

Chart B-6

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

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

### Over-The-Air (OTA) Proxy / OTA Proxy

**CLAIM LIMITATIONS:** “an *over-the-air (OTA) proxy* configured 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 device and SE specific information, and transmit the mobile device information for registering the mobile wallet application” (“receiving the contactless applet, the WMA, and the widget information through *OTA proxy*” (claim 16).

**ASSERTED CLAIMS:** These limitations are present in the following asserted claim: ’125 patent claim 23 (and its dependent claims).

**DISCLOSURE/MOTIVATION TO COMBINE:** The Court construed the “OTA proxy” limitations as “software, in conjunction with hardware, that provisions contactless card applets, captures mobile device information (including SE information), transmits data (including SE information) to the TSM system, and receives APDU commands from the TSM and appropriately forwards them to the mobile device” (claim 23, 86). Even though the Court construed OTA proxy on Nov. 27, 2019, *Fintiv’s* proposed Amended Initial Disclosure of AIA Prior Art, Instrumentalities, and Infringement Contentions (“*Fintiv’s* Proposed Amended Infringement Contentions”) served on Defendant Apple on Nov. 27, 2019, are consistent with the Court’s construction. As it relates to the OTA proxy limitation, *Fintiv’s* Preliminary Infringement Contentions and its Proposed Amended Infringement Contentions are identical. *Compare, e.g.*, pgs. 53-55 and 96-105 of Exhibit A to both documents. For both documents, *Fintiv’s* contentions state that the OTA proxy is “software and/or hardware that enables secure communication.” *See, e.g.*, *Fintiv’s* Preliminary Infringement Contentions, Exhibit A at 53 and 96. Under *Fintiv’s* interpretation of the OTA proxy claim limitations and the Court’s construction, the prior art references that satisfy this requirement were well-known to POSITA at the time of the alleged inventions.<sup>1</sup>

As noted, OTA proxy appears in claims 23 and 16. Most of the district court’s construction merely repeats other limitations already requires that the OTA proxy is configured to “provision the contactless card applet,” “capture mobile device information,” and “transmit the mobile device information for registering the mobile wallet application.” The analogs to the Court’s construction are “provisions contactless card applets,” “captures mobile device information (including SE information),” and “transmits data (including SE information) to the TSM system,” respectively. Apple addressed how the prior art meets these requirements.

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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 adopt claim construction positions in this and other proceedings. Various positions put forth in this document are predicated on Plaintiff’s incorrect and inconsistent claim constructions (as evidenced by its Preliminary Infringement Contentions, dated May 20, 2019 and proposed Amended Infringement Contentions, dated August 14, 2019, and 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.

requirement that the OTA proxy be software, in its Preliminary Invalidity Contentions (as well as in the A-charts and Invalidity Contentions) for claim 23. Unlike claim 23, claim 16 does not recite that the OTA proxy performs the aforementioned same reasons, even if claim 16 were interpreted to require everything that claim 23 requires, the prior art renders claim 16 invalid for the same reasons. The only new requirement imposed by the district court's construction is that the OTA proxy "receives APDU commands and appropriately forwards them."

