

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

LIBERTY PEAK VENTURES, LLC,

Plaintiff,

v.

**REGIONS FINANCIAL CORPORATION
and
REGIONS BANK,**

Defendants.

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JURY TRIAL DEMANDED

CIVIL ACTION NO. _____

PLAINTIFF’S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Liberty Peak Ventures, LLC files this Complaint in the Eastern District of Texas (the “District”) against Defendants Regions Financial Corporation (“Regions Corp.”) and Regions Bank (collectively, “Defendants” or “Regions”) for infringement of U.S. Patent Nos. 7,953,671 (the “671 patent”), 8,794,509 (the “509 patent”), 8,851,369 (the “369 patent”), 9,195,985 (the “985 patent”), 6,820,802 (the “802 patent), and 8,905,301 (the “301 patent) which are collectively referred to as the “Asserted Patents.”

THE PARTIES

1. Plaintiff Liberty Peak Ventures, LLC (“LPV” or “Plaintiff”) is a Texas limited liability company located at 1400 Preston Rd, Suite 482, Plano, TX 75093.

2. On information and belief, Defendant Regions Financial Corporation (“Regions Corp.”) is a corporation organized under the laws of the state of Delaware, with its principal place of business located at 1900 Fifth Avenue North, Birmingham, Alabama 35203. Regions Corp. may

be served with process via its registered agents and via its corporate officers. Regions Corp. is a publicly traded company on the New York Stock Exchange under the symbol “RF.”

3. On information and belief, Defendant Regions Bank is a commercial bank and member of the Federal Reserve System, chartered in Alabama. Regions Bank’s main banking facility is located at 1900 Fifth Avenue North, Birmingham, Alabama 35203. Regions Bank is a wholly-owned subsidiary of Defendant Regions Corp. Regions Bank may be served with process via its registered agents and/or its corporate officers.

4. On information and belief, Regions Corp. is a financial holding company that “provides traditional commercial, retail and mortgage banking services, as well as other financial services in the fields of asset management, wealth management, securities brokerage, trust services, merger and acquisition advisory services, and other specialty financing. *See 2020 Form 10-K, REGIONS*, <https://ir.regions.com/~media/Files/R/Regions-IR/documents/2020%2010-K%20Final%20Draft%20for%20Website.pdf>, at 11 (last downloaded October 28, 2021). Regions Corp. operates across the United States, having “2,083 ATMs and 1,369 total branch outlets across the South, Midwest, and Texas.” *Id.* Regions Corp. conducts its banking operations through Regions Bank. *Id.*

5. On information and belief, Regions Bank is “[Regions Corp.’s] banking subsidiary.” *Id.* at 37. Regions Bank offers banking services through its ATMs and branch outlets, including 98 branches in Texas. *Id.* at 11. Additionally, Regions Bank offers multiple other services through its wholly-owned subsidiaries: commercial financing (Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC); investments and insurance products (Regions Investment Services, Inc.); and investment advising and consulting (Regions Investment Management, Inc. and Highland Associates, Inc.) *Id.* These Regions products and services include

Regions Bank offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing payment cards (e.g., credit card and debit cards) account services and transactions for Regions’ customers, consumers, and clients. *See, e.g., ATM and Debit Card Agreement*, REGIONS, https://www.regions.com/-/media/pdfs/terms/ATM_Debit_CheckCard_Agreement.pdf (stating that “This Agreement...covers the possession and use of any card that...we issue...or we activate, in connection with this Agreement, for access to or for transactions with respect to an Account” and indicating that “we” means “Regions Bank.”) (last visited October 29, 2021).

6. On information and belief, Defendants, individually and via their subsidiaries and affiliates, contract with and issue credit and debit cards to their customers (“cardholders”) to provide card services. *See id.* The Asserted Patents cover Regions’ products, services, and methods related to offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions via credit and debit cards and associated accounts, which are designed, developed, manufactured, distributed, sold, offered for sale, and used by Regions and/or their customers, consumers, and clients. For example, Defendants infringe the Asserted Patents via at least Regions’ branded credit cards and online services that utilize those credit cards, which allow Regions’ clients and consumers to conduct financial and banking transactions via credit and debit cards and their associated accounts. *See Credit Cards*, REGIONS, <https://www.regions.com/personal-banking/credit-cards> (last visited November 1, 2021). Moreover, Defendants’ infringing credit and debit card account systems and processes are compatible with application (“app”)-based mobile payment methods via third-party services, such as Google Pay and Samsung Pay, that are installed on a consumer’s device, such as a mobile phone,

tablet, or smartwatch. *See, e.g., Mobile Pay*, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (last visited October 29, 2021).

7. On information and belief, Defendants, on their own and/or via subsidiaries and affiliates, maintain a corporate and commercial presence in the United States, including in Texas and this District, via at least their 1) physical bank locations, operation centers, and ATM locations established throughout Texas, including this District; 2) Regions' online presence (e.g., [regions.com](https://www.regions.com)) that provides to consumers access to Regions' products and services, including those identified as infringing herein; and 3) consumers and clients of Regions who utilize Regions credit and debit card account services, at the point of sale, including via contactless payment methods, in numerous merchant physical and online sites, i.e., retail stores, restaurants, and other service providers accepting Regions credit and debit cards. *See, e.g., Credit Cards*, REGIONS, <https://www.regions.com/personal-banking/credit-cards> (last visited November 1, 2021). Such credit and debit card account services include systems and methods for processing digital transactions, via online transactions and mobile payment solutions. *See id.* (detailing benefits of various Regions cards, contactless payment methods, and card security measures). Defendants maintain 21 bank branches in this District, including, but not limited to, branches in Tyler, Plano, Allen, Longview, Lufkin, Kilgore, Palestine, and Nacogdoches, among other properties located in this District. For example, Defendants have a "Main" branch in Tyler located at 100 E. Ferguson Street, Tyler, Texas 75702. *See Tyler Main*, REGIONS, <https://www.regions.com/Locator/Branch/bank-branch-Tyler-Main-Tyler> (last visited October 28, 2021). Thus, Defendants do business, including committing infringing acts, in the U.S., the state of Texas, and in this District.

JURISDICTION AND VENUE

8. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

9. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

A. Defendant Regions Corp.

10. On information and belief, Defendant Regions Corp. is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this State and this District, including: (A) at least part of its infringing activities alleged herein which purposefully avail the Defendant of the privilege of conducting those activities in this state and this District and, thus, submits itself to the jurisdiction of this court; and (B) regularly doing or soliciting business, engaging in other persistent conduct targeting residents of Texas and this District, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported and services provided to and targeting Texas residents and residents of this District vicariously through and/or in concert with its alter egos, intermediaries, agents, distributors, partners, subsidiaries, clients, customers, affiliates, and/or consumers.

11. For example, Regions Corp. owns and/or controls multiple subsidiaries and affiliates, including, but not limited to Defendant Regions Bank, that have a significant business presence in the U.S. and in Texas. *See, e.g., Find a Location, REGIONS, <https://www.regions.com/Locator> (Showing 21 branches in this District) (last visited October 29, 2021).* Regions Corp., via its own activities and via at least wholly owned subsidiary Regions Bank, has multiple properties in this District, including a "main" full-service bank branch located at 100 E. Ferguson Street, Tyler, TX 75702. *See id.*

12. Such a corporate and commercial presence in Texas, including in this District, by Defendant Regions Corp. furthers the development, design, manufacture, distribution, sale, and use of Regions' infringing products, services, and methods for offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions via credit and debit cards and associated accounts. Through direction and control of its alter egos, intermediaries, agents, subsidiaries and affiliates, Regions Corp. has committed acts of direct and/or indirect patent infringement within Texas, this District, and elsewhere in the United States, giving rise to this action and/or has established minimum contacts with Texas such that personal jurisdiction over Regions Corp. would not offend traditional notions of fair play and substantial justice.

13. On information and belief, Regions Corp. controls or otherwise directs and authorizes all activities of its alter egos, intermediaries, agents, subsidiaries, and affiliates, including, but not limited to Defendant Regions Bank. Via its own activities and via at least these entities, Regions Corp. has substantial business operations in Texas, which include retail and non-profit partners, clients, customers and related financial products and services, such as retail banking services, investment services, Regions-branded cards, and private label and co-brand cards. Regions Corp. has placed and continues to place infringing products, services, and methods for offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions via credit and debit cards and associated accounts, including related mobile, contactless, and online payment systems, into the U.S. stream of commerce. Regions Corp. has placed such products, services, and methods into the stream of commerce with the knowledge and understanding that such products are, will be, and continue to be sold, offered for sale, and/or used in this District and the State of Texas. *See Litecubes, LLC v. Northern Light Products, Inc.*,

523 F.3d 1353, 1369-70 (Fed. Cir. 2008) (“[T]he sale [for purposes of § 271] occurred at the location of the buyer.”).

14. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(c) and 1400(b). As alleged herein, Defendant Regions Corp. has committed acts of infringement in this District. As further alleged herein, Defendant Regions Corp., via its own operations and employees located there and via ratification of Defendant Regions Bank’s presence and the presence of other subsidiaries as agents and/or alter egos of Regions Corp., has a regular and established place of business, in this District at least at a main bank branch located at 100 E. Ferguson Street, Tyler, TX 75702. Further, Defendants operate 20 other bank branches in this district, including multiple branches in Tyler, Longview, Lufkin, Plano, and elsewhere, each of which is a regular and established place of business. Accordingly, Regions Corp. may be sued in this district under 28 U.S.C. § 1400(b).

B. Defendant Regions Bank

15. On information and belief, Defendant Regions Bank is subject to this Court’s specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this State and this District, including: (A) at least part of its infringing activities alleged herein which purposefully avail the Defendant of the privilege of conducting those activities in this state and this District and, thus, submits itself to the jurisdiction of this court; and (B) regularly doing or soliciting business, engaging in other persistent conduct targeting residents of Texas and this District, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported and services provided to and targeting Texas residents and residents of this District vicariously through and/or in concert with its alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers. For example, Regions

Bank, including as an agent and alter ego of parent company Regions Corp., operates a “main” bank branch in Tyler, TX, operates a large network of Regions ATMs, and maintains in a retail services and retail banking business that provides to products, services, and methods that include Regions Bank offering, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card account services, via credit and debit cards and associated accounts, including related mobile, contactless, and online payment systems, for Regions’ customers, consumers, and clients in Texas and this District. Moreover, Regions Bank identifies itself as the Regions entity that issues Regions credit and debit cards to Regions’ clients, consumers, and customers. *See, e.g., ATM and Debit Card Agreement*, REGIONS, https://www.regions.com/-/media/pdfs/terms/ATM_Debit_CheckCard_Agreement.pdf.

16. Multiple wholly-owned subsidiaries of Regions Bank also do business in Texas and in this District. Regions’ commercial financing subsidiaries, Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, have Texas-based employees that service East Texas. *See Meet Our Team – Regions Equipment Finance*, REGIONS, <https://www.regions.com/commercial-banking/equipment-finance/about-us/our-team> (showing an employee based in Dallas, TX, that serves “East Texas & South Louisiana”) (last visited October 29, 2021). Regions also employs mortgage lenders, financial advisors, and wealth advisors in this District. *See, e.g., Find a Location – Mortgage Lenders*, REGIONS, <https://www.regions.com/Locator?type=MLO> (Searching for “Plano, TX” in the search bar and selecting “load more results” shows multiple employees in this District, in and around Plano, Tyler, and Texarkana)

17. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(c) and 1400(b). Defendant Regions Bank has committed acts of infringement in this District. As further alleged

herein, Defendant Regions Bank, has a regular and established place of business, in this District at least at a main bank branch located at 100 E. Ferguson Street, Tyler, TX 75702. Further, Defendants operate 20 other bank branches in this district, including multiple branches in Tyler, Longview, Lufkin, Plano, and elsewhere, each of which is a regular and established place of business. Accordingly, Regions Corp. may be sued in this district under 28 U.S.C. § 1400(b).

