

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION**

LIBERTY PEAK VENTURES, LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	CIVIL ACTION NO. _____
	§	
FIFTH THIRD BANCORP and FIFTH	§	JURY TRIAL DEMANDED
THIRD BANK, NATIONAL	§	
ASSOCIATION,	§	
	§	
Defendants.	§	

**PLAINTIFF’S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Liberty Peak Ventures, LLC files this Complaint in this Northern District of Texas (the “District”) against Defendants Fifth Third Bancorp and Fifth Third Bank, National Association (collectively, “Defendants” or “Fifth Third”) 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”), 6,886,101 (the “101 patent”), and 7,904,386 (the “386 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 812 W. McDermott Drive #1066, Allen, TX 75013.

2. On information and belief, Defendant Fifth Third Bancorp (“FT Bancorp”) is a corporation organized under the laws of the state of Ohio, with its principal place of business located at 38 Fountain Square Plaza, Cincinnati, Ohio 45263. FT Bancorp may be served with process via its registered agents, for example, Corporation Service Company, 3366 Riverside Drive, Suite 103, Upper Arlington, Ohio 43221, and/or via its corporate officers. FT Bancorp is a publicly traded

company on The NASDAQ Stock Market LLC under the symbols “FITB,” “FITBI,” “FITBP,” and “FITBO.”

3. On information and belief, Defendant Fifth Third Bank, National Association (“Fifth Third Bank”) is a federally chartered national bank with its principal place of business located at 38 Fountain Square Plaza, Cincinnati, Ohio 45202. Fifth Third Bank is a wholly owned subsidiary of Defendant FT Bancorp. Fifth Third Bank may be served with process via its registered agents, for example, via the officers of the Secretary of State of Texas and their successors in such offices and/or its corporate officers. *Amended Articles of Incorporation of Fifth Third Bank, Western Ohio*, Document ID 200101101030, OFFICE OF THE SECRETARY OF STATE OF TEXAS (filed Dec. 6, 2001) *available at* <https://direct.sos.state.tx.us/acct/acct-login.asp> (stating “[t]he name of this corporation shall be Fifth Third Bank,” and including *Form U-2 Uniform Consent to Service of Process*, which states: “the undersigned Fifth Third Bank . . . hereby irrevocably appoints the officers of the Secretary of the State of Texas and their successors in such offices, its attorney in those states so designated upon whom may be served any notice, process or pleading in any action or proceeding against it arising out of, or in connection with the exercise of any action taken in its capacity as a foreign corporate fiduciary. . . and the undersigned does hereby consent that any such action or proceedings against it may be commenced in any court of competent jurisdiction and proper venue within the States so designated hereunder by service of process upon the officers so designated with the same effect as if the undersigned was organized or created under the laws of that State and have been served lawfully with process in that State.”) The term “Fifth Third” is used herein to refer to Fifth Third Bancorp and Fifth Third Bank, National Association, collectively.

4. On information and belief, FT Bancorp “is a diversified financial services company headquartered in Cincinnati, Ohio and is the indirect holding company of Fifth Third Bank, National

Association.” *Form 10-K Annual Report for the Fiscal Year Ended December 31, 2022*, at p. 20, FIFTH THIRD BANCORP, available for download at <https://ir.53.com/financial-information/sec-filings/default.aspx> (hereinafter “2022 Annual Report”).

5. On information and belief, FT Bancorp owns, directs, controls, operates and profits from the business of Fifth Third National bank. *See, e.g., 2022 Annual Report* at 25, 88 (FT Bancorp “operates three main businesses: Commercial Banking, Consumer and Small Business Banking and Wealth & Asset Management....Fifth Third’s core values and culture provide the foundation for sound risk management practices by establishing expectations for appropriate conduct and accountability across the organization. All employees are expected to conduct themselves in alignment with Fifth Third’s Code of Business Conduct and Ethics, which may be found on [www.53.com](http://www.53.com), while carrying out their responsibilities.”). Indeed, Fifth Third “conducts its principal lending, deposit gathering, transaction processing and service advisory activities through its banking and non-banking subsidiaries from banking centers located throughout the Midwestern and Southeastern regions of the United States as well as through other offices, telephone sales, the internet and mobile applications.” *Id.* at 126.

6. On information and belief, Fifth Third Bancorp directs, controls and shares management with Fifth Third Bank, National Association. *See, e.g., 2022 Annual Report* at 24, 114, 115 (“A BHC, including the Bancorp, is expected to act as a source of financial and managerial strength to each of its banking subsidiaries and to commit resources to their support....The Operational Risk Committee reports to the ERMC, which reports to the RCC of the Board of Directors of Fifth Third Bancorp and Fifth Third Bank, National Association.... The Management Compliance Committee reports to the ERMC, which reports to the RCC of the Board of Directors of Fifth Third Bancorp and Fifth Third Bank, National Association.”). According to FT Bancorp’s

own Annual Report, “As of December 31, 2022, Fifth Third [Bancorp] had \$207 billion in assets and operates 1,087 full-service Banking Centers and 2,132 Fifth Third branded ATMs in Ohio, Kentucky, Indiana, Michigan, Illinois, Florida, Tennessee, West Virginia, Georgia, North Carolina and South Carolina.” *Id* at 20. As an example of FT Bancorp’s direction of, control over and shared management with Fifth Third Bank, FT Bancorp and Fifth Third Bank share the same President and Chief Executive Officer. For example, Fifth Third Bank’s website includes a webpage entitled “Executive Officers,” listing Timothy N. Spence as “President and Chief Executive Officer.” *Executive Officers*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/about/corporate-governance/cg-executive-officers.html> (last visited March 13, 2023). Per Timothy N. Spence’s bio available at the same webpage, “Tim Spence [also] serves as president and chief executive officer of Fifth Third Bancorp, one of the largest U.S.-based financial institutions.” *Fifth Third Bancorp President and Chief Executive*, FIFTH THIRD BANK, [https://www.53.com/content/dam/fifth-third/docs/bios/Tim\\_Spence\\_Bio.pdf](https://www.53.com/content/dam/fifth-third/docs/bios/Tim_Spence_Bio.pdf) (last visited March 13, 2023). As another example, “Lori G. Hilman is the Assistant Secretary of Fifth Third Bancorp and Fifth Third Bank, National Association” jointly referred to as the “Bank” in the Certificate of Amendment submitted by Lori G. Hilman to the Ohio Secretary of State. *See Fifth Third Bancorp Amended/Restated Articles*, DOC ID 202110504272, OHIO SECRETARY OF STATE (received April 15, 2021), available at <https://bizimage.ohiosos.gov/api/image/pdf/202110504272>.

7. As of “December 31, 2022, Fifth Third [Bancorp] had \$207 billion in assets.” *2022 Annual Report* at p. 20. For the fiscal year ended December 31, 2022, FT Bancorp had a total of \$76.389 billion in its outstanding commercial loan and lease portfolio, and 9% of this total outstanding amount is attributed to commercial loans and leases in the state of Texas. *Id.* at 91, Table 29. “[FT] Bancorp’s subsidiaries provide a wide range of financial products and services to

the commercial, financial, retail, governmental, educational, energy and healthcare sectors. This includes a variety of checking, savings and money market accounts, wealth management solutions, payments and commerce solutions, insurance services and credit products such as commercial loans and leases, mortgage loans, credit cards, installment loans and auto loans. These products and services are delivered through a variety of channels including [FT] Bancorp’s banking centers, other offices, telephone sales, the internet and mobile applications.” *Id.* at 20. FT Bancorp’s Consumer and Small Business Banking segment “includes [FT] Bancorp’s residential mortgage, home equity loans and lines of credit, credit cards, automobile and other indirect lending and other consumer lending activities.” *Id.* at 211. “[FT] Bancorp receives substantially all of its liquidity from dividends from its subsidiaries, primarily Fifth Third Bank, National Association.” *Id.* at 112.

