

Chart B-5

**Invalidity Contentions: U.S. Patent No. 8,843,125**

*Fintiv, Inc. v. Apple Inc.*, Case No. 1:19-CV-1238-ADA (W.D. Tex.)

**Displaying and Receiving a Selection of a Contactless Card Applet**

**CLAIM LIMITATIONS:** “displaying a contactless card applet based on attributes of the mobile device” and “receiving a selection of a contactless card applet” (’125 patent claim 11).

**ASSERTED CLAIMS:** These limitations are present in the following asserted claim: ’125 patent claim 11 (and its dependent claims).

**DISCLOSURE/MOTIVATION TO COMBINE:** Under Fintiv’s interpretation of these claim limitations, mobile devices that display a selection of a contactless card applet (“CCA”) were well-known to POSITA at the time of the alleged inventions.<sup>1</sup>

For both the “displaying ...” and “receiving ...” limitations, the entirety of Fintiv’s Infringement Contentions is reproduced in the chart below.

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<sup>1</sup> To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims, Defendant is not proposing any such constructions as proper constructions of those terms or phrases and reserves the right to propose alternative claim construction positions in this and other proceedings. Various positions put forth in this document are predicated on Plaintiff’s incorrect and misleading interpretation of the claims as evidenced by its Preliminary Infringement Contentions, dated May 20, 2019 and proposed Amended Infringement Contentions, dated August 1, 2019 (collectively, the “Infringement Contentions” or “Preliminary Infringement Contentions”). Those positions are not intended to and do not necessarily reflect the true and proper scope of Plaintiff’s claims, and Defendant reserves the right to adopt claim construction positions that differ from or even conflict with those positions in this document.

**How Apple Pay uses the Secure Element**

The Secure Element hosts a specially designed applet to manage Apple Pay. It also includes payment applets certified by the payment networks. Credit, debit, or prepaid card data is sent from the payment network or card issuer encrypted to these payment applets using keys that are known only to the payment network and the payment applets' security domain. This data is stored within these payment applets and protected using the Secure Element's security features. During a transaction, the terminal communicates directly with

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the Secure Element through the Near Field Communication (NFC) controller over a dedicated hardware bus.

See Infringement Contentions Ex. A at pp. 13-18.

These passages disclose nothing about “displaying a contactless card applet ...” Nor do they disclose “receiving a selection of a contactless card applet ...” from a user. Rather, the passages disclose a user manually entering credit card information (e.g., by typing in a picture of their card for provisioning purposes. Under Fintiv’s interpretation, these claim limitations were well-known and obvious to POSITAs at the time of the alleged invention as reflected by the prior art references below. The Asserted Patent’s contactless card applet is displayed in any novel manner or that “receiving a selection of a contactless card applet” is accomplished in an unconventional or new way. See, e.g., ’125 patent at 11:2-4 (“TSM system 120 sends the list of applets to display to the mobile device user, which relays it back to the mobile wallet application 24 in step 405.”); *id.* at 8:46-51 (“mobile device user is prompted to select a contactless card applet to display to the mobile wallet application 24 with the changes made at the TSM system 120”). To the contrary, such activities were well-known and obvious to modify prior art system or methods wherein a contactless card applet is provisioned on a mobile device displays and receives a selection of that contactless card applet. Nothing in the Asserted Patent suggests that “displaying” and “receiving” techniques used outside the context of contactless card applications (e.g., for displaying and receiving software such as games apps and the like) would have required anything beyond the ordinary skill to implement in the context of contactless card applications.

**When you add credit, debit, prepaid, or transit cards**

When you add a credit, debit, prepaid, or transit card (where available) to Apple Pay, information that you enter on your device is encrypted and sent to Apple servers. If you use the camera to enter the card information, the information is never saved on your device or photo library.

Apple decrypts the data, determines your card's payment network, and re-encrypts the data with a key that only your payment network (or any providers authorized by your card issuer for provisioning and token services) can unlock.

Information that you provide about your card, whether certain device settings are enabled, and device use patterns—such as the percent of time the device is in motion and the approximate number of calls you make per week—may be sent to Apple to determine your eligibility to enable Apple Pay. Information may also be provided by Apple to your card issuer, payment network, or any providers authorized by your card issuer to enable Apple Pay, to determine the eligibility of your card, to set up your card with Apple Pay, and to prevent fraud.

