

Chart B-2

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

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

Retrieving/Capturing Secure Element (SE) Information

CLAIM LIMITATIONS: “retrieving mobile device information comprising SE information” (’125 patent claim 14) and “configured to capture mobile device information comprising SE information” (’125 patent claim 23).

ASSERTED CLAIMS: These limitations are present in the following asserted claims: ’125 patent claims 14 and 23 (and

DISCLOSURE/MOTIVATION TO COMBINE: The Court construed “SE information” as “information that is about or related to, but not limited to, production life cycle, card serial number, card image number, and integrated circuit card identification” (’125 patent claim 14) and *Fintiv’s* Infringement Contentions state that “SE info [includes] Card Production Life Cycle (CPLC), Card Serial Number (CSN), Integrated Circuit Card Identification (ICCID)) comprising SE information.” *See* Infringement Contentions at 36 (“SE information [includes] financial institution.”). Under *Fintiv’s* interpretation of these claim limitations and the prior art, mobile devices that were capable of retrieving and/or capturing information about their own secure element were well-known to those skilled in the art at the time of the alleged inventions of the Asserted Patent.¹

Accordingly, known prior art systems or methods in which a mobile device retrieves and/or captures information relating to, but not limited to, these well-known claim limitations, and it would have been obvious to a POSITA to modify a system or method of a mobile device to be provisioned on a mobile device and/or a mobile device registers a mobile wallet application with a TSM so that either of the mobile device can retrieve or capture information about SE information. Moreover, to the extent SIM cards, UICC (Universal Integrated Circuit Card), embedded SIM cards/chips are secure elements, retrieving information from and/or about those components was also well-known to those skilled in the art at the time of the alleged invention. For example, SD Card Association announced the microSD format at CTIA Wireless 2005 on March 13, 2005. <https://simple.wikipedia.org/wiki/MicroSD>. And UICC/SIM cards were well-known to those skilled in the art before that. Smart cards were sold worldwide as early as 1991 by manufacturers such as Giesecke & Devrient. https://www.etsi.org/deliver/etsi_ts/102200_102299/102221/03.00.00_60/ts_102221v030000.pdf. ETSI released the SIM standard, TS 11.11, shortly thereafter, and a technical specification for UICC/SIM cards was released as early as 1999. https://www.etsi.org/deliver/etsi_ts/102200_102299/102221/03.00.00_60/ts_102221v030000.pdf

¹ To the extent that these Invalidity Contentions rely on or otherwise embody particular constructions of terms or phrases in the Asserted Claims as ordered by the Court in this action, 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 incomplete claim constructions as evidenced by its Preliminary Infringement Contentions, dated May 20, 2019 and proposed Amended Infringement Contentions, dated August 14, 2019 (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.

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telephone calls made on GSM mobile devices, all of which require a SIM card, the mobile device receives the SIM card (which contains the ICCID number) and/or the MSISDN (which contains the user's telephone number) from the SE and transmits it to the carrier.

As reflected by the prior art references and citations below, it was well-understood by POSITAs that software (*e.g.*, an application) on a mobile device retrieved and/or captured its own SE information. A POSITA would have been motivated to implement this standard for a number of goals, including: 1) ensuring secure registry of the mobile device or the SE with a TSM, 2) allowing for software to be provisioned onto the device and/or the SE; 3) to allow a TSM and the mobile device and/or SE to synchronize, backup, and restore data; 4) to allow the secure verification of a removable SE when it has been transferred from one mobile device to another; and 5) to allow a mobile device to verify the identity of the caller and/or their SE. *See, e.g.*, Pesonen at 8:21-43, 11:1-11 (“...the invention generates Issuer Security Domain keys of a Global Platform Java card, whereby the initialized chip will contain Issuer Security Domain specific keys, which keys have been generated from issuer-specific master keys diversified with the unique chip serial number. The unique chip serial number may be constructed, for example, from the card production life cycle (CPLC) data on the secure element chip. In certain embodiments, several CPLC data fields, such as the IC fabrication date, the IC serial number, and the IC batch identifier...in certain embodiments, encrypted communication can take place, the issuer 230 must have the unique chip serial number and the master keys for the issuer. As discussed above, the device vendor 220 returns the unique chip serial numbers to the issuer 230 after the successful initialization of the device. Alternatively, an issuer without the unique chip serial number may obtain that number from other public sources or generate it itself...”); Bauer at 7:29-36, 7:48-54 (“The mobile device 3 may also include one or more other third party application modules in secure memory 4, for example an application module related to third party loyalty scheme. The secure memory 4 may also include an application which is an application to manage and hold the mobile network operator's functionality and secure information, such as a PIN.... the automated process begins at Step S3-1 where the middleware server 16 in the account provisioning system 7 receives a request for a new mobile payment account from the mobile device 3 via the communications server 13, the request including data identifying the user and details entered by the user for provisioning the new mobile payment account.”).