8. FT Bancorp earns card and processing revenue, which “consists primarily of ATM fees and interchange fees earned when [FT] Bancorp’s credit and debit cards are processed through card association networks.” *Id.* at 136. \$1.874 billion of FT Bancorp’s commercial loans and leases portfolio is attributable to credit cards. *Id.* at 81, 110, 143. FT Bancorp had card and processing revenue of \$409 million for the fiscal year ended December 31, 2022. *Id.* at 68.

9. On information and belief, Fifth Third Bancorp and/or Fifth Third Bank contracts with and issues debit cards and credit cards to its customers (for example, cardholders) to provide card services. *See Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023). On information and belief, Fifth Third Bank also

provides mobile and online banking services associated with its banking products, such as debit card, credit card, checking, and savings accounts. *See Online and Mobile Banking—Now 166.7% Better*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking.html> (last visited March 13, 2023); *Mobile Banking at Your Fingertips*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/mobile-banking.html> (last visited March 13, 2023); *Fifth Third Contactless Debit Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023); *Fifth Third 1.67% Cash/Back Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards/fifth-third-cash-back.html> (last visited March 13, 2023). The Asserted Patents cover Fifth Third’s products, services, and methods related to the offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions via banking products, including online banking, mobile banking, checking, savings, debit card, and/or credit card accounts, which are designed, developed, manufactured, distributed, sold, offered for sale, and used by Fifth Third and/or their customers, consumers, and clients. For example, Fifth Third infringes the Asserted Patents via at least Fifth Third Bank debit cards, Fifth Third Bank credit cards, mobile banking, and mobile wallets, which are services that allow Fifth Third’s clients and consumers to conduct financial and banking transactions via banking, debit and credit accounts. *See Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying

debit card products provided by Fifth Third Bank) (last visited March 13, 2023); *Online and Mobile Banking—Now 166.7% Better*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking.html> (last visited March 13, 2023); *Mobile Banking at Your Fingertips*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/mobile-banking.html> (last visited March 13, 2023). Moreover, Fifth Third’s infringing banking product systems and processes are compatible with application-based (“app”) mobile payment methods, such as Google Pay and Samsung Pay, that are installed on a consumer’s device, such as a mobile phone, tablet, or smartwatch. *See Digital Wallets*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/digital-wallet.html> (last visited March 13, 2023).

10. On information and belief, Defendants, on their own and/or via divisions, subsidiaries, partners, and affiliates maintain a corporate and commercial presence in the United States, including in Texas and this District, via at least 1) Fifth Third’s physical office locations established throughout Texas, including this District (*see, e.g., Find Commercial Banking in Texas*, FIFTH THIRD BANK, <https://cbios.53.com/us/tx> (last visited March 13, 2023) (listing offices in “Dallas” and “Houston” and stating “[d]eposit and credit products provided by Fifth Third Bank, National Association”); 2) Fifth Third’s online presence (e.g., <https://www.53.com>) that provides to consumers access to Defendants’ banking products and services, including those identified as infringing herein; and 3) consumers and clients of Defendants who utilize Fifth Third Bank debit card and credit 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 Fifth Third Bank debit cards and credit cards. *See, e.g., Fifth Third*

*Contactless Debit Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023) (“With the Fifth Third Contactless Debit Card, you can pay quickly and securely with just a tap at any contactless payment terminal.”); *Fifth Third 1.67% Cash/Back Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards/fifth-third-cash-back.html> (last visited March 13, 2023) (“Fast, safe, touch-free payments.”). Defendants, on their own and/or via alter egos, agents, divisions, subsidiaries, partners, and affiliates maintain office locations in this District, for example, with one office located at 5400 Lyndon B Johnson Fwy, Suite 825, Dallas, TX 75240. *See Find Commercial Banking in Texas*, FIFTH THIRD BANK, <https://cbios.53.com/us/tx> (last visited March 13, 2023); *Fifth Third Bank Announces Leadership for Dallas Middle-Market Banking Expansion Strategy*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/media-center/press-releases/2021/press-release-2021-04-06.html> (April 6, 2021) (last visited March 13, 2023) (“Fifth Third Bank, N.A., announced that Ron Harrison has joined Fifth Third as senior vice president and North Texas market executive. In this role, he will report to Scott Silvas, Texas market president for Fifth Third Bank..... he will play an active role on Fifth Third’s leadership team as it continues to build out its commercial banking services and hire talent in North Texas, including Dallas over the coming months.”); *Search for Jobs*, FIFTH THIRD BANK, <https://fifththird.wd5.myworkdayjobs.com/en-US/53careers?locations=5d81a4de586e01c53ae02f2d880b0e4c> (last visited March 14, 2023) (“9 JOBS FOUND” using “Dallas, TX” location filter. Thus, Defendants do business, including committing infringing acts, in the U.S., the state of Texas, and in this District.

### **JURISDICTION AND VENUE**

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

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

**A. Defendant Fifth Third Bancorp**

13. On information and belief, Defendant Fifth Third Bancorp 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, divisions, intermediaries, agents, suppliers, distributors, partners, subsidiaries, clients, customers, affiliates, and/or consumers, including, but not limited to, its subsidiary Fifth Third Bank, National Association.

14. For example, Fifth Third Bancorp, for itself and vicariously through its subsidiary and alter ego Fifth Third Bank, has established a physical presence in Dallas, Texas and Houston, Texas. *See, e.g., Find Commercial Banking in Texas, FIFTH THIRD BANK, <https://cbios.53.com/us/tx> (last visited March 13, 2023) (listing offices in "Dallas" and "Houston" and stating "[d]eposit and credit products provided by Fifth Third Bank, National Association").* Furthermore, FT Bancorp indicates that its business with Texas is significant. For the fiscal year ended December 31, 2022, FT Bancorp had a total of \$76.389 billion in its outstanding commercial loan and lease portfolio, and 9% of this total outstanding amount is attributed to commercial loans and leases in the state of Texas. *Id.* at 91, Table 29.

15. Such a corporate and commercial presence in Texas and in this District, by Defendant Fifth Third Bancorp furthers the development, design, manufacture, distribution, sale, and use of Fifth Third Bancorp's infringing products, services, and methods for offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions, for example, via banking services (e.g., mobile banking and online banking), debit cards, credit cards, and associated accounts including related mobile, contactless, and online payment and enrollment systems. Through direction and control of its alter egos, divisions, suppliers, intermediaries, agents, subsidiaries, and affiliates, including, but not limited to, direction and control of Defendant Fifth Third Bank, National Association, Defendant Fifth Third Bancorp has committed acts of direct and/or indirect patent infringement within Texas and this District, and elsewhere in the United States. Such acts give rise to this action and/or have established minimum contacts with Texas such that personal jurisdiction over Fifth Third Bancorp would not offend traditional notions of fair play and substantial justice.