18. On information and belief, Defendants Regions Corp. and Regions Bank each have significant ties to, and presence in, the State of Texas and this District, making venue in this District both proper and convenient for this action.

THE ASSERTED PATENTS AND TECHNOLOGY

19. The Asserted Patents cover various aspects of products, services, and methods that include Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients, including Regions' internal payment processing, authentication, authorization, and fraud detection systems and methods, referred to herein collectively as the "Accused Instrumentalities." The apparatuses, systems, and methods described in each of the Asserted Patents apply, for example, to systems for securing, authorizing, and facilitating financial transactions, i.e., purchases, related to credit and debit card accounts.

20. On information and belief, a significant portion of Defendants' operating revenue is derived from offering and selling products, services, and methods related to issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts, and related financial benefits of, including fees and interest, for Regions' customers, consumers, and clients. Regions reported \$4.26 billion in interest income and \$2.39

billion in non-interest income in 2020. *2020 Form 10-K* at 46. This included \$438 million in income related to Regions credit and debit cards. *Id.* at 59.

21. The Asserted Patents cover Defendants' Accused Instrumentalities that secure, authorize, and facilitate mobile payments, contactless payments, and online payments using credit and debit card accounts activated, offered, issued, provided, established, registered, facilitated, and maintained by Regions, including by Defendants and their alter egos, intermediaries, agents, distributors, partners, subsidiaries, and clients. Clients, customers, and consumers of the Accused Instrumentalities use such products at the point of sale, for example, via mobile wallets provided on a mobile device with the appropriate smartcard and/or app installed (in some cases, via software native to the device) or via an embedded chip or smartcard embedded within a physical credit or debit card. In other instances, the Accused Instrumentalities may be utilized in online purchases conducted over a network (e.g., the Internet) and/or when the user of the payment card account is registering, activating, or maintaining the account.

22. On information and belief, Regions' credit and debit card account services utilize the Europay, Mastercard, and Visa (EMV) standards in processing, securing, and authenticating financial transactions. For example, Defendants provide payment applications (often provisioned to a Secure Element) that use EMV standards to process payments. In some cases, Defendants' payment applications reside on a user's mobile device (e.g., stored in a Secure Element or other secure memory), allowing the user to make payments via a Regions credit or debit card without presenting the physical card at the time of payment (referred to herein as a "mobile payment"). Regions' mobile payments can be facilitated by using mobile wallets such as Google Pay and Samsung Pay, such as shown below:

Google Pay®

Android users, use Google Pay to tap and pay with your phone at more than 1 million locations across the United States for things like groceries and more. Just unlock your phone, place it near a contactless terminal wherever Google Pay is accepted and you're all on your way.³

Samsung Pay™

Samsung users, now you can enroll in Samsung Pay and make purchases just by hovering your mobile device close to the payment terminal. In fact, it works almost anywhere you can swipe your card. From local grocery stores to corner coffee shops to taco trucks, it's easy to use with compatible Samsung devices.⁵

See Mobile Pay, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (last visited October 29, 2021).

23. Mobile wallets may be implemented as an application (or “app”) on a mobile device, e.g., a mobile phone, tablet, or smartwatch. In some implementations, mobile wallets utilize Host Card Emulation, where, instead of storing the Region payment application in a Secure Element on the host device, it is stored in the host CPU or remotely, e.g., in the cloud. In either case, mobile payments are made wirelessly, without contact needed between payment device and payment terminal, via, for example, Near Field Communication (“NFC”) protocols or Magnetic Secure Transmission (MST), as explained below. A user need only hold the mobile device close to the payment terminal in order to establish communication between the payment application and the payment terminal. These wireless methods utilized with EMV deliver secure transactions between a payment terminal and the mobile device.

SECURITY

How Visa secures contactless payments

Sophisticated security makes tapping to pay simple.

Contactless payments are already common in places like Canada, Australia and the United Kingdom. In fact more than 40 percent of Visa in-store transactions outside the United States occur with a tap. And now they're poised for ubiquity in the U.S., where 100 million new Visa contactless cards are expected to be issued in 2019. In addition to being a fast and easy way to pay, contactless cards and mobile devices provide strong protection against fraud without ever touching the payment terminal. Here are some contactless security facts.

Contactless cards use the same secure technology as EMV Chip

- Every contactless transaction includes a one-time use cryptographic code that prevents counterfeit fraud.

Contactless cards experience among the lowest fraud rates of any type of payment

- The global contactless fraud rate declined 33 percent between 2017 and 2018.

See Security, VISA, <https://usa.visa.com/visa-everywhere/security/how-visa-secures-contactless-payments.html> (accessed via link at <https://www.regions.com/digital-banking/transfer-money-and-pay/contactless-pay>) (last visited October 29, 2021).

24. On information and belief, as indicated below, Regions encourages its clients, consumers, and customers to shop with its Regions credit and debit cards using a digital wallet service which provides a distribution channel by which Regions' payment applications (e.g., via the Secure Element on the mobile device) can be accessed and used:

Mobile Pay

Transfer Money and Pay

Use your Regions credit, debit and prepaid cards to simply and conveniently make purchases through a variety of mobile payment options.¹

Gone are the days of counting change and writing checks to make payments. Add your compatible Regions card to the payment solution compatible with your device, and make purchases at participating locations with just one touch of your device — no need to swipe your card.

See Mobile Pay, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (last visited October 29, 2021).

25. The Accused Instrumentalities also include at least Defendants' payment card (e.g., credit card and debit card) related products, services, and methods for card payments using a physical credit card having an embedded chip or smartcard. *See, e.g., Credit Cards*, REGIONS, <https://www.regions.com/personal-banking/credit-cards> (last visited October 29, 2021). For example, Defendants' payment applications reside on microchips embedded on Regions' credit and debit cards, which allow the user to tap the payment card to a reader and complete a transaction wirelessly and without contact between the card's magnetic stripe and the reader.




Contactless Payment

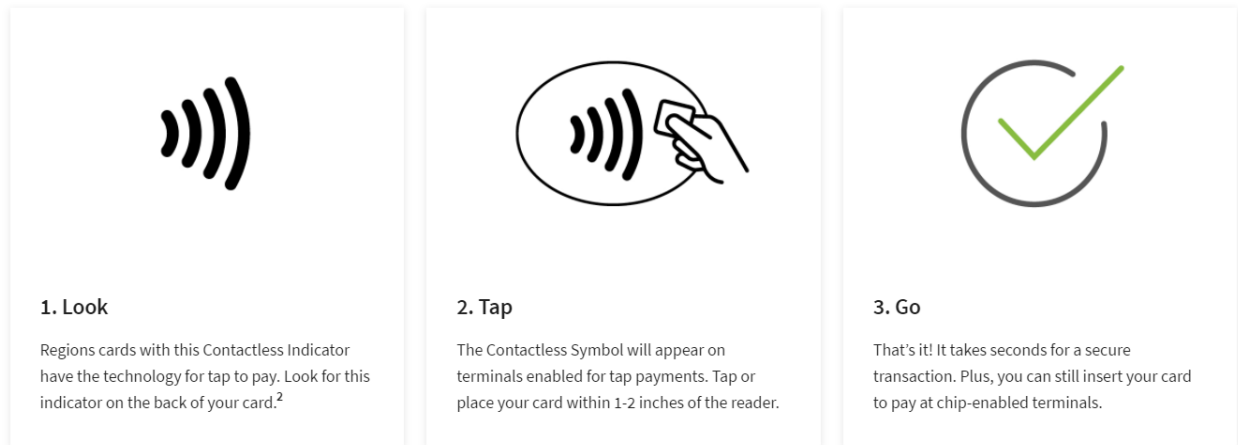
With a Regions Visa® contactless chip credit card, you can tap your card to pay for everyday purchases.

[Tap to Pay details](#)

See Credit Cards, REGIONS, <https://www.regions.com/personal-banking/credit-cards> (last visited October 28, 2021).

26. On information and belief, the Accused Instrumentalities include at least Defendants' payment card (e.g., credit card and debit card) related products, services, and methods for contactless payments using a physical credit card having an embedded chip or smartcard that utilize EMV standards for contactless payment. *See, e.g., Credit Cards*, REGIONS. These credit and debit cards include contactless payment functionality indicated by the signal  symbol, and further described below.

How to Tap to Pay



See Tap to Pay with Contactless Payment Cards, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/contactless-pay> (last visited October 28, 2021).

27. On information and belief, a process referred to as “tokenization,” which is also part of the EMV standards, is also utilized by Defendants in authorizing credit and debit transactions, via online payments, in-app payments, and mobile payments. As explained below, a “payment token” is a “surrogate value for a PAN” (a primary account number). In tokenization, “Payment Tokens are requested, generated, issued, provisioned, and processed as a surrogate for PANs.” *See also Shop Smarter with Improved Credit and Debit Card Technology*, REGIONS, <https://www.regions.com/Insights/Personal/Personal-Finances/Managing-credit-and-debt/Using-Improved-Credit-Card-Technology> (Discussing Samsung Pay using Regions credit or debit cards: “Because tokenization is used at point of purchase, your actual card number isn’t shared when you make a purchase.”) (last visited October 29, 2021).

Payment Token	A surrogate value for a PAN that is a variable length, ISO/IEC 7812-compliant numeric issued from a designated Token BIN or Token BIN Range and flagged accordingly in all appropriate BIN tables. A Payment Token must pass basic validation rules of a PAN, including the Luhn check digit. Payment Tokens must not collide or conflict with a PAN.
Payment Tokenisation	A specific form of tokenisation whereby Payment Tokens are requested, generated, issued, provisioned, and processed as a surrogate for PANs as described by the processes defined in this technical framework.

<https://www.emvco.com/wp-content/plugins/pmpro-customizations/oy-getfile.php?u=/wp-content/uploads/documents/EMVCo-Payment-Tokenisation-Specification-Technical-Framework-v2.0.pdf>

28. Via mobile wallet applications, such as Google Pay, tokenization is implemented by Defendants assigning a “virtual account number” or token that “securely links the actual card number to a virtual card on the user’s Google Pay-enabled device.”

Tokenization

Google Pay facilitates the assignment of a “virtual account number,” also called a token, that securely links the actual card number to a virtual card on the user’s Google Pay-enabled device. A token is unique to the card number it represents. The app user’s mobile device keeps an encryption key in memory that it uses to decrypt limited-use and single-use keys (also called cryptograms) for contactless transactions (NFC payments).

<https://support.google.com/pay/merchants/answer/7151299?hl=en>

29. Defendants, as a payment card account issuer, direct and control the operation of mobile wallets and contactless payments utilizing microchips or smartcards embedded within the physical credit or debit card. As described below with respect to the mobile wallet Google Pay, for

example, Defendants provision third-party mobile wallets with Defendants' own credentials and EMV payment applications.

