”

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TECHNICAL FIELD

[001] The present disclosure generally relates to the field of electronic payments. More particularly, but not exclusively, the disclosure relates to a dedicated and configurable pay button on computer hardware.

BACKGROUND

[002] The global gaming industry is an ever-growing industry with approximately billions of consumers and dollars. Additionally, streaming services (e.g., Twitch) have revolutionized the solitary nature of the gaming industry into a virtual community of spectators and influencers, which has thus increased payment transactions, opportunities, and/or methods into various folds. For example, consumers (e.g., gamers, viewers, etc.) can pay (or tip) streamers through “Bits” that are exchangeable for real money, while the streamers thereby provide fun commentary during the gaming experience as well as teaching skills to get around games or providing other useful tools.

[003] These payment transactions can be typically handled with a full game purchase, a “Pay-to-Play” purchase, an in-game purchase, or other similar purchase methods. The full game purchase typically requires paying upfront large amounts of money with cards or wallets, and such payment transaction can be delayed as the consumer can only get access to the paid-content after the payment transaction has completed. As a result, the “Pay-to-Play” or in-game purchases continue to grow as preferred payment methods, which allow the consumer to buy the content (e.g., additional stages, tips, etc.) during the gaming experience.

[004] The purchases need to be instantaneous, secure and un-intrusive to the consumer, the game, the streaming service, and the like. The “Pay-to-Play” purchase, however, is intrusive and not instantaneous. Where consumers have to reach out to the payment page to pay for the additional content. This payment page can be hidden within multiple layers behind the consumer’s profile page or other settings. Also, the “Pay-to-Play” purchase can often be unsafe for storing payment credentials as consumers are reluctant to save their payment credentials within the payment page of the gaming website due to fear of the payment information being hacked.
BRIEF DESCRIPTION OF THE DRAWINGS

[005] The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate exemplary embodiments and, together with the description, serve to explain the disclosed principles. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The same numbers are used throughout the figures to reference like features and components. Some embodiments of device or system and/or methods in accordance with embodiments of the present subject matter are now described, by way of example only, and with reference to the accompanying figures, in which:

[006] Figure 1 is an illustration of a block diagram of an electronic payment processing system configuring a Pay button on a computer hardware and linking the Pay button to an electronic wallet, in accordance with some embodiments of the present disclosure;

[007] Figure 2 is an illustration of a block diagram of a plurality of transactions implemented with an electronic wallet system, in accordance with some embodiments of the present disclosure;

[008] Figure 3 is an illustration of a detailed logic flow diagram for linking a Pay button on a computer hardware to an electronic wallet, in accordance with some embodiments of the present disclosure;

[009] Figure 4 is an illustration of a detailed logic flow diagram for linking a Pay button on a computer hardware to an electronic wallet through a merchant processor, in accordance with some embodiments of the present disclosure;

[010] Figure 5 is an illustration of a detailed logic flow diagram for linking a Pay button on a computer hardware to an electronic wallet through a secure channel of the computer hardware, in accordance with some embodiments of the present disclosure;

[011] Figure 6 is an illustration of a block diagram of a portable communication device, in
accordance with some embodiments of the present disclosure; and

[012] Figure 7 is an illustration of a block diagram of a computer system, in accordance with some embodiments of the present disclosure.

[013] The figures depict embodiments of the disclosure for purposes of illustration only. One skilled in the art will readily recognize from the following description that alternative embodiments of the structures and methods illustrated herein may be employed without departing from the principles of the disclosure described herein.

DETAILED DESCRIPTION

[014] In the present document, the word "exemplary" is used herein to mean "serving as an example, instance, or illustration." Any embodiment or implementation of the present subject matter described herein as "exemplary" is not necessarily to be construed as preferred or advantageous over other embodiments. While the disclosure is susceptible to various modifications and alternative forms, specific embodiment thereof has been shown by way of example in the drawings and will be described in detail below. It should be understood, however that it is not intended to limit the disclosure to the particular forms disclosed, but on the contrary, the disclosure is to cover all modifications, equivalents, and alternative falling within the spirit and the scope of the disclosure.

[015] The terms “comprises”, “comprising”, or any other variations thereof, are intended to cover a non-exclusive inclusion, such that a setup, device or method that comprises a list of components or steps does not include only those components or steps but may include other components or steps not expressly listed or inherent to such setup or device or method. In other words, one or more elements in a device or system or apparatus proceeded by “comprises… a” does not, without more constraints, preclude the existence of other elements or additional elements in the device or system or apparatus.