16. Fifth Third Bancorp has placed and continues to place infringing products, services, and methods for offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions, for example, via banking services (e.g., mobile banking and online banking), debit cards, credit cards, and associated bank accounts, including related mobile, contactless, and online payment and enrollment systems, into the U.S. stream of commerce. For example, Fifth Third Bancorp has placed such infringing products, services, and methods into the stream of commerce through its offices located in this District and the State of Texas, including the office located at 5400 Lyndon B Johnson Fwy, Suite 825, Dallas, TX 75240 and through its websites, for example, at <https://www.53.com> and <https://cbios.53.com>. Indeed, Fifth Third Bancorp has placed such infringing products, services, and methods into the

stream of commerce with the knowledge and understanding that such products and services 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.”).

17. Venue is proper in the United States District Court for the Northern District of Texas pursuant to 28 U.S.C. §§ 1391(c) and 1400(b). As alleged herein, Defendant Fifth Third Bancorp has committed acts of infringement in this District. As further alleged herein, Defendant Fifth Third Bancorp, via its own operations and employees located there and via the presence of subsidiaries as agents and/or alter egos of Defendant Fifth Third Bancorp, has a regular and established place of business in this District at least at its office at 5400 Lyndon B Johnson Fwy, Suite 825, Dallas, TX 75240. According to property search records for Dallas County, Defendant Fifth Third Bancorp’s subsidiary Fifth Third Bank is the listed owner of the property at this location. *See Find Property by Owner Name*, DALLAS CENTRAL APPRAISAL DISTRICT, <https://www.dallascad.org/SearchOwner.aspx> (use Search By: Owner Name form to search for “Fifth Third” as owner) (last visited March 14, 2023). Accordingly, Fifth Third Bancorp may be sued in this district under 28 U.S.C. § 1400(b).

**B. Defendant Fifth Third Bank**

18. On information and belief, Defendant Fifth Third 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, suppliers, intermediaries, partners, agents, divisions, distributors, importers, customers, subsidiaries, and/or consumers, including, but not limited to, its parent Fifth Third Bancorp.

19. For example, for itself and as an agent and alter ego of parent Fifth Third Bancorp, Fifth Third Bank owns and maintains a banking business that provides products, services, and methods that include Fifth Third Bank offering, providing, registering, facilitating, maintaining, transacting, authenticating, and processing banking (e.g., mobile banking and online banking), debit and credit card account services, for example, via debit and credit cards and associated banking accounts, including related mobile, contactless, and online banking and payment systems, for Defendants' customers, consumers, and clients in Texas and this District.

20. Fifth Third Bank currently has offices located in Texas, including at least offices in Houston and Dallas, including at least one office in this District located at 5400 Lyndon B Johnson Fwy, Suite 825, Dallas, TX 75240. *See Find Commercial Banking in Texas*, FIFTH THIRD BANK, <https://cbios.53.com/us/tx> (last visited March 13, 2023); *Fifth Third Bank Announces Leadership for Dallas Middle-Market Banking Expansion Strategy*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/media-center/press-releases/2021/press-release-2021-04-06.html> (April 6, 2021) (last visited March 13, 2023) (“Fifth Third Bank, announced that Ron Harrison has joined Fifth Third as senior vice president and North Texas market executive. In this role, he will report to Scott Silvas, Texas market president for Fifth Third Bank..... he will play an active role on Fifth Third’s leadership team as it continues to build out its commercial banking services and hire talent in North Texas, including Dallas over the coming months.”); *Search for Jobs*, FIFTH THIRD BANK, <https://fifththird.wd5.myworkdayjobs.com/en->

US/53careers?locations=5d81a4de586e01c53ae02f2d880b0e4c (last visited March 14, 2023) (“9 JOBS FOUND” using “Dallas, TX” location filter. Via Fifth Third Bank’s own activities, Fifth Third Bank has substantial business operations in Texas, which include clients, customers, and related financial products and services, for example, commercial and/or retail banking services, and Fifth Third Bank branded debit and credit cards. Fifth Third Bank has placed and continues to place infringing products, services, and methods for offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions, for example, via banking services, debit cards, credit cards, mobile banking, online banking and associated bank accounts, including related mobile, contactless, and online payment systems, into the U.S. stream of commerce. Fifth Third Bank 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*, 523 F.3d at 1369-70 (“[T]he sale [for purposes of § 271] occurred at the location of the buyer.”).

21. Such a corporate and commercial presence in Texas, including in this District, by Defendant Fifth Third Bank furthers the development, design, manufacture, distribution, sale, and use of Fifth Third Bank’s infringing products, services, and methods for offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing commercial transactions, for example, via banking, debit cards, credit cards, and associated accounts including related mobile, contactless, and online payment and enrollment systems. Through direction and control of its alter egos, suppliers, intermediaries, agents, subsidiaries and affiliates, Fifth Third Bank has committed acts of direct and/or indirect patent infringement within Texas and this District, and elsewhere in the United States. Such acts give rise to this action and/or

have established minimum contacts with Texas such that personal jurisdiction over Fifth Third Bank would not offend traditional notions of fair play and substantial justice.

22. Venue is proper in the United States District Court for the Northern District of Texas pursuant to 28 U.S.C. §§ 1391(c) and 1400(b). As alleged herein, Defendant Fifth Third Bank has committed acts of infringement in this District. As further alleged herein, Defendant Fifth Third Bank, via its own operations and employees located there and via the presence of other subsidiaries as agents and/or alter egos of Defendant Fifth Third Bank, has a regular and established place of business in this District at least at an office located at 5400 Lyndon B Johnson Fwy, Suite 825, Dallas, TX 75240. According to property search records for Dallas County, Defendant Fifth Third Bank is the listed owner of the property at this location. *See Find Property by Owner Name, DALLAS CENTRAL APPRAISAL DISTRICT, <https://www.dallascad.org/SearchOwner.aspx>* (use Search By: Owner Name form to search for “Fifth Third” as owner) (last visited March 14, 2023). Accordingly, Fifth Third Bank may be sued in this district under 28 U.S.C. § 1400(b).

23. Upon information and belief, Defendants Fifth Third Bancorp and Fifth Third 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**

24. The Asserted Patents cover various aspects of products, services, and methods that include Defendants’ offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing banking (e.g., mobile banking and online banking), credit, and debit card accounts, and related products and services for Defendants’ customers, consumers, and clients, including Defendants’ internal payment processing, authentication, authorization, rewards, cashback, enrollment, and fraud detection systems and methods, referred to herein collectively as the “Accused Instrumentalities.” The apparatuses, systems, and methods described in each of the

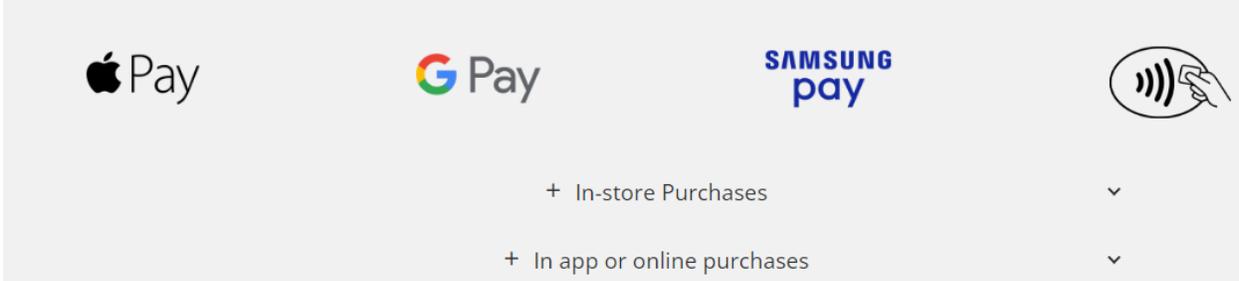
Asserted Patents apply, for example, to systems for securing, authorizing, and facilitating financial transactions, e.g., purchases related to banking and debit card accounts.

