[9] Exemplary embodiments of the present invention provide a mobile device to store a mobile wallet application and a wallet management system (WMS) to store corresponding wallet application information. Exemplary embodiments of the present invention provide a method for provisioning a wallet application, a contactless card applet, a wallet management applet (WMA), and a widget. Exemplary embodiments of the present invention provide a method for synchronizing a mobile wallet application with the WMS.

[10] Additional features of the invention will be set forth in the description which follows, and in part will be apparent from the description, or may be learned by practice of the invention.

[11] Exemplary embodiments of the present invention provide a method for installing a wallet application in a mobile device including requesting, by the mobile device, a mobile wallet application comprising a corresponding Over-the-Air (OTA) proxy; receiving mobile wallet application installation information; installing the mobile wallet application in the mobile device; capturing mobile device information by using the OTA proxy, the mobile device information comprising secure element (SE) information; and transmitting the mobile device information for registering the installed mobile wallet application.

[12] Exemplary embodiments of the present invention provide a method for managing mobile wallet accounts installed on a mobile devices including receiving a request for a mobile wallet application from a mobile device; transmitting the mobile wallet application to the mobile device; receiving mobile device information, the mobile device information comprising SE information; and registering the mobile device and the corresponding mobile wallet application in a trusted service manager (TSM).

[13] Exemplary embodiments of the present invention provide method for provisioning a contactless card applet in a mobile device comprising a mobile wallet application including activating the mobile wallet application; connecting to a TSM system; synchronizing the mobile wallet application with the TSM system; displaying a contactless card applet based on attributes of the mobile device; receiving a selection of a contactless card applet; retrieving a widget and a WMA corresponding to the contactless card applet; and provisioning the selected contactless card applet, widget, and the WMA.

[14] Exemplary embodiments of the present invention provide a WMS in a non-transitory storage medium to store and manage mobile wallet account information including a wallet client management component to store and to manage a mobile wallet ap-plication; a widget management component to store and to manage widgets; a device profile management component to store mobile device information; and a rule engine to filter a widget based on the mobile device information.

wherein said wallet management system is configured to receive the mobile device information from a mobile device and store the mobile device information in the device profile management component, and

wherein said wallet management system is configured to register the mobile device and the mobile wallet application in a Trusted Service Manager (TSM) system.

[15] Exemplary embodiments of the present invention provide a mobile device including a SE; a mobile wallet application to store a widget corresponding to a contactless card applet, wherein the contactless card applet is stored in the SE; a WMA corresponding to the contactless card applet, wherein WMA is stored in the SE; and an OTA proxy to provision the contactless card applet, a widget corresponding to the contactless card applet, and the WMA,

wherein said OTA proxy is configured to capture mobile device information comprising SE information; and

wherein said OTA proxy is configured to transmit the mobile device information for registering the mobile wallet application.

[16] It is to be understood that both foregoing general descriptions and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed. Other features and aspects will be apparent from the following detailed description, the drawings, and the claims.

## Brief Description of Drawings

[17] The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this specification, illustrate embodiments of the invention, and together with the description serve to explain the principles of the invention.

[18] FIG. 1 is a system diagram of a mobile wallet application and associated integration in accordance with an exemplary embodiment of the present invention.

[19] FIG. 2 is a system diagram illustrating a system and method for provisioning mobile card wallet management application along with supporting applications, mobile card widgets, contactless card applets, and related credentials in accordance with an exemplary embodiment of the present invention.

[20] FIG. 3 is a system diagram illustrating a system and method for provisioning service provider specific mobile card widgets, contactless card applets, and wallet management application account information in accordance with an exemplary embodiment of the present invention.

[21] FIG. 4 is a system diagram illustrating a system and method for dynamically filtering applicable mobile wallet service provider specific widgets based upon user account attributes in accordance with an exemplary embodiment of the present invention.

[22] FIG. 5 is a system diagram illustrating a system and method for synchronizing mobile wallet application with the master mobile wallet configuration server to provide a most current version of the mobile wallet application in accordance with an exemplary embodiment of the present invention.

## Mode for the Invention

[23] The invention is described more fully hereinafter with references to the accompanying drawings, in which exemplary embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, these exemplary em-

## Claims

[Claim 1] A method for installing a wallet application in a mobile device, comprising:
requesting, by the mobile device, a mobile wallet application comprising a corresponding Over-the-Air (OTA) proxy;
receiving mobile wallet application installation information;
installing the mobile wallet application in the mobile device;
capturing mobile device information by using the OTA proxy, the mobile device information comprising secure element (SE) in-formation; and
transmitting the mobile device information for registering the installed mobile wallet application.

[Claim 2] The method of claim 1, wherein installing the mobile wallet application in the mobile device comprises automatically installing upon receipt of the mobile wallet application installation information.

[Claim 3] The method of claim 1, further comprising provisioning a wallet management applet (WMA) container into the SE of the mobile device.

[Claim 4] The method of claim 1, wherein receiving mobile wallet application in-stallation information comprises:
receiving a Wireless Application Protocol (WAP) message with an embedded Uniform Resource Locator (URL) from a Short Message Service (SMS) platform.

[Claim 5] The method of claim 1, wherein capturing mobile device information comprises:
capturing at least one of an International Mobile Equipment Identity (IMEI), a Mobile Equipment Identifier (MEID), a Mobile Subscriber Integrated Services Digital Network Number (MSISDN), a Card Production Life Cycle (CPLC), a Card Serial Number (CSN), a Card Image Number (CIN), and an Integrated Circuit Card Identification (ICCID).