[016] The terms "an embodiment", "embodiment", "embodiments", "the embodiment", "the embodiments", "one or more embodiments", "some embodiments", and "one embodiment" mean
"one or more (but not all) embodiments of the invention(s)" unless expressly specified otherwise. The terms "including", "comprising", “having” and variations thereof mean "including but not limited to", unless expressly specified otherwise.

[017] According to some embodiments, devices, systems and methods are provided for configuring a Pay button on a computer hardware and linking the Pay button with an electronic wallet. The following description is presented to enable one of ordinary skill in the art to make and use the invention and is provided in the context of a patent application and its requirements. Various modifications to the exemplary embodiments and the generic principles and features described herein will be readily apparent. The exemplary embodiments are mainly described in terms of particular methods and systems provided in particular implementations. However, the methods and systems will operate effectively in other implementations. Phrases such as "exemplary embodiment", "one embodiment" and "another embodiment" may refer to the same or different embodiments. The embodiments will be described with respect to systems and/or devices having certain components. However, the systems and/or devices may include more or less components than those shown, and variations in the arrangement and type of the components may be made without departing from the scope of the invention. The exemplary embodiments will also be described in the context of particular methods having certain steps. However, the method and system operate effectively for other methods having different and/or additional steps and steps in different orders that are not inconsistent with the exemplary embodiments. Thus, the present invention is not intended to be limited to the embodiments shown but is to be accorded the widest scope consistent with the principles and features described herein.

[018] Prior to discussing the specific embodiments of the invention, a further description of some terms is be provided for a better understanding of embodiments of the invention.

[019] An “acquirer” is typically a business entity (e.g., a commercial bank) that has a business relationship with a particular merchant.

[020] An “electronic wallet” or “digital wallet” can store user profile information, payment information, bank account information, and/or the like and can be used in a variety of transactions, such as but not limited to e-Commerce, social networks, money transfer/personal
payments, mobile commerce, proximity payments, gaming, and/or the like for retail purchases, digital goods purchases, utility payments, purchasing games or gaming credits from gaming websites, transferring funds between users, and/or the like.

[021] An “issuer” is typically a business entity (e.g., a bank) which issues a payment device (such as a credit or debit card) to a consumer. Some entities may perform both issuer and acquirer functions.

[022] An “online purchase” can be the purchase of a digital or physical item or service via a network, such as the Internet.

[023] A “payment account” can include any suitable payment account including a credit card account, a checking account, or a prepaid account.

[024] A “payment device” may include a device that a user may use to conduct a payment transaction. Examples of payment devices include debit cards, credit cards, smart cards, mobile devices such as mobile phones, electronic or digital wallets and other suitable devices.

[025] A “payment processing network” may include data processing subsystems, networks, and other means of implementing operations used to support and deliver authorization services, exception file services, and clearing and settlement services for payment transactions. An exemplary Payment Processing Network may include VisaNet®. The Payment Processing Networks such as VisaNet® are able to process credit card transactions, debit card transactions, and other types of commercial transactions. The VisaNet®, in particular, includes a VIP system (Visa Integrated Payments system) which processes transaction authorization requests and a Base II system which performs transaction clearing and settlement services.

[026] A “payment transaction” can be a communication carried out between a user and a merchant to exchange an asset, such as a physical or digital item or service, for payment.

[027] “Payment transaction data/information” or “purchase transaction data/information” can include any information corresponding to or describing purchases, orders, invoices, payments
involving goods, items, services, and/or the like, and may include, but is not limited to, a purchase amount, a merchant identifier, description code (e.g., NAICS: North American Industry Classification System) associated with purchased items, cost of purchased items, and transactions as well as descriptions of purchased items, purchase dates, purchase amounts, indications of payment accounts used, indications of whether purchases were made online, confirmation numbers, order numbers, cancellation numbers, shipment status updates (e.g., order being processed, shipped, delivered, on back order, etc.), delivery tracking numbers, cancellation notices, updates, and/or the like.

[028] “Promotional offers” can be media and non-media marketing communications employed for a pre-determined, limited time, or indefinitely to increase consumer demand, stimulate market demand or improve product availability. Examples include contests, coupons, premiums, prizes, discounts, rebates, and/or the like.

[029] A “server” can be a powerful computer or a cluster of computers. For example, the server computer can be a large mainframe, a minicomputer cluster, or a group of servers functioning as a unit. In one example, the server computer may be a database server coupled to a Web server.