25. The Asserted Patents cover Accused Instrumentalities of Defendants 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 Defendants and vicariously through their alter egos, suppliers, intermediaries, agents, divisions, 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 (and in some cases, the software is 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.

26. On information and belief, Defendants' 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 Defendants' credit or debit card without presenting the physical card at the time of payment (referred to herein as a "mobile payment"). Defendants' mobile payments can be facilitated by using mobile wallets such as Google Pay and Samsung Pay, such as shown below:

## Paying With a Digital Wallet

Digital wallets are accepted at many places where you shop. Look for these logos at checkout:



### + What is a digital wallet? ^

- A digital wallet stores electronic versions of your physical debit and credit cards, as well as plane tickets, concert tickets, and in-store rewards cards.
- A digital wallet enables contactless payments using your device in store, in app, or online.

See *Digital Wallets*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/digital-wallet.html> (last visited March 14, 2023).

27. 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 Defendants’ 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 holds 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.

## EMV

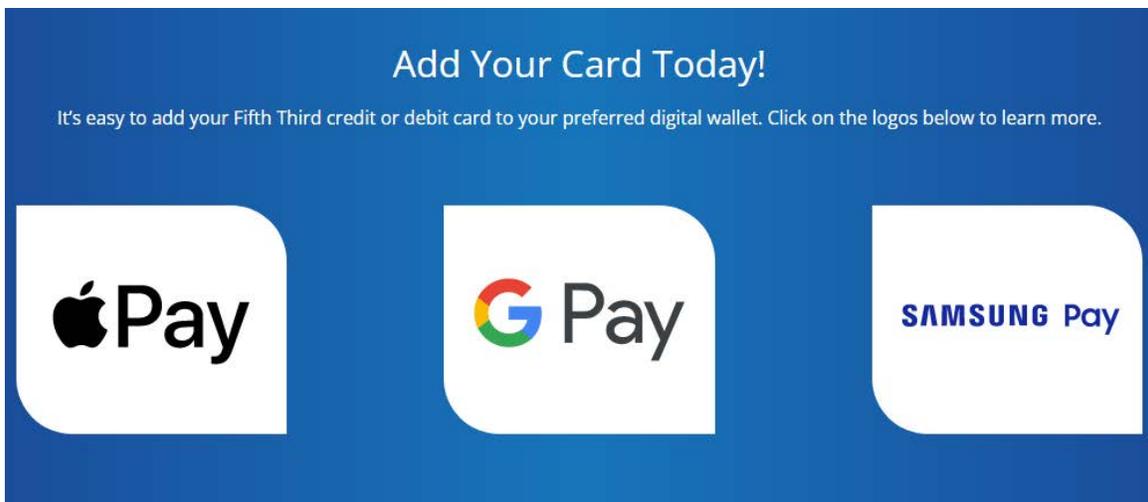
EMV stands for Europay, MasterCard, and Visa. It's the technical standard for payments using Smart Cards which are cards with an embedded chip. These cards can be contact cards that need to be inserted in a terminal or contactless cards that can be read using NFC technology. Google Pay payments are presented to the payment terminal as EMV contactless payments.

<https://support.google.com/pay/merchants/answer/7151369?hl=en>

Field Communication (NFC) and Magnetic Secure Transmission (MST). MST is Samsung's innovative technology that delivers secure transactions for new EMV chip and NFC terminals, as well as traditional, magnetic strip terminals, enabling consumers to use

<https://news.samsung.com/us/samsung-pay-partners-global-pos-providers-accelerate-mobile-payments-adoption/>

28. On information and belief, as indicated below, Defendants encourage their clients, consumers, and customers to shop with Defendants'-branded credit and debit cards using a digital wallet service that provides a distribution channel by which Defendants' payment applications (e.g., via the Secure Element on the mobile device) can be accessed and used.



...

### + What are the benefits of digital wallets? ^

- Digital Wallets have all the same card benefits and rewards as your physical debit or credit card—and they give you an added layer of security.
- With digital wallets, your physical card number is not shared when you make a purchase.
- Enjoy the freedom of shopping without the need to carry your cards—only your device.
- While using a digital wallet online or in an app, your billing and shipping information may be pre-populated, saving you time at checkout.

### + Where can I use my digital wallet? ^

- Digital wallets can be used at any check out where contactless payments are accepted.
  - Merchants may include grocery stores, fast food and quick service restaurants, your local coffee shop and many more.
- Digital wallets are also accepted online, while using a compatible browser at an enabled website, or in many apps on your device.
- Look for these contactless payment symbols at checkout:



See *Digital Wallets*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/digital-wallet.html> (last visited March 14, 2023).

29. The Accused Instrumentalities also include at least Defendants' payment card (e.g., credit and debit card) related products, services, and methods for card payments using a physical credit or debit card having an embedded chip or smartcard. See *Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023). For example, as indicated below, Defendants' payment applications reside on microchips embedded on Defendants' credit and debit cards, which allow the user to tap the payment card to a reader and

complete a transaction wirelessly without contact between the card's magnetic stripe and the reader.

**New** **Fifth Third 1% Cash/Back Card**

Your 1 card for anything and everything, from purchases to balance transfers.



**At a Glance:**

Enjoy **0% intro APR for 21 months** on purchases and balance transfers after account opening. After that, your **variable APR will be 15.49% - 26.49%**.<sup>6</sup> Fifth Third customers can apply in a branch, via phone or digitally if registered for Online or Mobile banking!

**Key Benefits:**

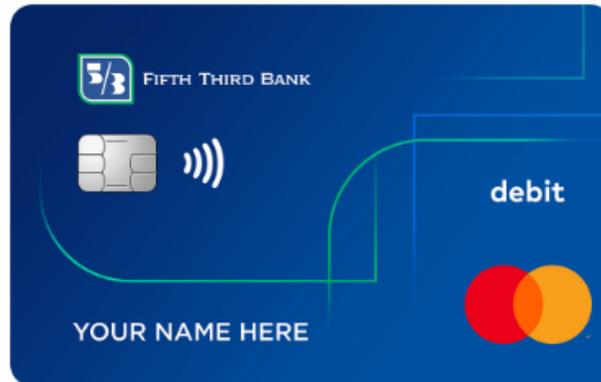
- Annual Fee: \$0<sup>6</sup>
- Earn **1% unlimited cash back**<sup>7</sup> on every purchase
- No caps, no expiration, no catch
- A **contactless** card for more secure payments
- Cell phone protection<sup>8</sup>

30. See *Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023).

31. On information and belief, the Accused Instrumentalities include at least Defendants' payment card (e.g., credit and/or debit card) related products, services, and methods for contactless payments using a physical credit and/or debit card having an embedded chip or smartcard that utilize EMV standards for contactless payment. See, e.g., *Fifth Third Contactless Debit Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023) ("Look for the contactless symbol at payment terminals nationwide."). At least some of Defendants' credit and/or debit cards include EMV compliant contactless payment functionality indicated, for example, by the "Contactless Indicator"  which appears prominently on the cards.

## Touch-Free Payments, Made Easy

With the Fifth Third Contactless Debit Card, you can pay quickly and securely with just a tap at any contactless payment terminal. It's as simple as tap to pay and go on your way.