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 pincites to the prior art identified in the table below also disclose the 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.

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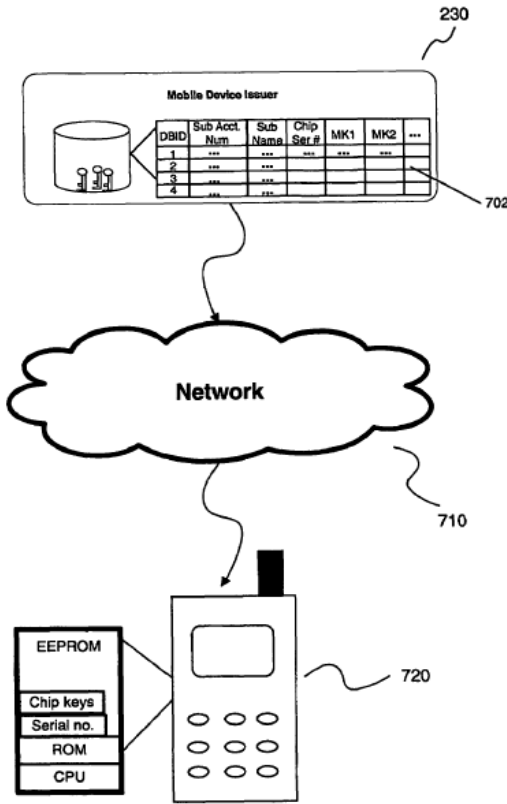
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Reference	Disclosure
<p>U.S. Patent No. 7,699,233 to Pesonen (“Pesonen”). Pesonen was filed on filed on November 2, 2005, published on May 3, 2007, and issued on April 20, 2010.</p>	<p><i>See, e.g.:</i></p> <ul style="list-style-type: none"> • Pesonen at 2:46-57 (“In light of the foregoing background, embodiments of the present invention provide a method for installing and initializing secure element chips into mobile devices. In one embodiment, a smart card manufacturer creates smart cards with embedded but uninitialized secure element chips, which are shipped to a mobile device manufacturer/vendor in an uninitialized state, rather than to the issuer. The uninitialized smart cards may contain pre-installed encryption keys and a secure element chip may support an initialization routine that can be invoked by the device vendor to personalize the smart card for a specific issuer.”). • Pesonen at 5:1-22 (“According to embodiments of the present invention, the pre-installed initialization data for each individual smart card manufactured, and will only later be diversified by the issuer using the unique chip serial numbers. This process is discussed in detail below. Also, note that the uninitialized smart cards may contain other data besides the pre-installed root keys, such as the MAC seed, transfer key, and encryption keys, which are discussed in detail below...Only the unique chip serial number, which is a public information value, might be public information accessible to the device vendor 220.”). • Pesonen at 5:55-63 (“In contrast, the unique chip serial number may be public information accessible to the device vendor. Certain embodiments of the present invention involve occasions where the smart card is shipped to the device vendor unsecured or untrusted, and thus the pre-installed root keys, transfer key, and MAC seed must remain completely inaccessible to a device vendor in possession of the uninitialized smart card, the unique chip serial numbers, and the encrypted initialization data.”). • Pesonen at 6:27-39 (“The initialization routine, discussed in further detail below, will be performed by the device vendor 220 embedded in the mobile device, personalizing the smart card chip for the issuer 230. The device vendor 220 manages the device and provide mobile customers with secure data transfer capabilities. The device vendor 220 delivers the initialized mobile devices to the issuer 230 for distribution to retailers. The issuer 230 provides corresponding chip serial numbers of the secure element in each device. The issuer 230 stores the chip serial numbers in a secure database, to facilitate future communications with the mobile device. The issuer 230 distributes these personalized mobile devices to customers.”). • Pesonen at 7:51-57 (“The EEPROM 308 in FIG. 3 illustrates the initial state of the secure element chip 302 when it is shipped from the smart card manufacturer 220. The uninitialized chip 302 has initial key values built into the EEPROM 308: the MAC seed 312, the root keys 314, and the unique serial number 316.”). • Pesonen at 8:21-43 (“Each secure element chip 302 also initially contains a unique serial number stored into the OS system area of the EEPROM 308. However, according to other embodiments, different arrangements for storing the unique serial number 316 can be made. Each secure element chip 302 contains a different serial number. In certain embodiments, the unique serial number is 16 digits”).