[030] According to the disclosed embodiments, a computer-implemented method and system for a dedicated Pay button and configurable on/in a computer hardware to provide a substantially instantaneous and nonintrusive e-commerce experience (or gaming experience). In these embodiments, the computer-implemented method may include receiving, by a processor, a link request generated from a computing hardware of a user, where the computing hardware includes a Pay button; configuring, by the processor, the Pay button on the computing hardware to be linked with an electronic wallet, where the Pay button includes a button or a pad physically or digitally located on the computing hardware, and where the Pay button of the computing hardware is linked with the electronic wallet of the user based on the received link request; and initiating, by the processor, a payment transaction triggered with the Pay button of the computing hardware of the user.

[031] The exemplary embodiment may relate to a dedicated and configurable Pay button on a computer hardware (e.g., a gaming console, a keyboard, a cell phone, a tablet, a laptop, and/or
the like). The dedicated and configurable Pay button described herein may also be linked to an electronic wallet to provide a user (e.g., a gamer) with a substantially instantaneous, secure, and nonintrusive payment transaction experience (or gaming experience). As used herein, a “Pay button” may refer to a physical (or digital) button, key, pad, and/or component on/in a computer hardware device such as a gaming console, a keyboard, a laptop, a tablet, a controller, a mouse, or the like, where the “Pay button” may have mechanisms to provision payment credentials, to implement (or provide/execute) payment transactions, and/or to non-intrusively authenticate the user with biometrics, built-in facial recognition, or the like.

[032] Figure 1 is an illustration of a block diagram of an electronic payment processing system 100 configuring a Pay button on a computer hardware (herein, referred to as a Pay button hardware 130) and linking the Pay button hardware 130 to a hardware server 131 and an electronic wallet 132, in accordance with some embodiments of the present disclosure.

[033] In an embodiment, the electronic payment processing system 100 may be described with a block diagram illustrating example aspects of systems and processes for configuring a dedicated Pay button hardware to be linked with a mobile electronic wallet, according some embodiments. Within various embodiments, a user 118 (e.g., a gamer, a consumer, etc.), a Pay button hardware 130 (e.g., a gaming console, a keyboard, a cell phone, a laptop, a mouse, etc.), an electronic wallet 132 (as described in further detail below in Figure 2), and/or one or more wallet-accepting merchants 112 are shown to interact with a payment processor 128 via communication network 424.

[034] According to some embodiments, the user 118 may be associated with the Pay button hardware 130 which may be comprised of a wide variety of different communications devices. For example, in one embodiment, the Pay button hardware 130 may include, but are not limited to, gaming consoles/controllers, keyboards, terminal computers, work stations, servers, cellular telephony handsets, smart phones, and/or the like (e.g., as shown in Figure 1 with the one or more illustrated devices within the Pay button hardware 130). In one embodiment, the Pay button hardware 130 may be associated with the hardware server 131, where the hardware server 131 may be one or more servers associated with a gaming hardware provider/vendor (or the like). In one embodiment, the electronic wallet 132 may be equipped at a terminal computer of the user.
In another embodiment, the electronic wallet 132 may be a remote server which is accessed by the user's 118 Pay button hardware 130. Additionally, the user 118 may link the Pay button hardware 130 associated with the hardware server 131 to the electronic wallet 132 to implement (or process) a payment transaction with the merchants 112 and the payment processor 128 via a communication network 140, such as, but not limited to local area network (LAN), in-house intranet, the Internet, and/or the like. In a further implementation, the merchant 112 may be integrated with the user 118 at a computer terminal.

In some embodiments, the user 118 may register a user’s electronic wallet with the hardware server 131 and the servers of the electronic wallet 132. For example, the user 118 may provide user profile information, payment information, bank account information, and/or the like to the electronic wallet 132 to establish a record comprising the bank account information at the servers of the electronic wallet 132. In some embodiments, the wallet-accepting merchant 112 may include a merchant store 141, a social media platform1, a merchant shopping website 148, a gaming site 152, and/or the like. For some embodiments, the merchant 112 may be associated with the Pay button hardware 130, the hardware server 131, and/or the electronic wallet 132, such that the electronic wallet 132 may be linked/authenticated/authorized with the one or more merchants 112 to engage in a payment transaction with the user 118 and the gaming hardware server 131 via the dedicated and configured Pay button hardware 130. For example, a gaming site, a social media platform 144, a merchant site 148, and/or the like, may comprise an icon of an electronic wallet on the shopping page, where the user 118 may press (or trigger/invoked) the Pay button hardware 130 to pay for a transaction via the electronic wallet 132 of the user 118.