After your card is approved, your bank, your bank's authorized service provider, or your card issuer creates a device-specific Device Account Number, encrypts it, and sends it along with other data (such as the key used to generate dynamic security codes that are unique to each transaction) to Apple. The Device Account Number can't be decrypted by Apple but is stored in the Secure Element—an industry-standard, certified chip designed to store your payment information safely—on your device. Unlike with usual credit or debit card numbers, the card issuer can prevent its use on a magnetic stripe card, over the phone, or on websites. The Device Account Number in the Secure Element is isolated from iOS, watchOS, and macOS, is never stored on Apple servers, and is never backed up to iCloud.

**Credit, debit, and prepaid cards**

When a user adds a credit, debit, or prepaid card to Apple Pay, Apple securely sends the card information about user's account and device to the authorized service provider. Using this information, the service provider determines whether to approve adding the card to Apple Pay.

Apple Pay uses three server-side calls to communicate with the card issuer or network as part of the card provisioning process: *Fields*, *Check Card*, and *Link and Provision*. These calls to verify, approve, and add card information sessions are encrypted using TLS v1.2.

Full card numbers aren't stored on the device. A unique Device Account Number is created and stored in the Secure Element. This unique Device Account Number is a way that Apple can't access it. The Device Account Number is different from usual credit or debit card numbers. Unlike with its use on a magnetic stripe card, over the phone, or on websites, the Account Number in the Secure Element is never stored on Apple servers, and is never backed up to iCloud.

Cards for use with Apple Watch are provisioned through the Watch app on iPhone. Provisioning a card for use with Apple Watch and have their own Device Account Number stored within the Secure Element on the iPhone.

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A POSITA would have been motivated to implement these standard practices to provide a simple, intuitive, and convenient software such as contactless card applications. This is especially true given the proliferation of available applications (such as applets) from companies like Visa, Mastercard, and Discover. *See, e.g.*, Khan at 2:43-67 (“A card number for a soft card on the device is obtained from the user of the device...Soft card personalization data along with branding image, market identification data, account summary data for provisioning the soft card is received from the provisioning issuer server. The soft card is then provisioned on the device based on the personalization data.”); Brudnicki at Figs. 4A-4B, ¶ 53 (“As an example, FIGS. 4A and 4B, illustrate a user interface for charging a credit card into a wallet using one exemplary wallet user interface 410 that may be deployed on a Smartphone. Using the user interface, the card services module 420 preferably transmits the first six digits of the identified credit card (commonly referred to as the Identification Number or BIN) to the control server, which then validates the card issuer’s compliance rules and facilitates communication between the OpenWallet 100 (or Card Services Module 420) on the user’s mobile device 50 and the appropriate issuer server 60, as was previously known in the art.”). Further, it would have been obvious to display to a user the contactless card application options for the credit card accounts a user had already setup with his/her bank. For example, if a user had a Visa and American Express and Mastercard cards, a POSITA would have been motivated to simplify the selection process for the user by only displaying the American Express options.

To the extent Fintiv contends that any reference identified in Exhibit A does not disclose any portion of the above limitations disclosed by the references herein. Moreover, the exemplary references cited to the prior art identified in the table below also disclose missing portions would have been obvious to one of ordinary skill in the art. Further, a person of ordinary skill in the art would be able to combine each reference identified in Exhibit A with any one or more of the following references for at least the reasons stated in the document of Apple’s Initial Invalidity Contentions or as identified herein.

Reference	Disclosure
<p>U.S. Patent Publication No. 2010/0138518 A1 (“Aiglstorfer”). Aiglstorfer was filed on November 18, 2009 and published on June 3, 2010.</p>	<p><i>See, e.g.:</i></p> <ul style="list-style-type: none"> <li>Aiglstorfer at paragraph [0039] (“It is appreciated that additional banking card information modules associated therewith may be similarly received and installed and messaged by the TSM 110. For example, a second banking card information 113 may be transmitted from the TSM 110 to the mobile device 100, which may store the second banking card information 113 in the removable security element 105. The mobile device 100 may subsequently automatically notify 115 the first mobile software module 106 of the transmission of the second banking card information. According to one embodiment, the first mobile software module 106 may notify 130 that the second banking card information 113 has been received.”).</li> </ul>