(c) GPC's Role. While Google Pay enables you to store your Payment Instruments and transmit their information to merchants or transit providers, neither GPC nor Google processes Google Pay transactions with such Payment Instruments, and neither exercises control over: the availability or accuracy of payment cards, payments, refunds, chargebacks; the provisioning (or addition) of cards to Google Pay; or other commercial activity relating to your use of Google Pay. For any concerns relating to the foregoing, please contact your Payment Instrument's issuer. You acknowledge and agree that your transactions through Google Pay are transactions between you and the merchant and not with GPC, Google, or any of their affiliates. For disputes relating to payment transactions conducted using Google Pay, contact your Payment Instrument's issuer or the appropriate merchant. Neither GPC nor Google is a party to your registered Payment Instruments' cardholder agreements or other terms of use, and neither is involved in issuing credit or determining eligibility for credit. GPC does not make any representation or verify that any of your Payment Instruments are in good standing or that the issuer of your Payment Instrument will authorize or approve any transaction with a merchant or transit provider when you use Google Pay in connection with that transaction.

https://payments.google.com/payments/apis-secure/u/0/get_legal_document?ldo=0&ldt=googlepaytos&ldl=und#SafeHtmlFilter_US

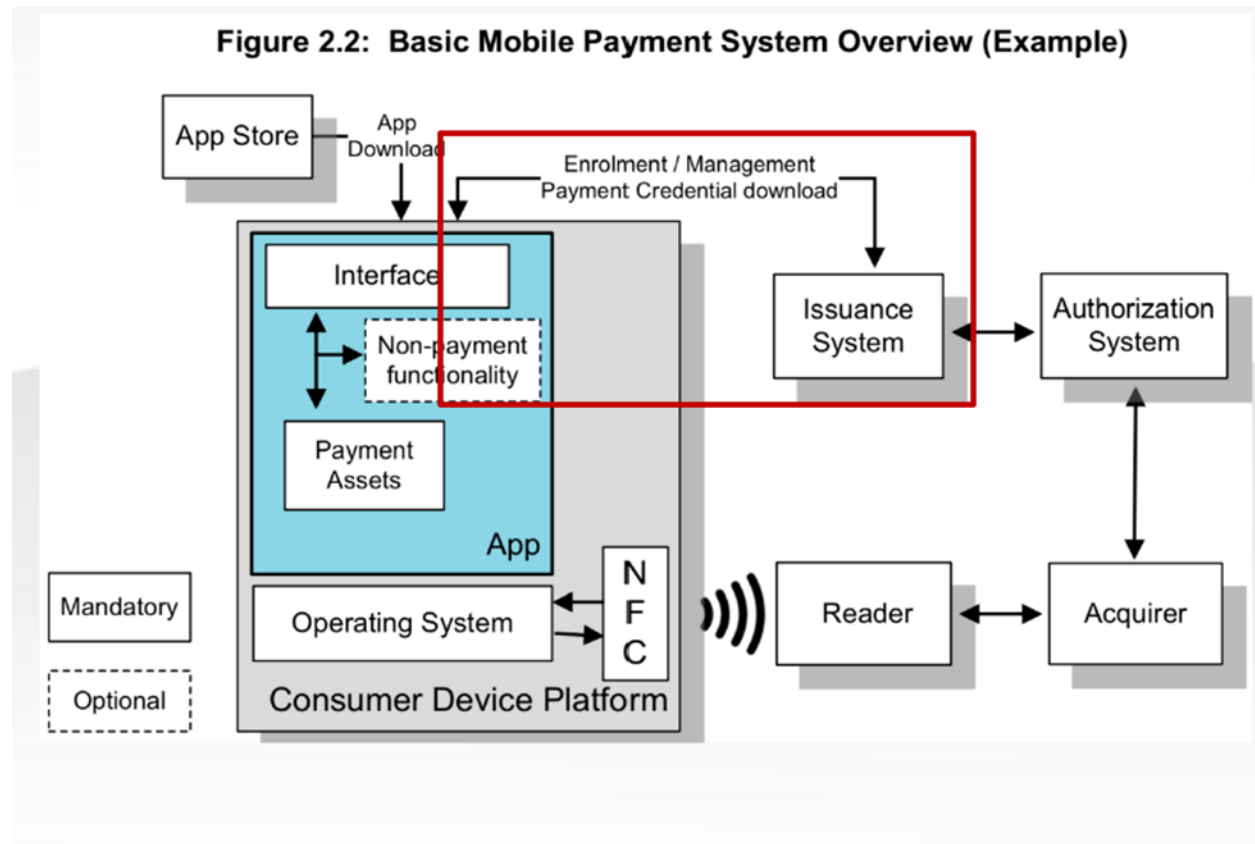
30. The Accused Instrumentalities include Regions' products, processes, and systems offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients, including Regions' internal payment processing, authentication, authorization, and fraud detection systems and methods, related to at least the following Regions payment cards: Regions Explore Visa® Credit Card; Regions Life Visa® Credit Card; Regions Cash Rewards Visa® Credit Card; Regions Premium Visa® Signature Credit Card; Regions Prestige Visa® Credit Card; Regions Personal Visa® Debit Card; Regions Business Visa® Check Card; Regions Visa ® Business Credit Card; Regions Visa® Business Enhanced Credit Card; Regions Now Card®; Regions Visa® Gift Card; and Regions Loyalty Card. *See, e.g., Credit Cards, REGIONS*, <https://www.regions.com/personal-banking/credit-cards> (listing contactless payment as a

“top feature for all credit cards”) (last visited October 29, 2021); *Mobile Pay*, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (“Use your Regions credit, debit, and prepaid cards to simply and conveniently make purchases through a variety of mobile payment options,” including Google Pay and Samsung Pay) (last visited October 29, 2021).

31. The Accused Instrumentalities infringe at least claims of the '671 patent, which provide technological solutions and improvements addressing security concerns surrounding the provisioning of credentials to, and transactions performed using, digital wallets. Though conventional methods for securing financial transactions utilized use of personal identifiers, such as PINs, such identifiers could be easily duplicated or discovered. Even with the use of electronic wallets and more intelligent instruments, there remained a need to further safeguard electronic transactions against evolving threats. In at least one exemplary embodiment, the '671 patent addresses the need for securing RFID transactions by establishing a challenge from a computer-based system sent to an intelligent token of a client. The token generates a challenge response that is received by the computer-based system. Credentials, assembled by the computer-based system, include a key. In a given transaction, a client may make a request to the computer-based system including at least a portion of the assembled credentials. The computer-based system may validate the portion of the assembled credentials with the key and provide access to a transaction service. Utilizing systems and methods such as these, the '671 patent's claims allow payment card issuers to secure direct and safe transactions between consumers and merchants.

32. Defendants infringe the '671 patent by enabling and conducting mobile payments that utilize mobile wallets, such as Google Pay and Samsung Pay. *See Mobile Pay*, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (last visited October 28, 2021). These mobile wallets conform to EMV standards. As part of utilizing a

consumer's mobile wallet, Defendants conduct an enrollment process, which forwards a challenge to a consumer's mobile device, i.e., an intelligent token, as shown below.



33. As described below, the challenge is used in the enrollment process for identification and verification of the consumer, as a user of the mobile wallet, and for device

attestation to determine that the device is in a trusted state. Furthermore, Defendants receive this challenge response.

3.3 User Enrolment

User enrolment enables the cardholder to request the registration of their Software Card. It is an important life cycle event, normally conducted remotely (e.g. OTA), at the time a consumer wishes to enrol a payment card to the Mobile Application. Some Identification and Verification (ID&V) considerations that need to be taken into account are:

- There must be defined and established Identification and Verification (ID&V) requirements to be used during the user enrolment process.
- The user enrolment process must verify through remote device attestation whether the device is in a trusted state before releasing protected data to or storing private information on the Consumer Device.

EMV Mobile Payment: Software-based Mobile Payment Security Requirements, Version 1.0 December 2016

34. Defendants further assemble credentials, including encryption keys, to be used when effecting transactions, referred to as “provisioning” below.

Data Preparation

Data preparation is the process that creates the data that is to be placed in an IC card application during card personalization. Some of the data created may be the same across all cards in a batch; other data may vary by card. Some data, such as keys, may be secret and may need to be encrypted at all times during the personalization process.

2.1.1 Issuer Master Keys and Data

EMV personalization cannot take place unless the card issuer creates master keys and other specific data. The master keys are used in two ways, firstly to support secure transmission of personalization data and secondly to create application-level data for personalization of an EMV application. Some of the data may be used to manage the personalization process and some will be placed on the card during personalization.

EMV Card Personalization Specification, Version 1.1 July 2007

35. In a given transaction, Defendants receive a request from the consumer’s mobile wallet, which include the assembled credentials, such as the application primary account number

(PAN or also token) and an Application Cryptogram, which is encrypted with the provided key. As described below, Defendants validate the consumer's credentials using the provided key.

Table 10 contains existing data elements necessary for an ICC transaction.

Data Element	Condition
Acquirer Identifier	Present for Terminal Type = '1x' or '2x' if Merchant Identifier or Terminal Identifier does not implicitly refer to a single acquirer
Amount, Authorised * 12	
Amount, Other *	Present if cashback used for current transaction
Application Effective Date	Present if in ICC
Application Expiration Date	Present if not in Track 2 Equivalent Data
Application PAN *	Present if not in Track 2 Equivalent Data
Application PAN Sequence Number *	Present if in ICC
Enciphered PIN Data	Present if CVM performed is 'enciphered PIN for online verification'
Merchant Category Code	Present for Terminal Type = '2x' if Merchant Identifier or Terminal Identifier does not implicitly refer to a single merchant category

https://www.emvco.com/wp-content/uploads/2017/05/EMV_v4.3_Book_4_Other_Interfaces_20120607062305603.pdf

8.1.2 Application Cryptogram Algorithm

The method for Application Cryptogram generation takes as input a unique ICC Application Cryptogram Master Key MK_{AC} and the data selected as described in section 8.1.1, and computes the 8-byte Application Cryptogram in the following two steps:

https://www.emvco.com/wp-content/uploads/2017/05/EMV_v4.3_Book_2_Security_and_Key_Management_20120607061923900.pdf

36. Once the mobile wallet is validated, as described below, the transaction is allowed to proceed.

be useful for clarity. The ARQC is a cryptogram generated by the card from transaction data using an issuer key stored in the card and known at the issuer authorisation system. The issuer uses this key to authenticate the ARQC and thereby authenticate the card. This process is termed 'online card authentication' or simply 'card authentication'.

EMV Integrated Circuit Card Specifications for Payment Systems: Book 3, Application Specification, Version 4.3, November 2011

37. The Accused Instrumentalities infringe at least the claims of the '509 patent, which provide technological solutions and improvements for facilitating payment transactions. Conventional methods for payment transactions, particularly RFID transactions, had problems supporting multiple payment systems. The '509 patent discloses a computer-based system that queries a payment system directory and selects the appropriate payment system. The directory may contain algorithms or rules to allow selection of a payment system based upon payment information, the type of transaction, or the transaction instrument issuer. Payment information may include a proxy account number. Once the payment system is selected, an authorization request with payment information is sent to the payment system. A payment authorization is received by the computer-based system. Systems and methods of the '509 patent, such as these, allow a payment system directory to identify a payment system that is mutually supported and appropriate for a particular transaction.

38. In response to a command from a point of sale terminal, Defendants, via a computer-based system that operates the payment application provisioned by Defendants, query an onboard payment system directory, as indicated below.