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	<p>after it is written into the EEPROM 308. While the methods presented herein do not depend on a secure element operating system, certain embodiments involve secure elements running a JavaCard with Global Platform operating system. For example, the invention can be used to securely generate Issuer Security Domain for a Java card, whereby the initialized chip will contain Issuer Security Domain with chip keys 518 and the unique chip serial number 316. As previously mentioned, while the chip keys 518 and the unique chip serial number 316 have been generated from issuer-specific master keys diversified with the unique chip serial number 316, the unique chip serial number may be constructed, for example, from the card production life cycle (CPLC) data. The unique chip serial number may be constructed from several CPLC data fields, such as the IC fabrication date, the IC production date, and the batch identifier.”).</p> <ul style="list-style-type: none"> • Pesonen at 10:26-35 (“After the Successful execution of the initialization routine, the chip keys 518 and the unique chip serial number 316. As previously mentioned, while the chip keys 518 and the unique chip serial number 316 do not depend on a secure element operating system, certain embodiments involve secure elements running a JavaCard with Global Platform operating system. In such embodiments, FIG.5 may be in a secure mode of the JavaCard Global Platform operating system, and the ROM 306 may store the chip keys 518 and the unique chip serial number 316.”). • Pesonen at 10:53-58 (“To generate the chip keys for a specific secure element, the issuer 230 may generate the unique chip serial number, which the device vendor 220 may send to the issuer, for example, to a database. The issuer 230 may then diversify the master keys with the unique chip serial number.”). • Pesonen at 11:1-11 (“However, in certain embodiments, before encrypted communication, the issuer 230 must have the unique chip serial number and the master keys for the target device. The device vendor 220 returns the unique chip serial numbers to the issuer 230 after the successful communication with the device. Alternatively, an issuer without the unique chip serial number may obtain the unique chip serial numbers from other sources, or from the device itself. However, the issuer 230 still needs the master keys and the unique chip serial numbers before communicating with the device USC.”). • Pesonen at 11:43-47 (“Once the chip keys are securely embedded into the mobile device, the issuer 230 may have possession of the unique chip serial numbers and the corresponding master keys, encrypted transactions can take place between the issuer 230 and the mobile device.”). • Pesonen at Fig. 7:

Reference	Disclosure
	 <p style="text-align: center;">FIG. 7</p> <p>The teachings of this reference are explicitly directed to systems and methods wherein software device and/or a mobile device registers a mobile wallet application with a TSM, and a POSITA been motivated to combine these teachings with other systems and methods in which software device and/or a mobile device registers a mobile wallet application with a TSM, such as those</p>

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