According to some embodiments, the user 118 may operate the Pay button hardware 130, such as a gaming console, a desktop, a laptop, a smart phone and/or the like to access the wallet-accepting merchant 112, such as, but not limited to the merchant store 141, the social media platform 114, the merchant shopping website 118, the gaming site 152, and/or the like. For example, when the user 118 is interested in paying a gaming merchant (or a gamer expert) via the gaming site 152, the social media service 144, and/or the like, the user 118 may click (or press/trigger/engage) the button/key (or the like) on the Pay button hardware 130 to pay the gaming merchant with an electronic payment transaction via the electronic wallet 132 and/or the payment processor 128. For another example, the user 118 may access the social media platform 144, the gaming site 152, or the like, to purchase gaming points (or tips, advice, lives, game...
tools, etc.) via the electronic wallet 132 that is linked with the pay button hardware 130 and the hardware server 131. In some embodiments, the user 118 may be required to submit one or more user credentials, such as, but not limited to, the Wallet ID/User ID, password, and/or the like. The processes used to link the Pay button hardware 130, the hardware server 131, the electronic wallet 132, and the payment processor 128 are described in further detail below with the detailed logic process flows diagrams of Figures 3 – 5.

[037] Furthermore, as described above, the hardware server 131 may be associated with the payment processor 128 (or a card payment processing system), where the payment processor 128 may be in communication (direct or indirect) over the network 140 with the one or more merchants 112. For example, a plurality of cardholders or users 118 purchase goods and/or services from various ones of the merchants 112 using a payment card such as an electronic wallet, a credit card, a debit card, a prepaid card and/or the like. Typically, the payment processor 128 provides the merchants 112 with a service or device that allows the merchants 112 to accept such payment card(s) as well as to send payment details to the payment processor 128 over the network 140. In some embodiments, an acquiring bank or processor (not shown) may forward the credit card details to the payment processor 128. Payment card transactions may be performed using a variety of platforms such as brick and mortar stores, ecommerce stores, wireless terminals, and user mobile devices. The payment card transaction details sent over the network 140 are received by one or more servers 120 of the payment processor 128 and processed by, for example, by a payment authorization process 122 and/or forwarded to an issuing bank (not shown). Likewise, in some embodiments, the payment card transaction details of such cards (or such electronic card wallets) may be stored as a plurality of payment transaction records 124 in a payment transaction database 126.

[038] In some embodiments, the electronic payment processing system 100 may include fewer or additional packaging components based on the desired packaging design.

[039] Figure 2 is an illustration of a block diagram of a plurality of transactions implemented with an electronic wallet system 200 that is associated with a user 218, a Pay button hardware 230, and a hardware server 231, in accordance with some embodiments of the present disclosure.

[040] In an embodiment, the electronic wallet system 200 provides a block diagram illustrating
embodiments of an electronic wallet 200. The electronic wallet 200 may be used in a variety of transactions, such as but not limited to e-Commerce 205, social networks 210, money transfer/personal payments 215, mobile commerce 220, proximity payments 225, gaming 230, and/or the like. For example, the user 218 may engage in e-Commerce via the electronic wallet 200 for retail purchases 206, digital goods purchases 207, utility payments 208, and/or the like, using the Pay button hardware 230. Users 218 may also, for example, use the electronic wallet 200 to purchase games 212 or gaming credits 232 from gaming websites, transfer funds to friends via social networks 216, and/or the like. Further, for example, users 218 may also use the electronic wallet 200 linked with the Pay button hardware 230, such as a gaming console, a smartphone, or the like, for retail purchases 222, buying digital goods 223, and NFC/RF payments 226 at POS terminals.

[041] In some embodiments, the electronic wallet system 200 may include fewer or additional components and processing steps based on the desired processing design.

[042] Figure 3 is an illustration of a detailed logic flow diagram 300 for linking a Pay button hardware 330 of a user 318 to an electronic wallet 332, in accordance with some embodiments of the present disclosure.

[043] The process of Figure 3 may be implemented (or performed) with a hardware server 331 (e.g., a gaming server associated with the Pay button hardware 330) and one or more components of an electronic payment processing system (e.g., the electronic payment processing system 100 of Figure 1). The detailed logic flow diagram 300 may be implemented by processing logic which may be implemented in software, firmware, hardware, or any combination thereof. In some embodiments, the user 318 (e.g., a gamer), the Pay button hardware 330 (e.g., a gaming console, controller, keyboard, mouse, table, and/or cell phone), the hardware server 331 (e.g., a gaming hardware merchant), and the electronic wallet 332 may be similar to the user 118, the Pay button hardware 130, the hardware server 131, and the electronic wallet 132 described above in Figure 1.