The basic functions of the POS System include:

- communication with contactless cards
- application selection and kernel activation

5.8.2 Application Selection and Kernel Activation

The selection mechanism is designed around the use of a PPSE. For multi-brand acceptance, this allows Entry Point to obtain all the available brands and applications with a single command and to make an immediate choice based on priority and kernel availability.

A PPSE response returned by a card contains one or more File Control Information (FCI) data elements forming a list of products supported by the card, the kernel they will run with, and their priority relative to one another.

Entry Point compares the ADF Names and Kernel Identifiers with the transaction type specific set of Combinations of AIDs and kernels that it supports for the given transaction type. The result is a list of Combinations, prioritised according to priority value or (for equal priority matches) by their order in the FCI list. AIDs and ADF Names can be obtained from the relevant payment system.

In the final selection, Entry Point picks the Combination with the highest priority, sends the SELECT AID command with the AID of this Combination, and hands over processing to the selected kernel. The Entry Point Pre-Processing Indicators for the relevant Combination are made available to the selected kernel.

https://www.emvco.com/wp-content/uploads/2017/05/Book_A_Architecture_and_General_Rqmts_v2_6_Final_20160422011856105.pdf

39. Defendants’ card application stored in a mobile wallet, for example, provides an identification of each supported candidate payment system. A candidate payment system is located for processing a transaction and receives payment information related to the transaction to develop a payment authorization.

5.8.2 Application Selection and Kernel Activation

The selection mechanism is designed around the use of a PPSE. For multi-brand acceptance, this allows Entry Point to obtain all the available brands and applications with a single command and to make an immediate choice based on priority and kernel availability.

A PPSE response returned by a card contains one or more File Control Information (FCI) data elements forming a list of products supported by the card, the kernel they will run with, and their priority relative to one another.

Proximity Payment System Environment (PPSE)	A list of all Combinations supported by the contactless card. PPSE is used in the Entry Point Combination Selection process.
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https://www.emvco.com/wp-content/uploads/2017/05/Book_A_Architecture_and_General_Rqmts_v2_6_Final_20160422011856105.pdf

40. As explained below, Defendants’ card application stored in a mobile wallet sends transaction information to the issuer, through the payment system, for authorization.

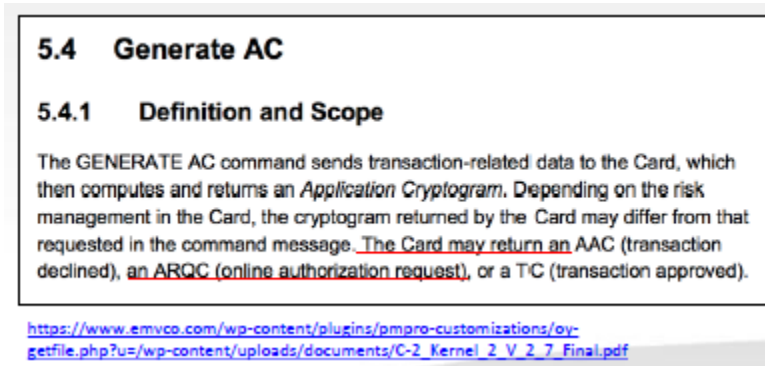
<p>A.1.117 Outcome Parameter Set</p> <p>Tag: 'DF8129'</p> <p>Template: —</p> <p>Length: 8</p> <p>Format: b</p> <p>Update: K</p> <p>Description: <u>This data object is used to indicate to the Terminal the outcome of the transaction processing by the Kernel. Its value is an accumulation of results about applicable parts of the transaction.</u></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="3" style="text-align: center;">Outcome Parameter Set</th> </tr> <tr> <th style="width: 10%;">Byte 1</th> <th style="width: 10%;">b8-5</th> <th style="width: 80%;">Status</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>0001: APPROVED</td> </tr> <tr> <td></td> <td></td> <td>0010: DECLINED</td> </tr> <tr> <td></td> <td></td> <td><u>0011: ONLINE REQUEST</u></td> </tr> <tr> <td></td> <td></td> <td>0100: END APPLICATION</td> </tr> <tr> <td></td> <td></td> <td>0101: SELECT NEXT</td> </tr> <tr> <td></td> <td></td> <td>0110: TRY ANOTHER INTERFACE</td> </tr> <tr> <td></td> <td></td> <td>0111: TRY AGAIN</td> </tr> <tr> <td></td> <td></td> <td>1111: N/A</td> </tr> <tr> <td></td> <td></td> <td>Other values: RFU</td> </tr> <tr> <td></td> <td>b4-1</td> <td>Each bit RFU</td> </tr> </tbody> </table>	Outcome Parameter Set			Byte 1	b8-5	Status			0001: APPROVED			0010: DECLINED			<u>0011: ONLINE REQUEST</u>			0100: END APPLICATION			0101: SELECT NEXT			0110: TRY ANOTHER INTERFACE			0111: TRY AGAIN			1111: N/A			Other values: RFU		b4-1	Each bit RFU	<p>Online authorization and transaction logging</p> <p>The transaction may need to be authorized online. The Terminal sends the online authorization request to the issuer. Upon completion of the transaction, it stores the clearing record and prepares the batch file for submission to the acquirer.</p> <p>The authorization request and clearing record include different data depending on whether the transaction was completed in mag-stripe mode or <u>EMV mode</u>.</p>
Outcome Parameter Set																																					
Byte 1	b8-5	Status																																			
		0001: APPROVED																																			
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	b4-1	Each bit RFU																																			
<p>Table 6.2—Mandatory EMV Mode Data Objects</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Data Object</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><u>Application Expiration Date</u></td> </tr> <tr> <td style="text-align: center;"><u>Application PAN</u></td> </tr> <tr> <td style="text-align: center;">CDOL1</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 10px;">https://www.emvco.com/wp-content/plugins/pmpo-customizations/oy-getfile.php?u=/wp-content/uploads/documents/C-2_Kernel_2_V_2_7_Final.pdf</p>		Data Object	<u>Application Expiration Date</u>	<u>Application PAN</u>	CDOL1																																
Data Object																																					
<u>Application Expiration Date</u>																																					
<u>Application PAN</u>																																					
CDOL1																																					

41. As explained below, Defendants store a token, in place of a primary account number (“PAN”), in a mobile wallet application, for example.

Payment Token	A surrogate value for a PAN that is a variable length, ISO/IEC 7812-compliant numeric issued from a designated Token BIN or Token BIN Range and flagged accordingly in all appropriate BIN tables. A Payment Token must pass basic validation rules of a PAN, including the Luhn check digit. Payment Tokens must not collide or conflict with a PAN.
Payment Tokenisation	A specific form of tokenisation whereby Payment Tokens are requested, generated, issued, provisioned, and processed as a surrogate for PANs as described by the processes defined in this technical framework.

<https://www.emvco.com/wp-content/plugins/pmpo-customizations/oy-getfile.php?u=/wp-content/uploads/documents/EMVCo-Payment-Tokenisation-Specification-Technical-Framework-v2.0.pdf>

42. Defendants' card application stored in a mobile wallet transmits a payment authorization request, related to the transaction, through the payment system for processing. As indicated below, the card application receives the issuer authorization through the payment system.



43. The Accused Instrumentalities infringe at least the claims of the '369 patent, which provide technological solutions and improvements for facilitating payment transactions. Conventional methods for payment transactions, particularly RFID transactions, had problems supporting multiple payment systems. The '369 patent provides systems and methods that can be used by smartcards, including contactless credit and debit cards and mobile wallets. The smartcard receives a payment request for a transaction. The smartcard determines a first payment system for processing the transaction, where such determination includes a query for payment directory information stored on the smartcard. The smartcard transmits to a point of sale device (POS) an identification of the payment system. Systems and methods of the '369 patent, such as these, allow a payment system directory to identify a payment system that is mutually supported and appropriate for a particular transaction.

44. Defendants provide contactless credit and debit cards and mobile wallet payment applications configured with smartcards that receive payment requests from POS terminals. For example, in a Kernel 3 application (i.e., a Visa transaction) a card responds to a "GET PROCESSING OPTIONS" (GPO) command from the terminal, as indicated below.

2.4.1 Initiate Application Processing

The status word from the response to the SELECT AID command has been evaluated by Entry Point, thus only a successful SELECT AID response including the Processing Options Data Object List (PDOL) be passed to Kernel 3.

Kernel 3 processing for a transaction starts with sending a GET PROCESSING OPTIONS (GPO) command to the card. This includes the data elements requested by the card in the PDOL returned in the response to the SELECT command, which will include the Terminal Transaction Qualifiers.

In the GPO response, the kernel is expected to receive data elements from the card that are appropriate to the conditions indicated in the Terminal Transaction Qualifiers:

- a cryptogram with supporting/additional data, and for offline approved transactions, an Application File Locator (AFL) which points to additional data. Signatures and other data that would cause the response to exceed its size limit are not included, but are instead provided in a record which is indicated in the AFL.

Note that the reader is expected to handle situations where the data elements – or some of them – are received during the Read Application Data function.

If the conditions for usage of the card application have not been fulfilled, the reader must retry or end the transaction.

https://www.emvco.com/wp-content/plugins/pmpro-customizations/oy-getfile.php?u=/wp-content/uploads/documents/C-3_Kernel_3_V_2_7_Final.pdf

45. The smartcard provided by Defendants in contactless cards and mobile wallets query a payment system directory in response to a command from the POS terminal. The contactless card or mobile wallet, via the smartcard, will transmit an identification of each supported payment system. The identification is usable by the POS terminal. As shown below, a POS device may support one or more applications (payment systems), where each payment system is associated with an Application Identifier (AID), e.g., Visa AIDs are routed through VisaNet—the payment system.

2.2.1 Visa U.S. Common Debit AID and Customized Application Selection

All transactions initiated with a Visa owned Application Identifier (AID) other than the Visa U.S. Common Debit AID must be routed to VisaNet and be processed according to Visa or Visa Interlink (as applicable) network operating rules and technical standards. Some products may be personalized with more than one AID, where one or more AIDs may represent products with their own routing option(s), for instance the Visa U.S. Common Debit AID. To initiate a transaction using such an AID, certain terminal logic may need to be executed as part of the outlined VSDC transaction flow. This logic is described in Section 4.4.3.