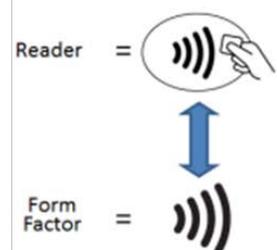


*See id.*

32. The Contactless Indicator “represents compatibility with a Point of Sale (POS) terminal or reader which is compliant with the EMV Contactless Communication Protocol” and in payment-related environments consumers may use their compliant card or device on a POS terminal or reader bearing the “Contactless Symbol”  as explained below.

**Using the Contactless Indicator and Contactless Symbol together in Traditional Payment Environments**  
The Contactless Indicator may be used for transactions beyond payments on consumer-held form factors (card, key fob, mobile device) or a contactless reader, terminal, or other “point of transaction” device.  
When shown on a traditional bank card or equivalent payment-related form factors, the Contactless Indicator represents compatibility with a Point of Sale (POS) terminal or reader which is compliant with the EMV Contactless Communication Protocol.

Payment-related transaction environments use the Contactless Symbol on POS terminal or reader.



<https://www.emvco.com/wp-content/uploads/2020/02/EMVCo-Contactless-Indicator-Reproduction-Requirements-Nov-2019.pdf>

33. 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.”

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>

34. Via mobile wallet applications, such as Google Pay and Samsung 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” or Samsung 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>

35. Defendants, as payment card account issuers, 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](https://payments.google.com/payments/apis-secure/u/0/get_legal_document?ldo=0&ldt=googlepaytos&ldl=und#SafeHtmlFilter_US)

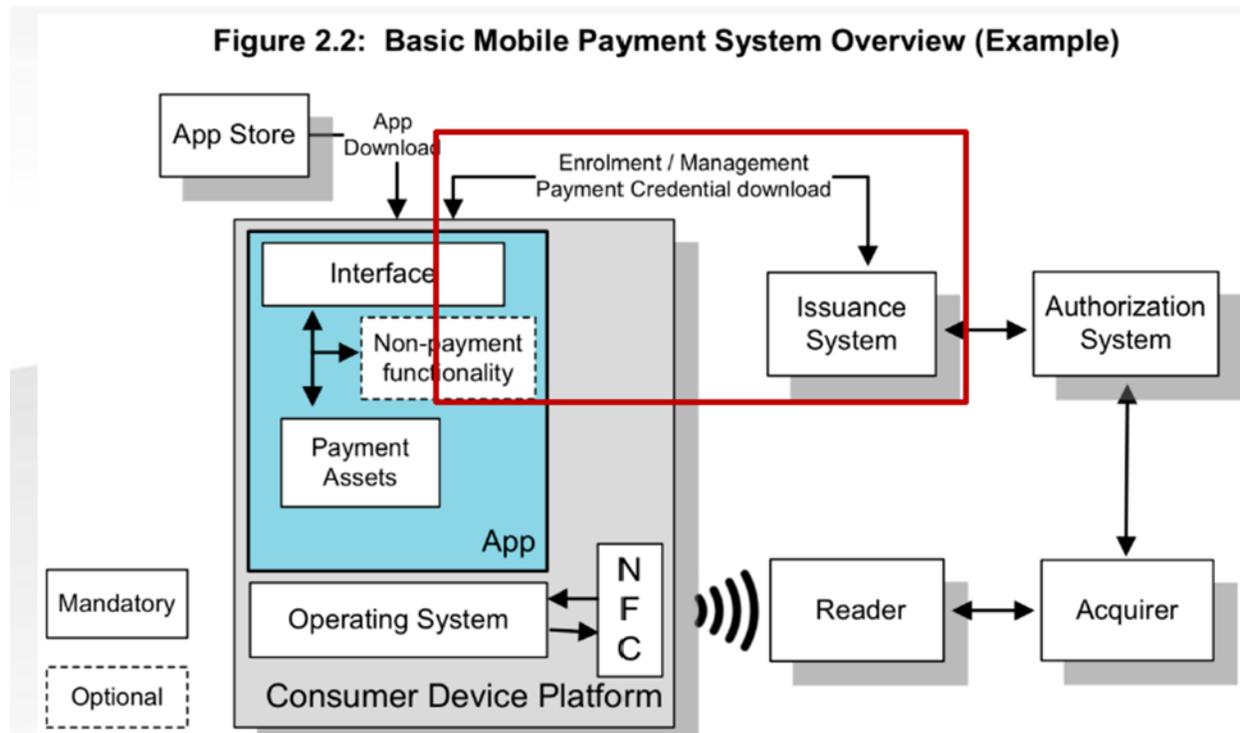
36. The Accused Instrumentalities include Defendants' products, processes, and systems offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing banking, credit and debit accounts and related products and services for Defendants' customers, consumers, and clients, including Defendants' internal payment processing, authentication, authorization, and fraud detection systems and methods, related to at least the Fifth Third Contactless Debit Card. *See, e.g., Fifth Third Contactless Debit Card, FIFTH THIRD BANK*, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023) ("Look for the contactless symbol

at payment terminals nationwide.”); *Fifth Third Bank Debit Card Disclosure and Card Agreement*, Fifth Third Bank, <https://www.53.com/content/dam/fifth-third/docs/legal/2022/fifth-third-bank-debit-card-disclosure-and-card-agreement.pdf> (last visited March 14, 2023). The Accused Instrumentalities further include systems and methods related to Defendants’ banking and fraud protection services, including those associated with authentication of user logins and user self-auditing of privacy data related to checking, savings, and other banking accounts. Such services are offered to users via at least Fifth Third Bank’s Online and Mobile Banking services, including Online Banking, Mobile Banking, and digital payments. *See e.g., See Online and Mobile Banking—Now 166.7% Better*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking.html> (last visited March 13, 2023); *Mobile Banking at Your Fingertips*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/mobile-banking.html> (last visited March 13, 2023).

37. The Accused Instrumentalities of Defendants 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 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.

38. Defendants infringe the '671 patent via at least Defendants' computer-based systems that conduct user enrollment processes for credit and debit card mobile wallet payments. Such systems of Defendants infringe the '671 patent by enabling and conducting mobile payments that utilize mobile wallets, such as Google Pay and Samsung Pay. 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.



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

39. 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*

40. 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*

41. In a given transaction, Defendants receive a request from the consumer’s mobile wallet, which includes 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](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](https://www.emvco.com/wp-content/uploads/2017/05/EMV_v4.3_Book_2_Security_and_Key_Management_20120607061923900.pdf)

42. 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*

43. The Accused Instrumentalities of Defendants 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 the 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. 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.

44. Defendants infringe the '509 patent via at least their computer-based systems for credit and debit card transaction processing, including an EMV payment application issued to a user and stored in a mobile wallet. 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](https://www.emvco.com/wp-content/uploads/2017/05/Book_A_Architecture_and_General_Rqmts_v2_6_Final_20160422011856105.pdf)

45. 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.

<b>Proximity Payment System Environment (PPSE)</b>	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](https://www.emvco.com/wp-content/uploads/2017/05/Book_A_Architecture_and_General_Rqmts_v2_6_Final_20160422011856105.pdf)

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

<p><b>A.1.117 Outcome Parameter Set</b></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;"> <thead> <tr> <th colspan="3">Outcome Parameter Set</th> </tr> <tr> <th>Byte 1</th> <th>b8-5</th> <th>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 <b>EMV mode</b>.</p>
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																																			

Table 6.2—Mandatory EMV Mode Data Objects	
Data Object	
	<u>Application Expiration Date</u>
	<u>Application PAN</u>
	CDOL1

[https://www.emvco.com/wp-content/plugins/pmpro-customizations/oy-getfile.php?u=/wp-content/uploads/documents/C-2\\_Kernel\\_2\\_V\\_2\\_7\\_Final.pdf](https://www.emvco.com/wp-content/plugins/pmpro-customizations/oy-getfile.php?u=/wp-content/uploads/documents/C-2_Kernel_2_V_2_7_Final.pdf)

47. 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/pmpro-customizations/oy-getfile.php?u=/wp-content/uploads/documents/EMVCo-Payment-Tokenisation-Specification-Technical-Framework-v2.0.pdf>

48. 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.