[044] According to some embodiments, the detailed logic flow diagram 300 may link the Pay button hardware 330 (i.e., a Pay button on/in a computer hardware such as a gaming console) to
the electronic wallet 332 (or an electronic wallet). The detailed logic flow diagram 300 may enable a user such as a gamer to promptly and non-intrusively link the gamer’s electronic wallet with the gamer’s computing hardware. Such process flow is further described below in accordance with one or more embodiments described herein.

[045] At 302, the user 318 may initiate a link request to pair (or link) the electronic wallet 332 with the pay button hardware 330 that is associated with the hardware server 331. At 304, the hardware server 331 may provide one or more instructions for linking the electronic wallet 332 with the pay button hardware 330, where such instructions may include a QR scan instruction, an NFC Tap instruction, or the like. At 306, the user 318 may invoke (or request access) the electronic wallet 332. As a result, at 308, the electronic wallet 332 may initiate the link request of the user 318 via the QR scan and/or the NFC Tap (or the like) implemented by the Pay button hardware 330.

[046] At 310, the Pay button hardware 330 may provide the necessary information to securely contact the hardware server 331. For example, in some embodiments at 312a, the necessary information for accessing the service on the hardware server 331 to link the electronic wallet 332 with the configured Pay button hardware 330 may further include: registering the wallet against the physical or digital button/key at 312b; registering a mechanism to invoke the wallet when the user presses (or invokes) the button/key at 312c; agreeing on the transaction date elements to be sent out and received at the wallet end/side at 312d; and agreeing (or approving/accepting) the user’s authentication and/or authorization mechanisms for approving the payment transaction at 312e.

[047] At 314a, after the user’s electronic wallet 332 gains access hardware server 331, the electronic wallet 314a may then provide an authentication request to the user 318. At 314b, when the user 318 is authenticated/authorized for the authentication request, the electronic wallet 332 may therefore approve the authentication request and provide a status message of the approved authentication request to the hardware server 331. Lastly, at 316, the hardware server 331 may send a user message to be displayed on the Pay button hardware 330.

[048] In some embodiments, the detailed logic flow diagram 300 may include fewer or
additional components and processing steps based on the desired processing design.

[049] Figure 4 is an illustration of a detailed logic flow diagram 400 for linking a Pay button hardware 430 of a user 418 to an electronic wallet 432 through a payment processor 428, in accordance with some embodiments of the present disclosure.

[050] The process of Figure 4 may be implemented (or performed) in addition to the process of Figure 3 using a hardware server 431 (e.g., a gaming server associated with the Pay button hardware 430) and one or more components of an electronic payment processing system (e.g., the electronic payment processing system 100 of Figure 1). Furthermore, the detailed logic flow diagram 400 may be implemented by processing logic which may be implemented in software, firmware, hardware, or any combination thereof. In some embodiments, the user 418 (e.g., a gamer), the Pay button hardware 430 (e.g., a gaming console, controller, keyboard, mouse, table, and/or cell phone), the hardware server 431 (e.g., a gaming hardware merchant), the electronic wallet 432, and the payment processor 428 may be similar to the user 118, the Pay button hardware 130, the hardware server 131, the electronic wallet 132, and the payment processor 128 described above in Figure 1.

[051] According to some embodiments, the detailed logic flow diagram 400 may be implement a payment transaction through the hardware server 431 (or the gaming server) and/or the payment processor 428 associated with the hardware server 431, where the electronic wallet 432 may have been previously configured/linked/authenticated via the process described above in Figure 3. For example, in a gaming experience, the gaming console may initiate the necessary API to handle the payment transaction. The hardware server may initiate the electronic wallet based on the registered webhook, invoking endpoint, or the like. The hardware server may then use a unique identifier (or the like) to map the gaming console and the electronic wallet, which may be generated if/when the gaming console is linked with the electronic wallet. The user may have to provide authorization information to initiate the payment transaction via the electronic wallet. Such authorization may include the user’s biometrics or any other similar nonintrusive method. Thereafter, a payment payload may be generated by the electronic wallet (e.g., such payment payload may be similar to a remote payment payload with unique cryptogram or the like). Lastly, the hardware server may format a text message (or the like) with a payload and
send the payload to the payment processor (or the gaming provider’s payment
gateway/processor), where the user and the gaming console may be informed (or notified) to
proceed as the payment transaction is complemented.