The '125 patent explains that APDU is an acronym for "Application Protocol Data Unit." '125 patent at 8:2-3. The Ass'n does not identify any specific APDU commands nor identify any new APDU commands. To the contrary, such commands were well-known in the art of the alleged invention and it would have been obvious to modify prior art system or methods to use existing APDU commands including to securely communicate, between a TSM and secure element. APDU commands were an industry standard set forth in the ISO7816-4 Standard, 1st Edition (Sept. 1, 1995); ISO14443-4 Standard, pg. vi (applying ISO7816-4 to contactless cards) and the communication protocol and commands for communicating with an IC card (*e.g.*, a smartcard) and the secure element. Introduction. For example, ISO7816-4 specifies how many bits of data comprise header and payload information of APDU commands. Thus, even if claims 16 and 23 required the OTA proxy to "receive[] APDU commands from the TSM and appropriately forward them to the secure element) as required by the district court's construction, this would have been obvious. For instance, Apple already taught transmitting information from a TSM to the secure element via an OTA proxy. *See also, e.g.*, IPR2020-00019, Petition at 47-50, 53-55. Aiglstorfer's mobile device includes a "secure element" and a "subscriber identify module (SIM) card" which wirelessly receives, via the mobile device's communication hardware, "banking card information" (TSA) 102," contactless "banking card information" from a TSM for provisioning on the device. Aiglstorfer at Fig. 1, ¶¶ 0017-0019. Aiglstorfer does not explicitly state that the TSM transmits banking card information via "ADPU commands," as of the time of the invention was well-known in the art to use APDU commands for communicating with, and provisioning cards on, a secure element. This is evidenced by Buhot '437 which explains that "Application Protocol Data Unit (APDU commands)," defined by "ISO 14443-4 Standard transmitted to/from a secure element like a SIM card during contactless card use, or when interacting with the secure element." Buhot '437, ¶¶ [0017], [0100]- [0105]. The standards in Buhot '437 are themselves prior art to the '125 patent. Aiglstorfer's knowledge of a POSITA circa 2010. *See* ISO7816-4 Standards dated 1995 and 2005; ISO14443-4 Standard dated 2001 and 2004. The ISO7816-4 Standard expressly states that APDU commands are the format used for "information exchange between the outside world and the integrated circuit" in a removable security element like a SIM card. *See* ISO7816-4 at 5, 13. Thus, to receive banking card information from the TSM to a secure element (such as Aiglstorfer's SIM card), it would have been obvious to use APDU commands. *See, e.g.*, U.S. Pat. Pub. 2012/0095852 to Bauer et al., ¶¶ [0025], [0036] (noting that "APDU commands" are used for "information exchange when communicating with a mobile device's "secure element").

A POSITA would have been motivated to use APDU commands for receiving communications from the TSM and forwarding them to the secure element because APDU commands were an industry standard format for communicating with a secure element. APDU

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communicating a variety of different types of messages relating to a variety of different contactless card applets. This fl to designers. It would also facilitate interoperability and flexibility which were known advantages of using industry sta standard techniques can reduce development time and result in more robust communications. Indded, the ability for a T secure element on a mobile device in the context of mobile payments was disclosed in references such as Bauer. Bauer, “APDU commands” are sent from a “TSM server” when communicating with a mobile device’s “secure element”). Usi provisioning was well within the capabilities of a POSITA and would have been a mere design choice. Moreover, a PO reasonable expectation of success in using APDU commands for provisioning because APDU commands were already e communicating with the secure element when conducting a payment transaction with a contactless card reader.

Apple incorporates by reference its December 9, 2019 filing (Paper 7) in IPR2020-00019, including the prior art referen Ex. 2028-1032).

To the extent Fintiv contends that any reference identified in Exhibit A does not disclose any portion of the OTA proxy are disclosed by the references herein. Moreover, the exemplary pincites to the prior art identified in the table below als missing portions would have been obvious to one of ordinary skill in the art. Further, a person of ordinary skill in the ar to combine each reference identified in Exhibit A with any one or more of the following references for at least the reason document of Apple’s Initial Invalidity Contentions and Apple’s Final Invalidit Contentions or as identified herein.

Reference	Disclosure
U.S. Pat. Pub. 2012/0095852 to Bauer et al. (“Bauer ’852). Bauer ’852 was filed Oct. 15, 2010.	<i>See, e.g.:</i> <ul style="list-style-type: none"><li data-bbox="669 1528 1624 1621">• Bauer, Abstract “A mobile payment method, system and graphical user inter face are and secured pay ment transactions from an electronic wallet on a user portable electro of sale terminal over a contactless communications link.”</li></ul>