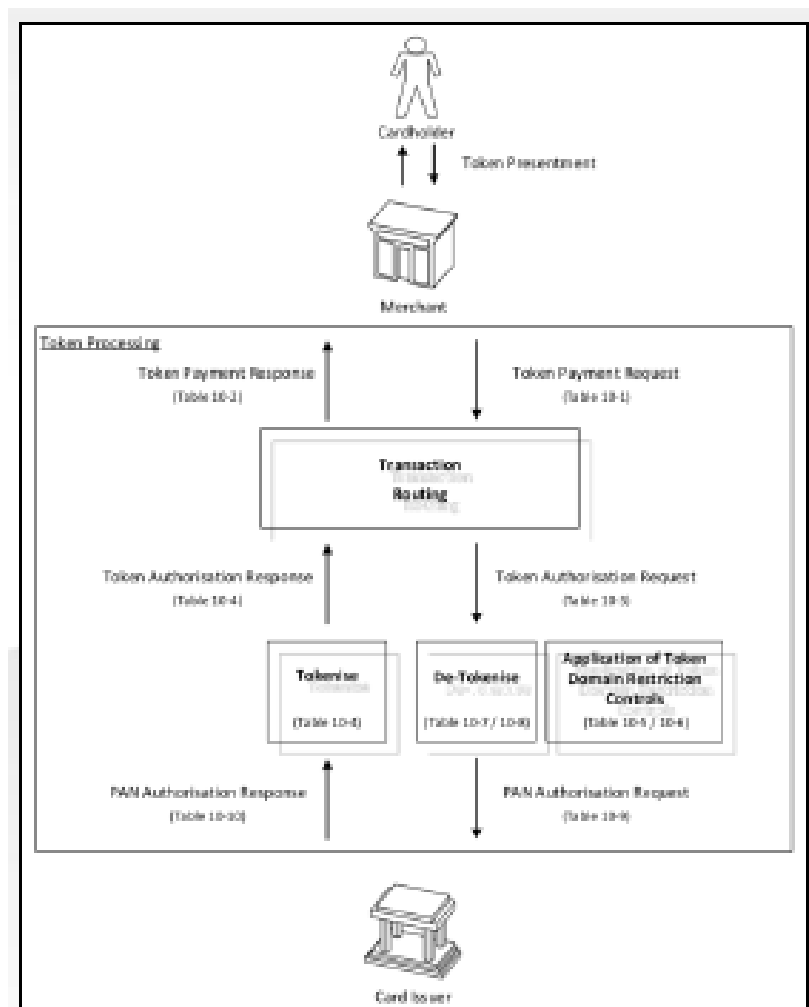
<https://www.visa.com/chip/merchants/grow-your-business/payment-technologies/credit-card-chip/docs/visa-emv-merchant-aig.pdf>

46. The Accused Instrumentalities infringe at least the claims of the '985 patent, which provide methods and systems for authorizing payment transactions for customers with more than one transaction instrument representing a single transaction account. In the '985 patent, customer-level transaction data may be determined to be common to more than one instrument, and such data may be analyzed in order to authorize a payment transaction. Data elements may be verified across multiple records for an individual customer. One advantage of such verification is that it improves the accuracy of transaction risk calculations, for example, by reducing the probability of errors during fraud detection. Other advantages include providing merchants with comparison results at the data element level to assist in a decision-making process. In at least one exemplary embodiment of the '985 patent, a computer system may receive an authorization request from a merchant for a transaction. Such transaction may be initiated by using a transaction instrument corresponding to a user. The computer system may determine a second transaction instrument corresponding to the user. To authorize the transaction, the computer system may analyze transaction data that corresponds to transaction data associated with the second transaction. The '985 patent allows for increased security and confidence during a transaction and reduces the number of incorrectly declined transactions due to authorization errors as well as providing an increase in customer satisfaction.

47. Defendants infringe the '985 patent by enabling and conducting mobile payments that use Defendants' EMV payment applications in conjunction with mobile wallets, such as Google Pay and Samsung Pay. Defendants create virtual account numbers, referred to as tokens in the mobile wallet context, for provisioning to mobile wallets and initiating payment card transactions. Regions credit card transactions made online by consumers may also utilize virtual account numbers. *See Shop Smarter with Improved Credit and Debit Card Technology*, REGIONS

(Discussing Samsung Pay using Regions credit or debit cards: “Because tokenization is used at point of purchase, your actual card number isn’t shared when you make a purchase.”).

48. As shown below, tokenized account numbers (i.e., a first transaction instrument) are sent to Defendants for de-tokenization and authorization.



Token Payment Request: includes the request that originates from the point of interaction with the Merchant (such as a Terminal, website or application) and the response that provides the results of the authorisation decision

EMV Payment Tokenisation Specification, Technical Framework v2.0, September 2017

49. As explained below, upon receipt of a Payment Token, Defendants convert the token into the corresponding Regions account number (PAN) of the user.

Payment Token	<p>An existing payment processing field that is passed through the authorisation, capture, clearing, and exception messages in place of the PAN.</p> <p>After De-Tokenisation, the Payment Token is replaced with the underlying PAN. The PAN is then passed to the Card Issuer as part of the PAN Authorisation in this field.</p> <p>The Payment Token may optionally be passed to the Card Issuer as part of the PAN Authorisation using a Payment Network specific Token Processing field.</p>
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De-Tokenisation: includes the request and corresponding response processing converting a Payment Token and Token Expiry Date to an underlying PAN and PAN Expiry Date. De-Tokenisation may or may not include the application of Token Domain Restriction Controls

EMV Payment Tokenisation Specification, Technical Framework v2.0, September 2017

50. Defendants analyze the transaction data in order to authenticate the transaction, as explained below in relation to an EMV-type transaction.

be useful for clarity. The ARQC is a cryptogram generated by the card from transaction data using an issuer key stored in the card and known at the issuer authorisation system. The issuer uses this key to authenticate the ARQC and thereby authenticate the card. This process is termed 'online card authentication' or simply 'card authentication'.

EMV Integrated Circuit Card Specifications for Payment Systems: Book 3, Application Specification, Version 4.3, November 2011

https://www.emvco.com/wp-content/uploads/2017/05/EMV_v4.3_Book_2_Security_and_Key_Management_20120607061923900.pdf

51. Based on the analysis for authentication, Defendants respond to the authorization request with an authorization message.

10.9 Online Processing

Purpose:

Online processing is performed to ensure that the issuer can review and authorise or reject transactions that are outside acceptable limits of risk defined by the issuer, the payment system, or the acquirer.

be useful for clarity. The ARQC is a cryptogram generated by the card from transaction data using an issuer key stored in the card and known at the issuer authorisation system. The issuer uses this key to authenticate the ARQC and thereby authenticate the card. This process is termed 'online card authentication' or simply 'card authentication'.

EMV Integrated Circuit Card Specifications for Payment Systems: Book 3, Application Specification, Version 4.3, November 2011

52. The Accused Instrumentalities infringe at least the claims of the '802 patent, which provide technological solutions and improvements in a transaction card initiation process which can be completed securely over a network, as opposed to conventional systems which used voice response systems or in-person customer service. Voice response systems limited fraud identification capabilities, and in-person systems increased costs and were inconvenient to customers. To address these limitations, the '802 patent, in one exemplary embodiment, provides notice to a consumer to activate a payment card via a network site. Instructions are provided to the consumer regarding accessing the site. The consumer is prompted to provide information and data, including predetermined card information, personal information, and authentication and service data. The provided information is processed against previously stored data in order to activate the card. The consumer is notified of the processing results.

53. Defendants infringe the '802 patent by providing Defendants' online websites to Regions' consumers, as users of Regions' payment card products, in order to register and activate their credit cards via the internet, i.e., a computer network. As shown below, Defendants provide

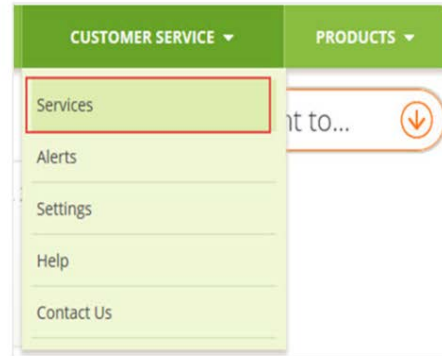
notice to and instruct a user to register and activate, for example, a Regions credit or debit card through the “Online Banking” section of their website.

HOW TO

How to Activate a Card

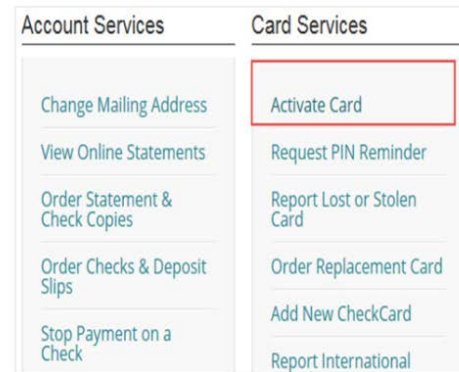
Step 1

Once logged in to Online Banking, from the Customer Service menu select **Services**.



Step 2

Under the Card Services section, select **Activate Card**.



See *How to Activate a Card*, REGIONS, <https://www.regions.com/help/online-banking-help/manage-accounts/card-services/how-to-activate-a-card> (last visited November 1, 2021).

54. To activate a credit card, a consumer enters (via a prompt) the card number and the expiration date (i.e., predetermined card information), as shown below. Personal information, such as the user’s social security number, and authentication and service data, such as a user ID and password (entered when the user logs into Online Banking prior to step 1 above), are also required for activation. Authentication and service data includes information in addition to and different

from information identifying the consumer, and personal information is different from predetermined card information.

Step 3

Enter your new card number, the last four digits of your Social Security Number, and the card expiration date. Then select **Submit**.

NOTE: The card number and last four digits of the Social Security Number are required to activate your card with this Online Banking profile.

Card Number: *	<input type="text"/>
SSN (Last 4): *	<input type="text"/>
Expiration Date *	<input type="text" value="mmyy"/>

See id.

55. Defendants process the input information against previously stored data to activate the card. The system notifies the consumer that their card has been activated and registered.

Step 4

You will receive confirmation that your new card has been activated and available for immediate use.

If you receive an error message, you can activate your card or get help with Online Banking by calling 1-800-REGIONS.

Only cards issued to the person enrolled for Online Banking can be activated. Other card holders on your account must log in or enroll separately.

✔ **SUCCESS! Your request has been processed.**

Thank you for activating your card.
Your card is now activated and ready for immediate use.

QUITY LOAN CALCULATORS. We ask the right questions so yo

See id.

56. The Accused Instrumentalities infringe at least the '301 patent, which provide technological solutions and improvements for issuing and using payment cards. The '301 patent addresses, for example, problems arising from overdraft charges and fees, which may be charged to the customer without his or her knowledge. As one solution, the '301 patent provides a means of providing overdraft protection that includes a method associating a backup account, which could

be a customer's savings account, with a primary account. Status information regarding the backup account may be maintained to facilitate authorization of transactions to cover any overdraft, thus avoiding the overdraft fee. In one exemplary embodiment of the '301 patent, a computer-based authorization system may receive a transaction request that is associated with a payment account. The payment account may be associated with a second separate account. The computer-based system may send a request for account information that includes account information of the separate account. The computer-based system may receive status information of the separate account, and the transaction request may be authorized based on the status information. The '301 patent allows for more flexibility and ease in payment transactions.

57. As shown below, Defendants infringe the '301 patent via an authorization system that receives a transaction request associated with the checking account, such as when a checking (i.e., debit) account is charged. The checking accounts may be associated with a separate deposit

account, credit card account, or line of credit through Defendants' Regions Overdraft Protection ("ODP") program.

Overdraft Protection

For greater peace of mind, link your Regions [Personal checking](#) account to a Regions overdraft protection product.

When you enroll in Regions Overdraft Protection ("ODP"), your [checking account](#) is linked to a designated funding account at Regions, such as another deposit account (including a [savings](#) or [money market](#) account), [credit card account](#), or a [line of credit](#). ODP may be used to authorize and/or to pay CheckCard and ATM transactions if your checking account lacks sufficient available funds. Regions Overdraft Protection may be used to cover pay checks, ACH transactions, and other items when payment of those items would overdraw the checking account. While Overdraft Protection may prevent overdrafts, it is subject to the following:

- If the funding account is a deposit account, then all available funds in that account can be used for Overdraft Protection.
- If the funding account is a credit card account, the entire amount available for cash advances can be used for Overdraft Protection.
- If the funding account is a line of credit, the entire amount available under the line can be used for Overdraft Protection.