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Reference	Disclosure
	<ul style="list-style-type: none"> <li>• Aiglstorfer at paragraph [0042] (“According to one embodiment, the third moblet software module 112 is transmitted wirelessly and installed on the electronic device 110 transparent to the user. The third moblet software module 112 to the third moblet software module 112 may be transmitted and installed automatically. The third moblet software module 112 that the third moblet software module 112 or any update thereof may be received and installed on the electronic device 110 responsive to a user request.”).</li> <li>• Aiglstorfer at paragraph [0072] (“At step 734, graphical icons of the second and the third moblet software modules are rendered on a display of the portable device. The graphical icons are user selectable. The user selection and selection of the second and the third moblet software modules are controlled by the second moblet software module.”).</li> <li>• <i>See also</i> Aiglstorfer at ¶¶ 51, 54.</li> </ul> <p>The teachings of this reference are explicitly directed to systems and methods wherein a contactless payment system is implemented on a mobile device, and a POSITA at the relevant time would have been motivated to combine the teachings of the reference with systems and methods in which a mobile device displays and receives a selection of a contactless payment system identified in Exhibit A.</p>
<p>U.S. Pat. Pub. 2010/0190437 (“Buhot 437”). Buhot 437 was filed December 23, 2009 and published on July 29, 2010.</p>	<p><i>See, e.g.:</i></p> <ul style="list-style-type: none"> <li>• “The user interface element 224 also includes a user interface engine 330 for providing a user interface for managing NFC services provided by the NFC application elements 302-312 to a user via the MMI 214. The user interface presented to the user may include a list of the NFC services which may be provided by the NFC application elements 302-312. Using the examples given above for the NFC application elements 302-312, the user interface may include a list of PayPass.TM. payment card, VSDC.TM. payment card, train ticket, airline ticket, book ticket, and loyalty card. The user interface element 224 therefore enables the user to select one of the NFC application elements 302-312 from information provided to the user via the MMI 214. The user interface element 224 manages the selected NFC application element via the respective user interface element 224 to provide the selected service or to update a NFC service. Managing the selected NFC application element via the user interface element 224 includes selecting and executing the managing application element 330 for the selected NFC application element and the selected managing application element 330 for the selected NFC application element and its behaviour during the provision of the associated service. The user interface element 224 may include deleting, updating, installing an application element in the NFC unit 218, and installing an application element in an NFC managing element in the program memory 216. The user interface element 224 may also see also ¶¶46, 21-22, 57-58, 89-90, 97, 118, 120.</li> </ul>

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	<ul style="list-style-type: none"> <li>• “installCard: the user interface element 224 informs a NFC managing element to check for available application elements available for installation ... After a successful card installation, the NFC managing element 224 are updated accordingly. New card application elements installed on the mobile device 102 are registered with the registration element 331 and can be selected by the user interface element 224 to proceed with a contactless transaction.” ¶81.</li> <li>• “Since the user interface element 224 provides to the user information relating to the available application elements, the user interface element 224 needs to be notified accordingly to take these changes into account. The user interface element 224 displays information displayed to the user to provide the user an updated list of the available NFC application elements that are present in the NFC unit 218 after an OTA update. The database element 316 stores the branding information, the CALC information may have changed too. Thus, the user interface element 224 needs to update the information provided to the user by the user interface element 224 accordingly. The user interface element 224 receives information transferred to the NFC unit 218. In a mobile device having a database element 316 is updated when the received update information is transferred to the NFC unit 218. The user interface element 224 may be updated from the updated information in the database element 316.”</li> <li>• “The mobile device 102 also has a Man Machine Interface MMI 214, including elements such as a microphone, speaker, display screen, for providing an interface between the mobile device 102 and the user. The MMI 214 is also coupled to the processing unit 200.” ¶39.</li> <li>• “In the above, the user interface element 224 informs a NFC managing element in response to a user selection via a display of the mobile device 102.” ¶84; see also ¶81.</li> <li>• “The user interface element enables information for the different application elements to be presented to the user in a simple user friendly manner, for example, by a central menu which lists the available NFC services, and enables the user to select and initiate a NFC service out of a plural of available NFC services. The information presented to the user which selected NFC service is then provided by the selected NFC service managing the appropriate application element(s).” ¶124.</li> <li>• “The user selects a card application element to proceed with the contactless transaction. Upon the selection of a card application element, the user interface engine 330 forwards a start signal to the registration element 331, step 706. As the selected card application element belongs to the registration element 331 notifies the NFC managing element by invoking the selected card application element 708. The NFC managing element A initialises itself, and activates the card application element (such as the NFC communication section 204), step 710. When the NFC managing element A initiates the contactless transaction, the user interface element 224 is put on standby, step 712. The user interface element 224 managing element A is activated (step 714). The activated user interface notifies the user of the contactless transaction.”</li> </ul>

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