## 5.4 Generate AC

### 5.4.1 Definition and Scope

The GENERATE AC command sends transaction-related data to the Card, which then computes and returns an *Application Cryptogram*. Depending on the risk management in the Card, the cryptogram returned by the Card may differ from that requested in the command message. The Card may return an AAC (transaction declined), an ARQC (online authorization request), or a TIC (transaction approved).

[https://www.emvco.com/wp-content/plugins/pmpro-customizations/oy-getfile.php?u=/wp-content/uploads/documents/C-2\\_Kernel\\_2\\_V\\_2\\_7\\_Final.pdf](https://www.emvco.com/wp-content/plugins/pmpro-customizations/oy-getfile.php?u=/wp-content/uploads/documents/C-2_Kernel_2_V_2_7_Final.pdf)

49. The Accused Instrumentalities of Defendants 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.

50. Defendants infringe the '369 patent via at least their computer-based systems for credit and debit card transaction processing, including Defendants' EMV payment application issued to a user and stored in a smartcard (e.g., a mobile wallet or contactless card). Defendants

provide contactless credit and/or debit cards and/or mobile wallet payment applications configured with smartcards that receive payment requests from POS terminals. For example, in a Kernel 2 application (i.e., a MasterCard transaction) a card responds to an Application Cryptogram (AC) command from the terminal, as indicated below.

### **3.4.3 EMV Mode**

For an EMV mode transaction, after the GET PROCESSING OPTIONS command, the Kernel continues with the following steps:

1. It determines which form of Offline Data Authentication to perform.
2. It reads the data records of the Card (using READ RECORD commands). If the same transaction involving the same Card is recognized in the Kernel's internal log of torn transactions, then an attempt is made to recover the transaction – see section 3.7.
3. It performs Terminal Risk Management and Terminal Action Analysis, and selects a cardholder verification method for the transaction.
4. It requests an Application Cryptogram from the Card by issuing a GENERATE AC command. If a response is not received from the Card, the Kernel considers the transaction as "torn", and stores the transaction details in its internal log of torn transactions, before terminating – see section 3.7.
5. It performs Offline Data Authentication as appropriate.

[https://www.emvco.com/wp-content/plugins/pmpro-customizations/ov-getfile.php?u=/wp-content/uploads/documents/C-2\\_Kernel\\_2\\_V\\_2\\_7\\_Final.pdf](https://www.emvco.com/wp-content/plugins/pmpro-customizations/ov-getfile.php?u=/wp-content/uploads/documents/C-2_Kernel_2_V_2_7_Final.pdf)

51. 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>

52. The Accused Instrumentalities of Defendants 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.

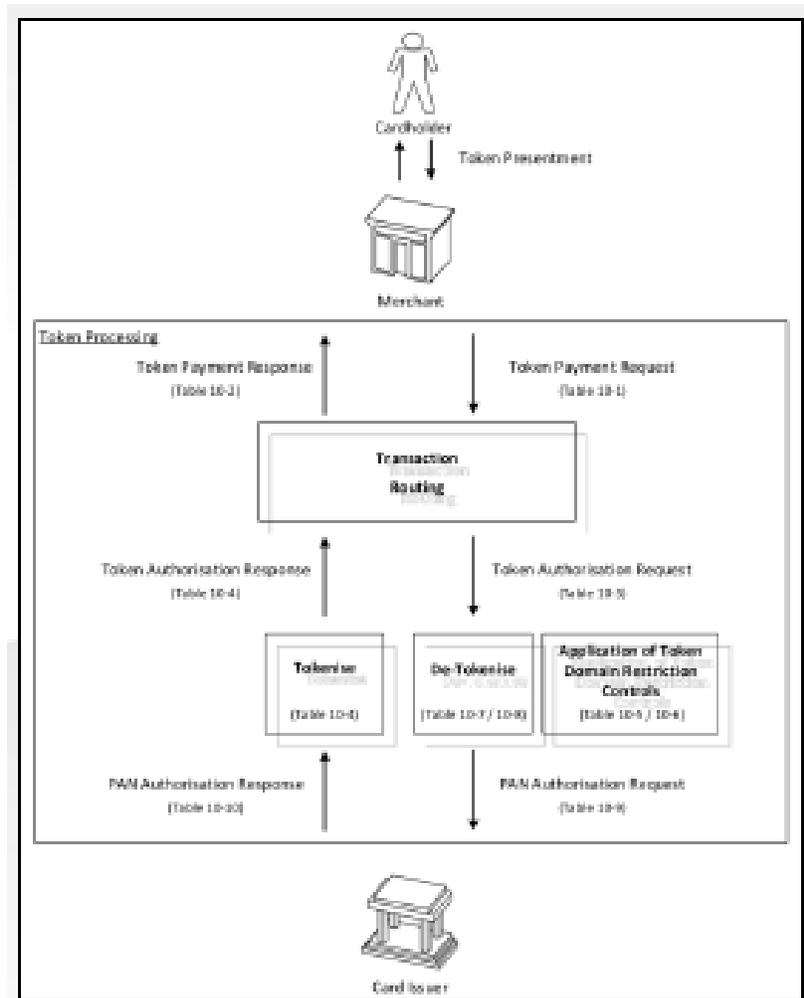
53. Defendants infringe the '985 patent via at least their computer-based systems for credit and debit card transaction processing, including their systems and processes for authorization of tokenized payment requests. Such systems infringe the '985 patent by enabling and conducting mobile payments that 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. Defendants' credit and debit card transactions made online by consumers may also utilize virtual account numbers via "tokenization," as shown below in relation to Google Pay.

## 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>

54. 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 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*

55. As explained below, upon receipt of a Payment Token, Defendants convert the token into the corresponding 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*

56. Defendants analyze the transaction data 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](https://www.emvco.com/wp-content/uploads/2017/05/EMV_v4.3_Book_2_Security_and_Key_Management_20120607061923900.pdf)

57. 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

58. The Accused Instrumentalities of Defendants infringe at least the claims of the '101 patent, which provide methods and systems providing a privacy service for facilitating the auditing and control of privacy data. In the '101 patent, users provide their personal information (e.g., privacy data such as name, address, etc.) to a privacy service system. The user's privacy data is stored in a database associated with the privacy service. Users are allowed to audit the user's respective privacy data that is stored on the database. As part of a self-audit of the user's data, the user may be allowed to change the user's privacy data. The inventions disclosed in the '101 patent may be used for the early detection of various types of identity fraud. Users may utilize the disclosed privacy service systems to take appropriate actions, including notifying various financial institutions of any identity fraud. Such appropriate actions in response to the detection of identity fraud may also be taken automatically by the privacy service system.

59. Defendants infringe the '101 patent by facilitating the self-auditing of users' privacy data. Defendants provide users of Defendants' website with a username and password giving them access to their own account information. *See, e.g., Login, FIFTH THIRD BANK*, <https://www.53.com/content/fifth-third/en/login.html/> (last visited March 15, 2023) (providing

instructions for “Existing Users” to use their “customer User ID” and “associated Online Banking password” and providing instructions for “First Time Users” indicating that they “will be prompted to create an exclusive password for Online Banking”).