See Overdraft Protection, REGIONS, <https://www.regions.com/personal-banking/overdraft-protection> (last visited November 1, 2021).

58. As explained below, prior to being used for overdraft protection, Defendants' ODP program uses an authorization server to ensure sufficient funds exist in the account (i.e., receiving

status information). If sufficient funds are available, the transaction is authorized (i.e., based on the status information).

We generally transfer amounts from the designated funding account to the checking account in increments of \$100. If the amount available for Overdraft Protection in the funding account is less than \$100, or the amount available for Overdraft Protection in the funding account is less than the \$100 increment that otherwise would be transferred to cover the amount of the overdraft, we will transfer the full amount available for Overdraft Protection in the funding account to the checking account.

For example, if one or more items would overdraw your checking account by \$250 and the amount available for Overdraft Protection in your funding account is \$300 or greater, we will transfer \$300 from your funding account to your checking account. However, if the amount available for ODP in your funding account is \$275, we will transfer the entire \$275 from your funding account to your checking account. A transfer fee of up to \$12 will be charged to the checking account each day that a transfer occurs.

See id.

59. By utilizing EMV standards, the Accused Instrumentalities include systems and methods for offering, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions via credit and debit cards and associated accounts that are covered by the Asserted Patents. Along with the above technology discussion, each respective Count below describes how the Accused Instrumentalities infringe on specific claims of the Asserted Patents.

COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 7,953,671)

60. Plaintiff incorporates paragraphs 1 through 59 herein by reference.

61. Plaintiff is the assignee of the '671 patent, entitled "Methods and Apparatus for Conducting Electronic Transactions," with ownership of all substantial rights in the '671 patent,

including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

62. The '671 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '671 patent issued from U.S. Patent Application No. 12/275,924.

63. Defendants have directly and/or indirectly infringed (by inducing infringement) one or more claims of the '671 patent in this District and elsewhere in Texas and the United States.

64. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '671 patent, which include Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients, as used in mobile payments and digital wallets.

65. Defendants have directly infringed the '671 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using the Accused Instrumentalities, their components, and/or products and processes containing the same that incorporate the fundamental technologies covered by the '671 patent.

66. Furthermore, Defendants have directly infringed the '671 patent through their direct involvement in the activities of their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' subsidiaries and affiliates conduct activities that constitutes direct infringement of the '671 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities. Defendants are vicariously liable for this infringing conduct of their

subsidiaries and affiliates, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants and their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, are essentially the same company. Regions Corp. and Regions Bank have the right and ability to control other subsidiaries' infringing acts (including those activities of Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC) and receive a direct financial benefit from their infringement.

67. For example, Defendants have infringed claim 1 of the '671 patent via their Accused Instrumentalities that utilize methods that implement EMV standards for mobile or contactless payments. Defendants provide, for example, to consumers payment cards, such as credit and debit cards, that support mobile or contactless payments that conform to the EMV standards. Defendants' mobile payments can be facilitated by using mobile wallets such as Google Pay and Samsung Pay. Defendants, as the payment card issuer, direct and control, including via their alter egos, agents, affiliates, partners, and subsidiaries, the operation of these mobile or contactless payments conducted using Regions-issued payment cards, including the provisioning, authenticating, and authorizing of mobile payment wallets and transactions therein.

68. The Accused Instrumentalities implement the method of claim 1 of the '671 patent. The technology discussion above and the example Accused Instrumentalities provide context for Plaintiff's allegations that each of those limitations are met. For example, the Accused Instrumentalities include a method that implements the steps of forwarding, by a computer-based system for conducting a transaction, a challenge to an intelligent token of a client, wherein said intelligent token generates a challenge response, and wherein said computer-based system

comprises a processor and a non-transitory memory; receiving, by said computer-based system, said challenge response; assembling, by said computer-based system, credentials for a transaction in response to verifying said challenge response, wherein said assembled credentials include a key; receiving, by said computer-based system, a request from said client, wherein said request includes at least a portion of said assembled credentials provided to said client; validating, by said computer-based system, said portion of said assembled credentials with said key of said assembled credentials; and, providing, by said computer-based system, access to a transaction service in response to said validating.

69. At a minimum, Defendants have known of the '671 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '671 patent since at least May 6, 2019, when, via e-mail, Plaintiff initially informed Defendants of Plaintiff's patent portfolio and provided access to a data room that included a claim chart that demonstrated Regions' infringement of the '671 patent, as well as other Asserted Patents. On May 28, 2019, Plaintiff additionally had an introductory phone call with Defendants and Defendants' counsel, in which Plaintiff discussed the patent portfolio and a model for licensing Plaintiff's patents. Since that time, Plaintiff has had ongoing discussions with Defendants regarding the Asserted Patents, including the '671 patent, and Plaintiff's request for Defendants to license the same.

70. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under U.S.C. § 271(b), their distributors, partners, customers, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, purchase, offer to sale, sell, use, and service the Accused Instrumentalities that include or are made using all of the limitations of one or more claims of the '671 patent to directly infringe one or more claims of the

'671 patent by using, offering for sale, selling, and/or servicing the Accused Instrumentalities. Since at least the notice provided on the above-mentioned date, the Defendants have done so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '671 patent.

71. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, partners, customers, clients, subsidiaries, and/or consumers and other payment platforms used with the Accused Instrumentalities by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Instrumentalities; adopting mobile payment and contactless payment standards and specifications (e.g., the EMV standards) to allow for interoperability of Regions' Accused Instrumentalities with other mobile payment systems, including with mobile wallet applications; as payment card issuer, providing EMV payment applications, related tokens, and virtual account numbers to third-party mobile wallet providers, point of sale terminal providers, merchants (including online and mail order), and users; maintaining such EMV payment applications by personalizing transaction devices with the payment applications, generating and installing cryptographic keys, and processing transactions; creating and/or maintaining established distribution channels for the Accused Instrumentalities into and within the United States; manufacturing and designing the Accused Instrumentalities in conformity with U.S. laws and regulations; distributing or making available instructions or manuals for these products and related processes to purchasers and prospective buyers; testing Regions' mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., regions.com) and mobile applications for clients, customers, and consumers for registering, activating, maintaining, and using (including accessing infringing features of) the Accused Instrumentalities, and/or providing technical support, replacement parts or services for these

products and services to purchasers and other consumers, including overdraft protection services, in the United States. *See, e.g., Mobile Pay*, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (last visited November 1, 2021). (explaining Google Pay and Samsung Pay and how they connect to Regions credit and debit cards).

72. On information and belief, despite having knowledge of the '671 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '671 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '671 patent have been willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

73. Plaintiff LPV has been damaged as a result of Defendants' infringing conduct described in this Count. Each Defendant is thus, jointly and severally, liable to LPV in an amount that adequately compensates LPV for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 8,794,509)

74. Plaintiff incorporates paragraphs 1 through 73 herein by reference.

75. Plaintiff is the assignee of the '509 patent, entitled "Systems and Methods for Processing a Payment Authorization Request over Disparate Payment Networks," with ownership of all substantial rights in the '509 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

76. The '509 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '509 patent issued from U.S. Patent Application No. 12/353,109.

77. Defendants have and continue to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '509 patent in this District and elsewhere in Texas and the United States.

78. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '509 patent, which include Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients.

79. Defendants directly infringe the '509 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using the Accused Instrumentalities, their components, and/or products and processes containing the same that incorporate the fundamental technologies covered by the '509 patent.

80. Furthermore, Defendants directly infringe the '509 patent through their direct involvement in the activities of their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' subsidiaries and affiliates conduct activities that constitutes direct infringement of the '509 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities. Defendants are vicariously liable for this infringing conduct of their subsidiaries and affiliates, such as Regions Equipment Finance Corporation and Regions

Commercial Equipment Finance, LLC (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants and their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, are essentially the same company. Regions Corp. and Regions Bank have the right and ability to control other subsidiaries' infringing acts (including those activities of Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC) and receive a direct financial benefit from their infringement.

81. For example, Defendants infringe claim 1 of the '509 patent via their Accused Instrumentalities that utilize EMV standards for mobile or contactless payments. Defendants provide, for example, to consumers payment cards, such as credit and debit cards, that support mobile or contactless payments that conform to the EMV standards. Defendants' mobile payments can be facilitated by using mobile wallets such as Google Pay and Samsung Pay. Defendants, as the payment card issuer, direct and control, including via their alter egos, agents, affiliates, partners, and subsidiaries, the operation of these mobile or contactless payments conducted using Regions-issued payment cards, including by provisioning the mobile devices with EMV-compliant card payment applications.

82. The Accused Instrumentalities implement the method of claim 1 of the '509 patent. The technology discussion above and the example Accused Instrumentalities provide context for Plaintiff's allegations that each of those limitations are met. For example, the Accused Instrumentalities include a method implementing the steps of querying, by a computer-based system configured to facilitate a transaction, a payment system directory, wherein said payment system directory communicates with said computer-based system, and wherein said payment system directory comprises information regarding a plurality of candidate payment systems, and wherein

said payment system directory locates a candidate payment system for processing at least a portion of said transaction, wherein said candidate payment system receives payment information related to said transaction for developing a payment authorization, and wherein said payment information includes a proxy account number; transmitting, by said computer-based system, a payment authorization request related to said transaction to said candidate payment system; and receiving, by said computer-based system, said payment authorization from said candidate payment system.

83. At a minimum, Defendants have known of the '509 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '509 patent since at least May 6, 2019, when, via e-mail, Plaintiff initially informed Defendants of Plaintiff's patent portfolio and provided access to a data room that included a claim chart that demonstrated Regions' infringement of the '509 patent, as well as other Asserted Patents. On May 28, 2019, Plaintiff additionally had an introductory phone call with Defendants and Defendants' counsel, in which Plaintiff discussed the patent portfolio and a model for licensing Plaintiff's patents. Since that time, Plaintiff has had ongoing discussions with Defendants regarding the Asserted Patents, including the '509 patent, and Plaintiff's request for Defendants to license the same.

84. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under U.S.C. § 271(b), their distributors, partners, customers, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, purchase, offer to sale, sell, use, and service the Accused Instrumentalities that include or are made using all of the limitations of one or more claims of the '509 patent to directly infringe one or more claims of the '509 patent by using, offering for sale, selling, and/or servicing the Accused Instrumentalities. Since

at least the notice provided on the above-mentioned date, Defendants do so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '509 patent.

85. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, partners, customers, clients, subsidiaries, and/or consumers and other payment platforms used with the Accused Instrumentalities by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Instrumentalities; adopting mobile payment and contactless payment standards and specifications (e.g., the EMV standards) to allow for interoperability of the Accused Instrumentalities with other mobile payment systems, including with mobile wallet applications; as payment card issuer, providing EMV payment applications, related tokens, and virtual account numbers to third-party mobile wallet providers, point of sale terminal providers, merchants (including online and mail order), and users; maintaining such EMV payment applications by personalizing transaction devices with the payment applications, generating and installing cryptographic keys, and processing transactions; creating and/or maintaining established distribution channels for the Accused Instrumentalities into and within the United States; manufacturing and designing the Accused Instrumentalities in conformity with U.S. laws and regulations; distributing or making available instructions or manuals for these products and related processes to purchasers and prospective buyers; testing Regions' mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., regions.com) and mobile applications for clients, customers, and consumers for registering, activating, maintaining, and using (including accessing infringing features of) the Accused Instrumentalities, and/or providing technical support, replacement parts or services for these products and services to purchasers and other consumers, including overdraft protection services, in the United States. *See, e.g., Mobile Pay, REGIONS, [PLAINTIFF'S ORIGINAL COMPLAINT
FOR PATENT INFRINGEMENT](https://www.regions.com/digital-</i></p></div><div data-bbox=)*

banking/transfer-money-and-pay/mobile-pay (last visited November 1, 2021). (explaining Google Pay and Samsung Pay and how they connect to Regions credit and debit cards).