[Claim 6] The method of claim 3, wherein provisioning a WMA container into the SE comprises:
transmitting a request to provision the WMA container; and
receiving the WMA container installation information in Application Protocol Data Unit (APDU) commands; and
provisioning the converted APDU commands to the SE.

[Claim 7] A method for managing mobile wallet accounts installed on a mobile

devices, comprising:

receiving a request for a mobile wallet application from a mobile device;

transmitting the mobile wallet application to the mobile device;

receiving mobile device information, the mobile device information comprising secure element (SE) information; and

registering the mobile device and the corresponding mobile wallet ap-plication in a trusted service manager (TSM).

[Claim 8] The method of claim 7, wherein registering the mobile device and the corresponding mobile wallet application in a TSM comprises:

checking for registered account information corresponding to the re-questing mobile device in the TSM system; and

registering the mobile device in the TSM system in response to no cor-responding registered account information being found in the TSM system, or updating account information in response to finding the cor-responding registered account information in the TSM system.

[Claim 9] The method of claim 7, further comprising transmitting an ac-companying over-the-air (OTA) proxy application to the mobile device.

[Claim 10] The method of claim 8, wherein registering the mobile device comprises:

creating a mobile identifier for the installed mobile wallet application;

storing the mobile device information; and

connecting the mobile device information with the mobile identifier.

[Claim 11] A method for provisioning a contactless card applet in a mobile device comprising a mobile wallet application, the method comprising:

activating the mobile wallet application;

connecting to a Trusted Service Manager (TSM) system;

synchronizing the mobile wallet application with the TSM system;

displaying a contactless card applet based on attributes of the mobile device;

receiving a selection of a contactless card applet;

retrieving a widget and a wallet management applet (WMA) cor-responding to the contactless card applet; and

provisioning the selected contactless card applet, the widget, and the WMA.

[Claim 12] The method of claim 11, wherein synchronizing the mobile wallet ap-plication with the TSM system comprises:

receiving a change made to a mobile wallet application user account on

the TSM system; and

provisioning the changed information.

[Claim 13] The method of claim 11, wherein synchronizing the mobile wallet ap-plication with the TSM system comprises:

checking for a change made to a configuration of the mobile wallet ap-plication; and

transmitting the change to the TSM system.

[Claim 14] The method of claim 11, wherein displaying a contactless card applet based on attributes of the mobile device comprises:

retrieving mobile device information comprising SE information;

transmitting the mobile device information; and

receiving filtered contactless card applet for provisioning, wherein the contactless card applet is filtered based on the mobile device in-formation.

[Claim 15] The method of claim 14, wherein displaying the contactless card applet further comprises:

receiving filtered contactless card applet for provisioning, wherein the contactless card applet is filtered based on the business rules.

[Claim 16] The method of claim 11, wherein provisioning the selected contactless card applet, WMA and widget comprises:

transmitting a request for installation of the contactless applet and the corresponding widget and WMA to be installed, wherein the WMA is a software application configured to store account specific information and the widget is an application configured to interface with a user of the mobile device; and

receiving the contactless applet, the WMA, and the widget information through OTA proxy.

[Claim 17] The method of claim 16, wherein account specific information comprises at least one of a payment card number, a security code, an expiration date, and a personal identification number (PIN).

[Claim 18] A wallet management system (WMS) in a non-transitory storage medium to store and manage mobile wallet account information, comprising:

a wallet client management component to store and to manage a mobile wallet application;

a widget management component to store and to manage widgets;

a device profile management component to store mobile device in-formation; and

a rule engine to filter a widget based on the mobile device information,

wherein said wallet management system is configured to receive the mobile device information from a mobile device and store the mobile device information in the device profile management component, and

wherein said wallet management system is configured to register the mobile device and the mobile wallet application in a Trusted Service Manager (TSM) system.

[Claim 19] The WMS of claim 18, wherein the wallet client management component further stores wallet application specific information comprising at least wallet application type and wallet application manu-facturer information.

[Claim 20] The WMS of claim 18, wherein the mobile device information comprises at least one of a mobile device type, a supporting Operating System (OS), a mobile service provider, a mobile device manufacturer, and a secure element (SE) type.

[Claim 21] The WMS of claim 18, further comprising a user profile management component to capture and manage user identifying information.

[Claim 22] The WMS of claim 18, wherein the WMS is hosted on ~~a Trusted Service Manager (~~the TSM~~)~~ system.

[Claim 23] The mobile device, comprising:

a secure element (SE);

a mobile wallet application to store a widget corresponding to a con-tactless card applet, wherein the contactless card applet is stored in the SE;

a wallet management applet (WMA) corresponding to the contactless card applet, wherein WMA is stored in the SE; and

an over-the-air (OTA) proxy to provision the contactless card applet, a widget corresponding to the contactless card applet, and the WMA,

wherein said OTA proxy is configured to capture mobile device information comprising SE information; and

wherein said OTA proxy is configured to transmit the mobile device information for registering the mobile wallet application.

[Claim 24] The mobile device of claim 23, wherein WMA is configured to store account information associated with the contactless card applet, and the widget is configured to include a user interface ~~with the user~~.

[Claim 25] The mobile device of claim 24, wherein the account information comprises at least one of a card number to access financial information, a security code, a personal identification number (PIN), and an ex-piration date.