Such process flow may be further described below in accordance with one or more
embodiments described herein. For example, initially at 402, the hardware server 431 may send a
payment initiation request to the Pay button hardware 430 of the user 418. At 403, the Pay button
hardware 430 may display one or more payment options based on the payment initiation request
to the Pay button hardware 430 of the user 418. At 404, the user 404 may initiate the payment
transaction during the game (or the like) by pressing/invoking the Pay button (or the payment
button/key) of the Pay button hardware 430. Likewise, at 405, the Pay button hardware may
extract one or more transaction details from the initiate payment transaction such as the payment
amount, the currency type, the transaction date, the transaction time, and so on.

At 406, the Pay button hardware 430 may send a payment service initiation request to the
hardware server 431. For example, in some embodiments, the Pay button hardware 430 may
initiate a payment API and provide all of the necessary information that may be required to
invoke the payment transaction, such as providing the unique ID of the Pay button hardware 430
to recognize (or identify) the user. Furthermore, at 408, the hardware server 408 may then
process the incoming request and retrieve the unique webhook (or the like) of such request,
which may thereby invoke the end point of the linked electronic wallet 432 with details such as
the transactional details.

Lastly, at 412, the electronic wallet 432 may forward a user authentication request to the
user 418. At 414, after the user has been authenticated, the electronic wallet 432 may create a
payment payload with a dynamic cryptogram and/or with one or more additional necessary
details (e.g., similar to a remote payment). At 415a, the electronic wallet 432 may then share the
payment payload with the hardware server 431 (e.g., the gaming merchant’s servers or
processors) to initiate and proceed to process the payment transaction. As such, at 415b, the
hardware server 431 may prepare a payment transaction message (or request) and may then send
the payment transaction message/request to the payment processor 428.
Lastly, at 417a, the payment processor 428 may send a payment authorization response to the hardware server 431, where such response may include a success request response, a filed request response, a missing details request response, and/or the like. Accordingly, the hardware server 431 may then forward the payment authorization response to the linked electronic wallet 432 at 417b, and may also forward the payment authorization response to the Pay button hardware 430 at 417c, where the linked electronic wallet 432 may subsequently send a payment confirmation message to the user 418 at 417d.

In some embodiments, the detailed logic flow diagram 400 may include fewer or additional components and processing steps based on the desired processing design.

Figure 5 is an illustration of a detailed logic flow diagram 500 for linking a Pay button hardware 530 of a user 518 to an electronic wallet 532 through a payment processor 528, in accordance with some embodiments of the present disclosure.

In particular, the process of Figure 5 may be similar to the process of Figure 4 with the exception that the payment transaction is implemented (or performed) directly between the Pay button hardware 530 and the electronic wallet 532. The process of Figure 5 may be implemented (or performed) in addition to the process of Figure 3 using a hardware server 531 (e.g., a gaming server associated with the Pay button hardware 530) and one or more components of an electronic payment processing system (e.g., the electronic payment processing system 100 of Figure 1). Furthermore, the detailed logic flow diagram 500 may be implemented by processing logic which may be implemented in software, firmware, hardware, or any combination thereof. In some embodiments, the user 518 (e.g., a gamer), the Pay button hardware 530 (e.g., a gaming console, controller, keyboard, mouse, table, and/or cell phone), the hardware server 531 (e.g., a gaming hardware merchant), the electronic wallet 532, and the payment processor 528 may be similar to the user 118, the Pay button hardware 130, the hardware server 131, the electronic wallet 132, and the payment processor 128 described above in Figure 1.

According to some embodiments, the detailed logic flow diagram 500 may be implement a payment transaction directly through the Pay button hardware 530 associated with the hardware server 531 (or the gaming server) and the electronic wallet 532, where the electronic
wallet 532 may have been previously configured/linked/authenticated via the process described above in Figure 3. For example, in a gaming experience, the gaming console may be used to implement a payment transaction directly between the gaming console and the wallet. For example, the gaming console may invoke the earlier-linked wallet through a secure channel (e.g., a NFC, a BLE, etc.). Thereafter, a payment payload may be generated by the wallet (e.g., such payment payload may be similar to a remote payment payload with unique cryptogram (or the like)). The wallet may then directly send the payment payload to the gaming console using the same secured channel, where the gaming console may subsequently share the complete transaction information with the payment transaction information to the gaming server. Accordingly, the gaming server may then format a text message (or the like) with the payload and send the text message (or the like) with the payload to the gaming provider’s payment gateway/processor (e.g., such as the payments processor 528) – and also send a similar payment completion message to the gamer.