86. On information and belief, despite having knowledge of the '509 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '509 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '509 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

87. Plaintiff LPV has been damaged as a result of Defendants' infringing conduct described in this Count. Each Defendant is thus, jointly and severally, liable to LPV in an amount that adequately compensates LPV for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III

(INFRINGEMENT OF U.S. PATENT NO. 8,851,369)

88. Plaintiff incorporates paragraphs 1 through 87 herein by reference.

89. Plaintiff is the assignee of the '369 patent, entitled "Systems and Methods for Transaction Processing Using a Smartcard," with ownership of all substantial rights in the '369 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

90. The '369 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '369 patent issued from U.S. Patent Application No. 12/505,164.

91. Defendants have and continue to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '369 patent in this District and elsewhere in Texas and the United States.

92. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '369 patent, which include Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients.

93. Defendants directly infringe the '369 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using the Accused Instrumentalities, their components, and/or products and processes containing the same that incorporate the fundamental technologies covered by the '369 patent to, for example, their alter egos, agents, intermediaries, distributors, customers, subsidiaries, partners, affiliates, clients and/or consumers.

94. Furthermore, Defendants directly infringe the '369 patent through their direct involvement in the activities of their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' subsidiaries and affiliates conduct activities that constitutes direct infringement of the '369 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities. Defendants are vicariously liable for this infringing conduct of their

subsidiaries and affiliates, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants and their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, are essentially the same company. Regions Corp. and Regions Bank have the right and ability to control other subsidiaries' infringing acts (including those activities of Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC) and receive a direct financial benefit from their infringement.

95. For example, Defendants infringe claim 1 of the '369 patent via their Accused Instrumentalities that implement EMV standards for mobile or contactless payments. Defendants provide, for example, to consumers payment cards, such as credit and debit cards, that support mobile or contactless payments that conform to the EMV standards. Defendants' mobile payments can be facilitated by using mobile wallets such as Google Pay and Samsung Pay, or such contactless payments can be facilitated by using microchips embedded on a Regions physical credit or debit card. Defendants, as the payment card issuer, perform and/or direct and control, including via their alter egos, agents, affiliates, partners, and subsidiaries, the operation of these mobile or contactless payments conducted using Regions-issued payment cards.

96. The Accused Instrumentalities implement the method of claim 1 of the '369 patent. The technology discussion above and the example Accused Instrumentalities provide context for Plaintiff's allegations that each of those limitations are met. For example, the Accused Instrumentalities include a method implementing the steps of receiving, at a smartcard, a payment request for a transaction; determining, by the smartcard, a first payment system for processing at least a portion of the transaction, wherein said determining includes the smartcard querying

payment directory information stored on the smartcard; and transmitting, by the smartcard, an identification of the first payment system to a point of service (POS) device, wherein the identification is usable by the POS device to transmit a first authorization request related to at least a portion of the transaction to the first payment system.

97. At a minimum, Defendants have known of the '369 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '369 patent since at least May 6, 2019, when, via e-mail, Plaintiff initially informed Defendants of Plaintiff's patent portfolio and provided access to a data room that included a claim chart that demonstrated Regions' infringement of the '369 patent, as well as other Asserted Patents. On May 28, 2019, Plaintiff additionally had an introductory phone call with Defendants and Defendants' counsel, in which Plaintiff discussed the patent portfolio and a model for licensing Plaintiff's patents. Since that time, Plaintiff has had ongoing discussions with Defendants regarding the Asserted Patents, including the '369 patent, and Plaintiff's request for Defendants to license the same.

98. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under U.S.C. § 271(b), their distributors, partners, customers, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, purchase, offer to sale, sell, use, and service the Accused Instrumentalities that include or are made using all of the limitations of one or more claims of the '369 patent to directly infringe one or more claims of the '369 patent by using, offering for sale, selling, and/or servicing the Accused Instrumentalities. Since at least the notice provided on the above-mentioned date, Defendants do so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '369 patent.

99. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, partners, customers, clients, subsidiaries, and/or consumers and other payment platforms used with the Accused Instrumentalities by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Instrumentalities; adopting mobile payment and contactless payment standards and specifications (e.g., the EMV standards) to allow for interoperability of Regions' Accused Instrumentalities with other mobile payment systems, including with mobile wallet applications; as payment card issuer, providing EMV payment applications, related tokens, and virtual account numbers to third-party mobile wallet providers, point of sale terminal providers, merchants (including online and mail order), and users; maintaining such EMV payment applications by personalizing transaction devices with the payment applications, generating and installing cryptographic keys, and processing transactions; creating and/or maintaining established distribution channels for the Accused Instrumentalities into and within the United States; manufacturing and designing the Accused Instrumentalities in conformity with U.S. laws and regulations; distributing or making available instructions or manuals for these products and related processes to purchasers and prospective buyers; testing Regions' mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., regions.com) and mobile applications for clients, customers, and consumers for registering, activating, maintaining, and using (including accessing infringing features of) the Accused Instrumentalities, and/or providing technical support, replacement parts or services for these products and services to purchasers and other consumers, including overdraft protection services, in the United States. *See, e.g., See Tap to Pay with Contactless Payment Cards*, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/contactless-pay> (last visited November 1, 2021) (“With a Regions Visa® contactless chip card, you can tap to pay for everyday

purchases.”); *Mobile Pay*, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (last visited November 1, 2021). (explaining Google Pay and Samsung Pay and how they connect to Regions credit and debit cards).

100. On information and belief, despite having knowledge of the '369 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '369 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '369 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

101. Plaintiff LPV has been damaged as a result of Defendants' infringing conduct described in this Count. Each Defendant is thus, jointly and severally, liable to LPV in an amount that adequately compensates LPV for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IV

(INFRINGEMENT OF U.S. PATENT NO. 9,195,985)

102. Plaintiff incorporates paragraphs 1 through 101 herein by reference.

103. Plaintiff is the assignee of the '985 patent, entitled “Method, System, and Computer Program Product for Customer-level Data Verification,” with ownership of all substantial rights in the '985 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

104. The '985 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '985 patent issued from U.S. Patent Application No. 11/448,767.

105. Defendants have and continue to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '985 patent in this District and elsewhere in Texas and the United States.

106. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '985 patent, which include Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients.

107. Defendants directly infringe the '985 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using the Accused Instrumentalities, their components, and/or products and processes containing the same that incorporate the fundamental technologies covered by the '985 patent.

108. Furthermore, Defendants directly infringe the '985 patent through their direct involvement in the activities of their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' subsidiaries and affiliates conduct activities that constitutes direct infringement of the '985 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities. Defendants are vicariously liable for this infringing conduct of their subsidiaries and affiliates, such as Regions Equipment Finance Corporation and Regions

Commercial Equipment Finance, LLC (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants and their subsidiaries such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC are essentially the same company. Regions Corp. and Regions Bank have the right and ability to control other subsidiaries' infringing acts (including those activities of Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC) and receive a direct financial benefit from their infringement.

109. For example, Defendants infringe claim 1 of the '985 patent via their Accused Instrumentalities that utilize methods that implement EMV standards for mobile payments. Defendants provide, for example, to consumers payment cards, such as credit and debit cards, that support mobile payments that conform to the EMV standards. Defendants' mobile payments can be facilitated by using mobile wallets such as Google Pay and Samsung Pay. Defendants further infringe the '985 patent via creation and use of virtual account numbers in online shopping transactions conducted with Regions payment cards. Defendants, as the payment card issuer, perform and/or direct and control, including via their alter egos, agents, affiliates, partners, and subsidiaries, the operation of these mobile conducted using Regions-issued payment cards. For example, Regions' payment applications reside on chip card and mobile devices (including via Host Card Emulation), and such applications perform the steps necessary to accomplish the transaction, including, but not limited to, processing functions, storing information, and performing cryptographic processing.

110. The Accused Instrumentalities implement the method of claim 1. The technology discussion above and the example Accused Instrumentalities provide context for Plaintiff's allegations that each of those limitations are met. For example, the Accused Instrumentalities

practice the following method steps: receiving, by a computer system, an authorization request from a merchant for a transaction, wherein the authorization request indicates that the transaction has been initiated using a first transaction instrument corresponding to a user; based on the authorization request, the computer system determining a second transaction instrument corresponding to the user; the computer system analyzing transaction data for the transaction, wherein the analyzing includes determining whether the transaction data at least partially corresponds to particular transaction data associated with the second transaction instrument; and based on said analyzing, the computer system transmitting a response to the authorization request to the merchant, wherein the response indicates whether the transaction is authorized.

111. At a minimum, Defendants have known of the '985 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '985 patent since at least May 6, 2019, when, via e-mail, Plaintiff initially informed Defendants of Plaintiff's patent portfolio and provided access to a data room that included a claim chart that demonstrated Regions' infringement of the '985 patent, as well as other Asserted Patents. On May 28, 2019, Plaintiff additionally had an introductory phone call with Defendants and Defendants' counsel, in which Plaintiff discussed the patent portfolio and a model for licensing Plaintiff's patents. Since that time, Plaintiff has had ongoing discussions with Defendants regarding the Asserted Patents, including the '985 patent, and Plaintiff's request for Defendants to license the same.

112. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under U.S.C. § 271(b), their distributors, partners, customers, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, purchase, offer to sale, sell, use, and service the Accused Instrumentalities that include or are made using all of the

limitations of one or more claims of the '985 patent to directly infringe one or more claims of the '985 patent by using, offering for sale, selling, and/or servicing the Accused Instrumentalities. Since at least the notice provided on the above-mentioned date, Defendants do so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '985 patent.

113. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, partners, customers, clients, subsidiaries, and/or consumers and other payment platforms used with the Accused Instrumentalities by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Instrumentalities; adopting mobile payment standards and specifications (e.g., the EMV standards) to allow for interoperability of Regions' Accused Instrumentalities with other mobile payment systems, including with mobile wallet applications; as payment card issuer, providing EMV payment applications, related tokens, and virtual account numbers to third-party mobile wallet providers, point of sale terminal providers, merchants (including online and mail order), and users; maintaining such EMV payment applications by personalizing transaction devices with the payment applications, generating and installing cryptographic keys, and processing transactions;; creating and/or maintaining established distribution channels for the Accused Instrumentalities into and within the United States; manufacturing and designing the Accused Instrumentalities in conformity with U.S. laws and regulations; distributing or making available instructions or manuals for these products and related processes to purchasers and prospective buyers; testing Regions' mobile payment features in the Accused Instrumentalities; providing websites (e.g., regions.com) and mobile applications for clients, customers, and consumers for registering, activating, maintaining, and using (including accessing infringing features of) the Accused Instrumentalities, and/or providing technical support, replacement parts or services for these products and services to

purchasers and other consumers, including overdraft protection services, in the United States. *See, e.g., Mobile Pay*, REGIONS, <https://www.regions.com/digital-banking/transfer-money-and-pay/mobile-pay> (last visited November 1, 2021). (explaining Google Pay and Samsung Pay and how they connect to Regions credit and debit cards).