60. When a user creates a banking account with Fifth Third, the user is prompted to enter the user’s privacy data in the form of an email address and the user’s phone number, which is subsequently collected and stored by Fifth Third Bank.

The screenshot shows a web form for applying for Fifth Third Momentum® Checking. At the top, it says "You're applying for: Fifth Third Momentum® Checking". Below that is a large heading "Let's Get Started" followed by the instruction "Please provide a few details to help us get to know you better." The form contains three input fields: a single-line text box for "Primary Email" with the subtext "Don't worry, we won't overload your inbox." below it; a single-line text box for "Zip Code"; and a single-line text box for "Offer Code (Optional)".

You're applying for: Fifth Third Momentum® Checking

### Verify Your Identity

For security reasons, we need to make sure you're really you. We'll send a link to your phone, so you can use your phone's camera to scan your state-issued ID. Here's how it works:

1. Enter your mobile phone number below.
2. You'll receive a text message that includes a link.
3. Tap the link and follow the instructions on the screen.
4. Return here to complete the application.

**Mobile Phone Number**

I agree to receive a text message at the above mobile phone number to complete the verification process. Message and data rates may apply. You will receive one message.

See, e.g., *You're applying for: Fifth Third Momentum® Checking*, FIFTH THIRD BANK, <https://openonline.53.com/product/apply>.

61. A user self audits the user's privacy data by logging in to the user's account. The user is restricted from auditing privacy data of another user. The user navigates to the user profile and preferences section of the website and retrieves privacy data associated with the user, e.g., the user's email address and phone number. The user reviews and can change the privacy data as part of the audit process.

62. The user is also provided with an alerts section of Defendants' website. In the alerts section of Defendants' website, the user can change communication preferences, the types of alerts that the user wishes to receive and associated delivery preferences (e.g., text messages, push notifications, and/or email).

### Desktop

1. [Log In](#) to Online Banking
2. Click on Service Center at the top of the page
3. Under Alerts, you'll see the Manage Alerts section
4. From here you can add and edit alerts, as well as select your delivery preference

*See, e.g., Account Alerts, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/account-alerts.html> (last visited March 14, 2023).*

### Stay in Control of Your Finances With Account Alerts

Are you managing and protecting your bank account to the best of your ability? Setting up account alerts for your mobile or online banking account can help provide additional protection from fraudulent charges or overdraft fees. Account alerts can also provide you with personalized payment reminders or account balances. Choose to receive alerts through text messages, push notifications, or email, and never miss a notification again. Manage your bank account with ease by setting up Fifth Third account alerts today.

*See id.*

63. The Accused Instrumentalities of Defendants infringe at least the claims of the '386 patent, which provide methods and systems providing a product that enables saving and investing through the use of transaction cards. In the '386 patent, an account issuing system has a processor and non-transitory memory. The account issuing system is used to accomplish several functions. One function includes associating a transaction account with a deposit account. Another function includes storing an amount of funds to be deposited from the transaction account into the deposit account based on a cash back amount established for the transaction account. Additional functions include verifying that criteria for receiving cash back from the transaction account issuer is met and verifying the transaction account has a predetermined bill payment status. In response to both (1) verifying the criteria is met and (2) verifying the predetermined bill payment status is met, the

account issuing system automatically deposits the cash back amount of funds from the transaction account into the deposit account.

64. Defendants infringe the '386 patent, for example, by using an account issuing system to automatically deposit cash back funds from a transaction account into a deposit account in response to (1) verifying criteria is met, and (2) verifying a predetermined bill payment status is met.

65. Fifth Third offers a number of cash back rewards cards (transaction accounts), which can be associated with a customer's Fifth Third checking or savings account (deposit account).

### **Fifth Third 1.67% Cash/Back Card**

Earn cash back on every purchase, every time with the [Fifth Third 1.67% Cash/Back Card](#).



**At a Glance:**

Earn cash back on every purchase! The Fifth Third 1.67% Cash/Back Card delivers a straightforward cashback program, and you'll be surprised by how quickly your cash back adds up. Fifth Third customers can apply in a branch, via phone or digitally if registered for Online or Mobile banking.

- **1.67% unlimited cash back** for every \$1 in purchases<sup>1,2</sup>
- No changing categories
- No limits
- No point expiration
- Annual Fee: \$0<sup>3</sup>

[APPLY NOW](#)

[More Details](#)  
[Terms and Conditions](#)

### **Fifth Third Preferred Cash/Back Card**

The [Fifth Third Preferred Cash/Back Card](#) is offered exclusively for Preferred Banking clients.



**At a Glance:**

Earn cash back on every purchase! The Fifth Third Cash/Back Card delivers a straightforward cashback program, and you'll be surprised by how quickly your cash back adds up. Available exclusively to [Fifth Third Preferred Banking clients](#).

- **2% unlimited cash back** for every \$1 in purchases<sup>4</sup>
- No changing categories
- No limits
- No point expiration
- Annual Fee: \$0<sup>5</sup>

[MORE DETAILS](#)

[Terms and Conditions](#)

**New** **Fifth Third 1% Cash/Back Card**

Your 1 card for anything and everything, from purchases to balance transfers.



**At a Glance:**

Enjoy **0% intro APR for 21 months** on purchases and balance transfers after account opening. After that, your **variable APR will be 15.49% - 26.49%**.<sup>6</sup> Fifth Third customers can apply in a branch, via phone or digitally if registered for Online or Mobile banking!

**Key Benefits:**

- Annual Fee: \$0<sup>6</sup>
- **Earn 1% unlimited cash back<sup>7</sup> on every purchase**
- No caps, no expiration, no catch
- **A contactless card** for more secure payments
- **Cell phone protection<sup>8</sup>**

**APPLY NOW**

[More Details](#)  
[Terms and Conditions](#)

See *Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023).

66. Fifth Third stores the cash back balance associated with a credit card account for at least three years, which accrues with transactions associated with the credit card account.

#### **REWARDS POINTS ACCUMULATION**

**Rewards Point Balance.** Rewards Point totals may be found on the Rewards Program website. These totals show your accumulated Points across all your Rewards Products. If earned or redeemed Rewards Points result in a fractional amount, then such fractional amount will be rounded to the nearest whole number. For example, if Rewards Points total 3.216, you will be awarded 3 Rewards Points.

#### **LOSS OF POINTS**

**Expiration.** Rewards Points (including cash back) generally expire.

- Rewards Points generally expire within 3 years. However,
- Rewards Points earned on Business Rewards Cards, Fifth Third Preferred Credit Cards, and Visa Signature Cards, expire within 4 years;
- Fifth Third Private Bank Card, Fifth Third Simply Business, Fifth Third 1% Cash/Back, Fifth Third 1.67% Cash/Back and Fifth Third Preferred Cash/Back Rewards Points do not expire.
- TRIO Credit Card - Fifth Third Preferred Banking Rewards Points earned before 11/21/2019 expire within 5 years and points earned on or after 11/21/2019 do not expire.

See *Fifth Third Real Life Rewards® Program Terms and Conditions and Fifth Third Private Bank Rewards<sup>SM</sup> Program Terms and Conditions*, FIFTH THIRD BANK, <https://www.53.com/content/dam/fifth-third/docs/legal/cards/2021/17991-real-life-rewards-tc.pdf> (last visited March 15, 2023).

67. Fifth Third verifies that the transactions meet criteria for receiving cash back, including verifying that the transaction is not a cash advance, ATM withdrawal, or other quasi-cash transaction.