[060] Such process flow may be further described below in accordance with one or more embodiments described herein. For example, initially at 502, the hardware server 531 may send a payment initiation request to the Pay button hardware 530 of the user 518. At 503, the Pay button hardware 530 may display one or more payment options based on the payment initiation request to the Pay button hardware 530 of the user 518. At 504, the user 504 may initiate the payment transaction during the game (or the like) by pressing/invoking the Pay button (or the payment button/key) of the Pay button hardware 530. Likewise, at 505, the Pay button hardware may extract one or more transaction details from the initiate payment transaction such as the payment amount, the currency type, the transaction date, the transaction time, and so on.

[061] At 506, the Pay button hardware 530 may send a payment service initiation request directly to the electronic wallet 532. For example, in some embodiments, the Pay button hardware 530 may initiate the payment transaction to be implemented (or linked/paired) with the electronic wallet 532 through a secure channel such as BLE, NFC, and/or the like. Furthermore, at 508, the electronic wallet 532 may then forward a user authentication request to the user 518. At 510, after the user has been authenticated, the electronic wallet 532 may create a payment payload with a dynamic cryptogram and/or with one or more additional necessary details (e.g., similar to a remote payment). At 512, the electronic wallet 432 may then share the payment
payload with the Pay button hardware 530 – securely and directly through the communication channel – to initiate and proceed to process the payment transaction. As such, at 514, the Pay button hardware 530 may send the payment payload and associated transaction details to the hardware server 531. Furthermore, the hardware server 531 may then prepare to send a payment transaction message (or request) to the payment processor 528 at 515 and may then send the payment transaction message/request to the payment processor 528 at 516a.

[062] Lastly, at 516b, the payment processor 528 may send a payment authorization response to the hardware server 531, where such response may include a success request response, a filed request response, a missing details request response, and/or the like. Accordingly, at 516c, the hardware server 531 may then forward the payment authorization response to the Pay button hardware 530, and the Pay button hardware 530 may subsequently forward the payment authorization response to the electronic wallet 532 at 516d, where the linked electronic wallet 532 may also send a payment confirmation message to the user 518 at 517.

[063] In some embodiments, the detailed logic flow diagram 500 may include fewer or additional components and processing steps based on the desired processing design.

[064] Figure 6 is an illustration of a block diagram of a portable communication device 600, in accordance with some embodiments of the present disclosure.

[065] In an embodiment, the portable communication device 600 includes a dedicated Pay button 625, where the dedicated Pay button 625 may be directly configured on the portable communication device 600, and be linked to an electronic wallet to provide a user with an instantaneous, secure and nonintrusive computing experience (e.g., a gaming experience, an e-commerce experience, etc.). The portable communication device 600 also includes a display 612, a plurality of input elements 614 (e.g., keypad, mouse, etc.), a computer readable medium 624 such as volatile and non-volatile memory, a processor 610 and at least one antenna 620. The portable communication device 600 may be capable of communicating through a cellular network, a wireless provider network, or a mobile operator network, such as GSM through antenna 620, for example to send and receive Short Message Service (SMS) messages or Unstructured Supplementary Service Data (USSD) messages. The portable communication
device 600 may be capable of transmitting and receiving information wirelessly through both short range NFC, radio frequency (RF), infrared (IR), and cellular connections. In some embodiments, the portable communication device 600 may have cryptographic capabilities to send encrypted messages and/or communications, and/or messages protected with message authentication codes or hash codes.

[066] In some embodiment, the portable communication device 600 may include fewer or additional packaging components based on the desired packaging design.

[067] Figure 7 is an illustration of a block diagram of a computer system 700, in accordance with some embodiments of the present disclosure.

[068] In an embodiment, the computer system 700 may include one or more subsystems or components as shown in Figure 7. As shown in Figure 7, the computer system 700 may interconnect (or couple) the one or more subsystems and/or components via a system bus 745. Additional subsystems such as a printer 744, a keyboard 748, a fixed disk 749 (or other memory comprising computer readable media), a monitor 746, which is coupled to a display adapter 782, and others are shown. Peripherals and input/output (I/O) devices, which may be coupled to an I/O controller 741 (which may be a processor or other suitable controller), may be connected to the computer system 700 by any number of means known in the art, such as a serial port 784. For example, the serial port 784 or an external interface 781 may be used to connect the computer apparatus to a wide area network such as the Internet, a mouse input device, or a scanner. The interconnection via system bus 745 allows the central processor 743 to communicate with each subsystem and to control the execution of instructions from system memory 742 or the fixed disk 749, as well as the exchange of information between subsystems. The system memory 742 and/or the fixed disk 749 may embody a computer readable medium.