114. On information and belief, despite having knowledge of the '985 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '985 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '985 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

115. Plaintiff LPV has been damaged as a result of Defendants' infringing conduct described in this Count. Each Defendant is thus, jointly and severally, liable to LPV in an amount that adequately compensates LPV for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT V

(INFRINGEMENT OF U.S. PATENT NO. 6,820,802)

116. Plaintiff incorporates paragraphs 1 through 115 herein by reference.

117. Plaintiff is the assignee of the '802 patent, entitled "Online Card Activation System and Method," with ownership of all substantial rights in the '802 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

118. The '802 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '802 patent issued from U.S. Patent Application No. 09/924,025.

119. Defendants have directly and/or indirectly infringed (by inducing infringement) one or more claims of the '802 patent in this District and elsewhere in Texas and the United States.

120. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '802 patent, which include Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients.

121. Defendants have directly infringed the '802 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using the Accused Instrumentalities, their components, and/or products and processes containing the same that incorporate the fundamental technologies covered by the '802 patent to, for example, their alter egos, agents, intermediaries, distributors, customers, subsidiaries, partners, affiliates, clients and/or consumers.

122. Furthermore, Defendants have directly infringed the '802 patent through their direct involvement in the activities of their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' subsidiaries and affiliates conduct activities that constitutes direct infringement of the '802 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities. Defendants are vicariously liable for this infringing conduct of their subsidiaries and affiliates, such as Regions Equipment Finance Corporation and Regions

Commercial Equipment Finance, LLC (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants and their subsidiaries such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC are essentially the same company. Regions Corp. and Regions Bank have the right and ability to control other subsidiaries' infringing acts (including those activities of Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC) and receive a direct financial benefit from their infringement.

123. For example, Defendants have infringed claim 1 of the '802 patent via their Accused Instrumentalities that utilize methods that process Regions' payment card accounts through a computer network, including, but not limited to, registration and activation of accounts. In particular, Defendants have infringed the '802 patent by providing notifications and instructions to account users for registering and activating the user's payment accounts via Regions' websites, e.g., regions.com. *See How to Activate a Card*, REGIONS, <https://www.regions.com/help/online-banking-help/manage-accounts/card-services/how-to-activate-a-card> (last visited November 1, 2021).

124. The Accused Instrumentalities implement the "method for processing a card through a computer network" of claim 1. The technology discussion above and the example Accused Instrumentalities provide context for Plaintiff's allegations that each of those limitations are met. For example, the Accused Instrumentalities practice the following method steps: a) providing a notice to a consumer to activate a card on a site on first computing system in communication with a second computing system over a first network; b) instructing the consumer to access the site; c) prompting the consumer to provide predetermined card information, personal information for use in identifying the consumer, and authentication and service data, when available, to the site and

communicating the predetermined card information to the second computing system over the first network; d) processing, by the second computing system, the predetermined card information, the personal information, and authentication and service data, when available against previously stored account data in order to activate the card and generating processing results; and e) notifying the consumer on the first computing network of the processing results, wherein the authentication and service data includes information in addition to and different from information identifying the consumer, and wherein the personal information is different from the predetermined card information.

125. At a minimum, Defendants have known of the '802 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '802 patent since at least May 6, 2019, when, via e-mail, Plaintiff initially informed Defendants of Plaintiff's patent portfolio and provided access to a data room that included a claim chart that demonstrated Regions' infringement of the '802 patent, as well as other Asserted Patents. On May 28, 2019, Plaintiff additionally had an introductory phone call with Defendants and Defendants' counsel, in which Plaintiff discussed the patent portfolio and a model for licensing Plaintiff's patents. Since that time, Plaintiff has had ongoing discussions with Defendants regarding the Asserted Patents, including the '802 patent, and Plaintiff's request for Defendants to license the same.

126. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under U.S.C. § 271(b), their distributors, partners, customers, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, purchase, offer to sale, sell, use, and service the Accused Instrumentalities that include or are made using all of the limitations of one or more claims of the '802 patent to directly infringe one or more claims of the

'802 patent by using, offering for sale, selling, and/or servicing the Accused Instrumentalities. Since at least the notice provided on the above-mentioned date, Defendants have done so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '802 patent.

127. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, partners, customers, clients, subsidiaries, and/or consumers and other payment platforms used with the Accused Instrumentalities by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Instrumentalities; as payment card issuer, providing, as the payment card issuer, internal payment processing, authentication, authorization, and fraud detection systems and methods, including registration and activation protections applied to payment cards for consumers; maintaining such EMV payment applications by personalizing transaction devices with the payment applications, generating and installing cryptographic keys, and processing transactions; creating and/or maintaining established distribution channels for the Accused Instrumentalities into and within the United States; manufacturing and designing the Accused Instrumentalities in conformity with U.S. laws and regulations; distributing or making available instructions or manuals for these products and related processes to purchasers and prospective buyers; testing Regions' fraud protection features, including activation and registration services, in the Accused Instrumentalities; providing websites (e.g., regions.com) and mobile applications for clients, customers, and consumers for registering, activating, maintaining, and using (including accessing infringing features of) the Accused Instrumentalities, and/or providing technical support, replacement parts or services for these products and services to purchasers and other consumers, including overdraft protection services, in the United States. *See, e.g., How to Activate a Card*, REGIONS.

128. On information and belief, despite having knowledge of the '802 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '802 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '802 patent have been willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

COUNT VI

(INFRINGEMENT OF U.S. PATENT NO. 8,905,301)

129. Plaintiff incorporates paragraphs 1 through 128 herein by reference.

130. Plaintiff is the assignee of the '301 patent, entitled "System, Method, and Computer Program Product for Issuing and Using Debit Cards," with ownership of all substantial rights in the '301 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

131. The '301 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '301 patent issued from U.S. Patent Application No. 12/907,955.

132. Defendants have and continue to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '301 patent in this District and elsewhere in Texas and the United States.

133. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '301 patent, which include Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting,

authenticating, and processing credit card and debit card accounts and related products and services for Regions' customers, consumers, and clients.

134. Defendants directly infringe the '301 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using the Accused Instrumentalities, their components, and/or products and processes containing the same that incorporate the fundamental technologies covered by the '301 patent to, for example, their alter egos, agents, intermediaries, distributors, customers, subsidiaries, partners, affiliates, clients and/or consumers.

135. Furthermore, Defendants directly infringe the '301 patent through their direct involvement in the activities of their subsidiaries, such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' subsidiaries and affiliates conduct activities that constitutes direct infringement of the '301 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities. Defendants are vicariously liable for this infringing conduct of their subsidiaries and affiliates, including subsidiaries such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants and their subsidiaries such as Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC are essentially the same company. Regions Corp. and Regions Bank have the right and ability to control other subsidiaries' infringing acts (including those activities of Regions Equipment Finance Corporation and Regions Commercial Equipment Finance, LLC) and receive a direct financial benefit from their infringement.

136. For example, Defendants infringe claim 1 of the '301 patent via their Accused Instrumentalities that utilize methods that process financial transactions using Regions' payment card accounts. In particular, Defendants infringe the '301 patent via creation and use of separate accounts that are associated with a debit account, e.g., utilizing Regions' Overdraft Protection Program with a Regions checking account for overdraft protection. *See Overdraft Protection, REGIONS*, <https://www.regions.com/personal-banking/overdraft-protection> (last visited November 1, 2021).

137. The Accused Instrumentalities implement the method of claim 1. The technology discussion above and the example Accused Instrumentalities provide context for Plaintiff's allegations that each of those limitations are met. For example, the Accused Instrumentalities practice the following method steps: receiving, at a computer-based authorization system, a transaction request associated with a debit account, wherein the debit account is associated with a separate account; sending, using the computer-based authorization system, an account information request that includes account information of the separate account; receiving, at the computer-based authorization system, status information of the separate account in response to the account information request; and authorizing, using the computer-based authorization system, the transaction request based on the status information.

138. At a minimum, Defendants have known of the '301 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '301 patent since at least May 6, 2019, when, via e-mail, Plaintiff initially informed Defendants of Plaintiff's patent portfolio and provided access to a data room that included a claim chart that demonstrated Regions' infringement of the '301 patent, as well as other Asserted Patents. On May 28, 2019, Plaintiff additionally had an introductory phone call with Defendants and Defendants' counsel, in which

Plaintiff discussed the patent portfolio and a model for licensing Plaintiff's patents. Since that time, Plaintiff has had ongoing discussions with Defendants regarding the Asserted Patents, including the '301 patent, and Plaintiff's request for Defendants to license the same.

139. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under U.S.C. § 271(b), their distributors, partners, customers, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, purchase, offer to sale, sell, use, and service the Accused Instrumentalities that include or are made using all of the limitations of one or more claims of the '301 patent to directly infringe one or more claims of the '301 patent by using, offering for sale, selling, and/or servicing the Accused Instrumentalities. Since at least the notice provided on the above-mentioned date, Defendants do so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '301 patent.

140. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, partners, customers, clients, subsidiaries, and/or consumers and other payment platforms used with the Accused Instrumentalities by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Instrumentalities; as payment card issuer, providing, as the payment card issuer, internal payment processing, authentication, authorization, and fraud detection systems and methods, including overdraft protections for consumers; maintaining such EMV payment applications by personalizing transaction devices with the payment applications, generating and installing cryptographic keys, and processing transactions;; creating and/or maintaining established distribution channels for the Accused Instrumentalities into and within the United States; manufacturing and designing the Accused Instrumentalities in conformity with U.S. laws and regulations; distributing or making

available instructions or manuals for these products and related processes to purchasers and prospective buyers; testing Regions' mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., regions.com) and mobile applications for clients, customers, and consumers for registering, activating, maintaining, and using (including accessing infringing features of) the Accused Instrumentalities, and/or providing technical support, replacement parts or services for these products and services to purchasers and other consumers, including overdraft protection services, in the United States. *See, e.g., Overdraft Protection, REGIONS*, <https://www.regions.com/personal-banking/overdraft-protection> (last visited November 1, 2021).

141. On information and belief, despite having knowledge of the '301 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '301 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '301 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

142. Plaintiff LPV has been damaged as a result of Defendants' infringing conduct described in this Count. Each Defendant is thus, jointly and severally, liable to LPV in an amount that adequately compensates LPV for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

CONCLUSION

143. Plaintiff is entitled to recover from Defendants the damages sustained by Plaintiff as a result of Defendants' wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

144. Plaintiff has incurred and will incur attorneys' fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional case within the meaning of 35 U.S.C. § 285, and Plaintiff is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

145. Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

146. Plaintiff requests that the Court find in its favor and against Defendants, and that the Court grant Plaintiff the following relief:

1. A judgment that Defendants have infringed the Asserted Patents as alleged herein, directly and/or indirectly by way of inducing infringement of such patents;
2. A judgment for an accounting of damages sustained by Plaintiff as a result of the acts of infringement by Defendants;
3. A judgment and order requiring Defendants to pay Plaintiff damages under 35 U.S.C. § 284, including up to treble damages as provided by 35 U.S.C. § 284, and any royalties determined to be appropriate;
4. A judgment and order requiring Defendants to pay Plaintiff pre-judgment and post-judgment interest on the damages awarded;

5. A judgment and order finding this to be an exceptional case and requiring Defendants to pay the costs of this action (including all disbursements) and attorneys' fees as provided by 35 U.S.C. § 285; and
6. Such other and further relief as the Court deems just and equitable.

Dated: November 9, 2021

Respectfully submitted,

/s/ Terry A. Saad

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