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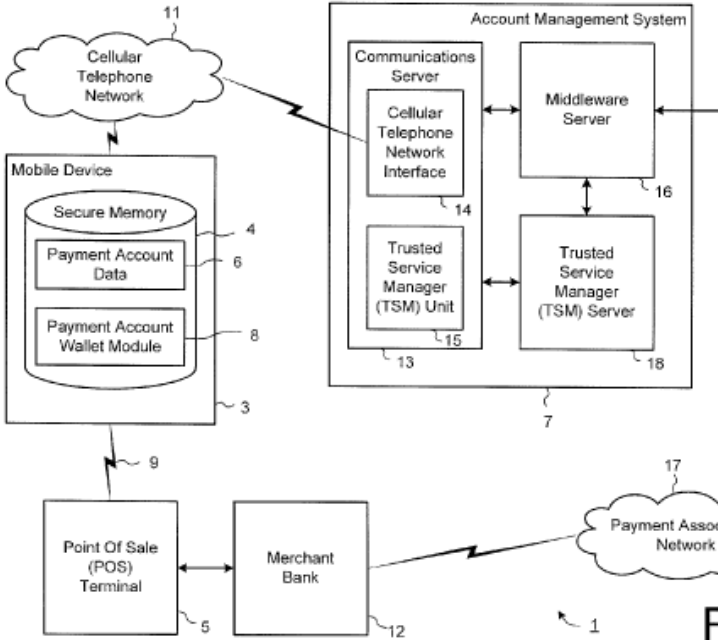
Reference	Disclosure
	 <ul style="list-style-type: none"> <li>• Bauer [0019] “The account management system 7 may provide for mobile payment transaction authorization, and other related functionality, as described in the Application U.S. Ser. No. 12/891,866. As will be described below, the account management system 7 includes a communications server 13 and a Trusted Service Manager (TSM) server 18 for facilitating the mobile payment transaction, the middleware server 16 and the mobile device 3.”</li> <li>• Bauer [0024] “As shown, the account management system 7 may include a communications server 13, a middleware server 16, and a Trusted Service Manager (TSM) server 18, which communicate electronically. In this embodiment, the servers communicate with one another via secure network links, such as a Local Area Network (LAN), a VPN connection, or other dedicated secure connection. Other network configurations are appreciated, although the components of the account management system 7 in this embodiment are shown as described above.”</li> </ul>

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Reference	Disclosure
	<p>separate servers, one or more of the servers could be provided as software and/or hardware server.”</p> <ul style="list-style-type: none"> <li> <p>Bauer [0025]. “As shown in FIG. 1, data may be communicated between the mobile device 3 and the server 16 over the cellular telephone network 11 via a cellular tele phone network interface 12 to the server 13. The TSM server 18 may perform logical data preparation of the data to be transmitted to the mobile device, for example by forming appropriate commands to be written to the secure memory 4 of the mobile device 3 and/or the payment association scheme 5. As those skilled in the art will appreciate, the precise form of the data may depend on the secure memory 4 of the mobile device 3 and/or the payment association scheme 5. The TSM server 18 may also perform encryption of the data, for example of the sensitive information in the mobile payment account data 6 such as payment keys. The TSM server 18 may transmit the encrypted data to the mobile device 3 via the communications server 13 and the cellular telephone network 11.”</p> </li> <li> <p>Bauer [0026] “the communications server 13 may also include a separate TSM unit 18 located at the mobile device 3, as will be known to the skilled person. In the above example, the communications server 13 would not access any of the sensitive portions of the encrypted data of the mobile device 3 via the cellular telephone network interface 14.”</p> </li> <li> <p>Bauer [0036]. “FIG.2b is a block diagram showing the main functional elements of the mobile payment wallet application module 8 configured to execute processing instructions of the payment applet 40 and the authentication applet 46, which is an embodiment of the invention. As will be discussed in greater detail below, the mobile payment wallet application module 8 may call the payment applet instance 40 to conduct a payment transaction process. The user waves the mobile device 3 past the contactless communication interface of the POS terminal 10. In this embodiment, the payment applet 40 may provide functional elements for authentication, for example, generating an authorization request 40-2, transmitting an authorization request 40-3 and receiving a response to a completed payment transaction 40-4. for example. The payment applet 40 may call the authentication applet 46 to process, authorize and allow a payment transaction to proceed. The authentication applet 46 may provide functional elements for authentication, for example, generating an authentication request 46-1, receiving a response to an authentication request 46-2, locking the PIN 46-2, obtaining a user defined security word 46-3 from the secure data element 4 of the mobile device 3, currently writeable 46-4, verifying the PIN 46-5, setting a PIN-verified flag 46-6, clearing the PIN-verified flag 46-7, resetting the PIN 46-8, updating the security word 46-9, updating the Risk flag 46-10, receiving a response to a PIN-verified flag 46-11 and retrieving the PIN-verified flag 46-12. Functional elements 46-1 to 46-7 and 46-11 to 46-12 are functional elements of the mobile payment wallet application module 8, as will be described below. Functional elements 46-8 to 46-10 are called by the account management system 7, for example from the middleware server 13. Functional elements 46-1 to 46-7 are in the form of APDU commands to execute in the secure element for remotely setting the PIN 46-2, for example. Functional elements 46-8 to 46-12, as well as 46-7, are typically called by the mobile payment wallet application module 8, as will be described below.”</p> </li> </ul>

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