[069] The computer system 700 may include fewer or additional packaging components based on the desired packaging design. Further, the one or more users, merchants, servers, and/or components (or elements) described herein with reference to Figures 1 – 7 may operate one or more computer apparatuses to facilitate the functions described herein. Any of the components/elements in Figures 1 – 7, including any servers or databases, may use any suitable
number of subsystems to facilitate the functions described herein.

[070] The present invention has been described in accordance with the embodiments shown, and there could be variations to the embodiments, and any variations would be within the spirit and scope of the present invention. For example, the exemplary embodiment can be implemented using hardware, software, a computer readable medium containing program instructions, or a combination thereof. Accordingly, many modifications may be made by one of ordinary skill in the art without departing from the scope of the appended claims.

[071] Any of the software components or functions described in this application, may be implemented as software code to be executed by a processor using any suitable computer language such as, for example, Java, C++ or Perl using, for example, conventional or object-oriented techniques. The software code may be stored as a series of instructions, or commands on a computer readable medium, such as a random access memory (RAM), a read only memory (ROM), a magnetic medium such as a hard-drive or a floppy disk, or an optical medium such as a CD-ROM. Any such computer readable medium may reside on or within a single computational apparatus and may be present on or within different computational apparatuses within a system or network.

[072] The present invention can be implemented in the form of control logic in software or hardware or a combination of both. The control logic may be stored in an information storage medium as a plurality of instructions adapted to direct an information processing device to perform a set of steps disclosed in embodiments of the present invention. Based on the disclosure and teachings provided herein, a person of ordinary skill in the art will appreciate other ways and/or methods to implement the present invention.

[073] Any recitation of “a”, “an” or “the” is intended to mean “one or more” unless specifically indicated to the contrary. The above description is illustrative and is not restrictive. Many variations of the invention will become apparent to those skilled in the art upon review of the disclosure. The scope of the invention should, therefore, be determined not with reference to the above description, but instead should be determined with reference to the pending claims along with their full scope or equivalents.
The illustrated steps are set out to explain the exemplary embodiments shown, and it should be anticipated that ongoing technological development will change the manner in which particular functions are performed. These examples are presented herein for purposes of illustration, and not limitation. Further, the boundaries of the functional building blocks have been arbitrarily defined herein for the convenience of the description. Alternative boundaries can be defined so long as the specified functions and relationships thereof are appropriately performed. Alternatives (including equivalents, extensions, variations, deviations, and the like, of those described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the disclosed embodiments. Also, the words "comprising," "having," "containing," and "including," and other similar forms are intended to be equivalent in meaning and be open ended in that an item or items following any one of these words is not meant to be an exhaustive listing of such item or items, or meant to be limited to only the listed item or items. It must also be noted that as used herein and in the appended claims, the singular forms “a,” “an,” and “the” include plural references unless the context clearly dictates otherwise.

Finally, the language used in the specification has been principally selected for readability and instructional purposes, and it may not have been selected to delineate or circumscribe the inventive subject matter. Accordingly, the disclosure of the embodiments of the disclosure is intended to be illustrative, but not limiting, of the scope of the disclosure.

With respect to the use of substantially any plural and/or singular terms herein, those having skill in the art can translate from the plural to the singular and/or from the singular to the plural as is appropriate to the context and/or application. The various singular/plural permutations may be expressly set forth herein for sake of clarity.
METHOD AND SYSTEM FOR INITIATING PAYMENT TRANSACTION USING DEDICATED PAY BUTTON

ABSTRACT

The present disclosure relates to initiating a payment transaction using a dedicated pay button. The pay button is associated with the computer hardware. The pay button includes a button, or a pad physically or digitally located on the computing hardware. The method includes receiving a link request generated from a computer hardware of a user. Further, the method includes configuring the pay button on the computer hardware to be linked with an electronic wallet of the user based on the received link request. Finally, the method includes initiating a payment transaction triggered with the Pay button of the computer hardware of the user.
FIGURE 3
FIGURE 4
FIGURE 5
FIGURE 6

PORTABLE COMMUNICATION DEVICE 600

DEDICATED PAY BUTTON 625
ANTENNA 620
MICROPHONE 622
COMPUTER READABLE MEDIUM 624
PROCESSOR 610
DISPLAY 612
INPUT ELEMENTS 614
SPEAKER 618
FIGURE 7