**Purchase(s):** the dollar value of goods and services paid by using your Rewards Card after your open or enrollment date (whichever is later), minus any credits, returns or other adjustments as reflected on the account statement for your Rewards Card. Purchases do not include any Fifth Third fees, service charges or interest charges; unauthorized charges; cash advances; ATM transactions; Ready Reserve Overdraft Protection transactions; balance transfers; Convenience Checks; or quasi-cash transactions (person-to-person money transfers, casino gaming chips, lottery tickets, money orders, wire transfers, travelers checks, foreign currency, or similar transactions).

**Purchase Categories.** Merchants who accept your Rewards Card are assigned to categories based on their business type (e.g. gas, grocery store). Different card readers used by the same merchant may be assigned to different categories. All transactions at a particular card reader are included in the category assigned to that card reader. We do not control which categories card readers are assigned. We use merchant categories to identify which transactions qualify as Purchases and which Purchases qualify to earn bonus or promotional Rewards Points. From time to time, transactions may be prevented from earning Rewards Points, and Purchases may be prevented from earning bonus or promotional Rewards Points, because the transaction occurs at a card reader that is assigned to a category that does not qualify to earn Rewards Points or bonus or promotional Rewards Points.

*See id.*

68. Fifth Third verifies that the transaction account is open, is not 60 or more days past due, and that an associated rewards card is not blocked because it was reported lost or stolen before depositing rewards.

**REDEMPTION**

**Conditions and Limitations.** To redeem Rewards Points for Rewards, your Rewards Product must not be closed for any reason. You may not redeem Rewards Points associated with a Rewards Card that has been blocked because it was reported as lost or stolen or is 60 or more days past due. All Rewards are subject to availability. Specific restrictions and/or terms and conditions may accompany each Reward. Please see the Rewards Program website for details. Please review carefully the terms and conditions applicable to specific Rewards before redeeming. Reasonable efforts have been made to ensure that the information provided about the Rewards Program is accurate; however, we are not responsible for errors or omissions. Rewards Point redemptions are final and cannot be reversed once made.

*See id.*

69. After verifying that the transaction account is in good standing, Fifth Third deposits the cash amount to an associated Fifth Third checking or savings account.

**Fifth Third Bank Auto-Redemption.** Sign up for automatic redemptions to your Fifth Third checking or savings account, statement credit to your Fifth Third credit card or to pay down the principal of your Fifth Third mortgage loan. Choose to have your total Rewards Points balance redeemed each month into the Fifth Third account you select. Please allow 14 days after redemption for the credit to appear on your account. You may turn this auto-redemption function on or off on the Rewards website. Statement credits are applied automatically as payments to credit card account balances regardless of whether the payment exceeds any outstanding balance and may cause credit balances more than the total balance due on your account. We handle credit account balances more than total balance due consistent with law. Please see your Cardholder Agreement for details on how we apply payments. Statement credits do not relieve you from your regularly scheduled payment obligations.

authenticating, and processing commercial transactions via, for example, banking (e.g., online and

mobile banking), credit cards, debit cards, and associated accounts that are covered by the Asserted Patents. Furthermore, the Accused Instrumentalities include systems and methods for providing self-auditing features of users' privacy data that are also 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)

71. Plaintiff incorporates paragraphs 1 through 70 herein by reference.

72. 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.

73. 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.

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

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

76. Defendant Fifth Third Bank directly infringes 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, for example, to or for FT Bancorp's and/or Fifth Third Bank's alter egos, agents, intermediaries, distributors, customers, subsidiaries, divisions, partners, affiliates, clients and/or consumers.

77. Defendant Fifth Third Bancorp directly infringes the '671 patent at least through the direct involvement in the activities of its subsidiaries, for example, Defendant Fifth Third Bank, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' divisions, subsidiaries, partners, and affiliates conduct activities that constitute 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. Specifically, Fifth Third Bank, as Fifth Third Bancorp's subsidiary, identifies itself, including via branding, as the entity that provides Fifth Third Bank credit and debit cards to Defendants' clients, consumers, and customers.

78. Defendant Fifth Third Bancorp is vicariously liable for this infringing conduct of its subsidiaries, for example, Defendant Fifth Third Bank, (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants Fifth Third Bancorp and Fifth Third Bank are essentially the same company. Fifth Third Bancorp has the right and ability to direct and control its subsidiaries' infringing acts and receives a direct financial benefit from their infringement. Fifth Third Bancorp and Fifth Third Bank have the right and ability to direct and control other subsidiaries' infringing acts, and each receives a direct financial benefit from their infringement.

79. Defendants also directly infringe the '671 patent via at least their own provision of credit and debit card services that implement EMV standards in mobile or contactless credit and debit card transactions. On information and belief, Defendants, via Defendant Fifth Third Bank, are the issuers of Fifth Third Bank-branded credit and debit cards offered as personal and commercial products. *See, e.g., Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

80. Defendants infringe at least claim 1 of the '671 patent via at least 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 issuers, perform and/or direct and control, including vicariously, via their alter egos, suppliers, agents, affiliates, partners, divisions, and subsidiaries, the operation of these mobile or contactless payments conducted using Fifth Third Bank issued payment cards, including the provisioning, authenticating, and authorizing of mobile payment wallets and transactions therein.

81. 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.

82. 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 April 2, 2020, when, via email, Plaintiff's affiliate Dominion Harbor Group, LLC ("DHG") initially informed Defendants of Plaintiff's acquisition of the American Express patent portfolio, invited Defendants to engage in licensing discussions relating to Plaintiff's patent portfolio, and provided Defendants with access to a data room containing claim charts for patents in the portfolio, including the '671 patent. From at least April 2, 2020, to at least December 8, 2022, Plaintiff continued to reach out to Defendants, for example, via emails, calls, and the opportunity to view a data room containing claim charts. As a part of these efforts, Plaintiff further informed Defendants of the patents in the portfolio, including the '671 patent, for example, by sending a letter to Defendants on August 11, 2020, (via email).

83. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under 35 U.S.C. § 271(b), their distributors, suppliers, partners, customers, clients, divisions, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, supply, purchase, offer to sell, 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 making, 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 an infringement of the '671 patent.

84. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, suppliers, partners, customers, clients, divisions, 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 Defendants' 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/or 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 Defendants' mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., <https://www.53.com> and <https://cbios.53.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 in the United States. *See, e.g., Digital Wallets*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/digital-wallet.html> (last visited March 13, 2023) (“Digital Wallets: Make fast, secure payments right from your device.”); *Online and Mobile Banking—Now 166.7% Better*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking.html> (last visited March 13, 2023) (informing consumers of several digital payment options); *Mobile Banking at Your Fingertips*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/mobile-banking.html> (last visited March 13, 2023); *Fifth Third Contactless Debit Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023); *Fifth Third 1.67% Cash/Back Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards/fifth-third-cash-back.html> (last visited March 13, 2023); *Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth->

third/en/personal-banking/bank/debit-cards.html (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

85. 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, 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.

86. 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)

87. Plaintiff incorporates paragraphs 1 through 86 herein by reference.

88. 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.

89. 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.

90. 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.

91. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '509 patent, which includes Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing banking, credit and debit accounts and related products and services for Defendants' customers, consumers, and clients, for example, as used in mobile payments and digital wallets.

92. Defendant Fifth Third Bank directly infringes 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, for example, to or for FT Bancorp's and/or Fifth Third Bank's alter egos, agents, intermediaries, distributors, customers, divisions, subsidiaries, partners, affiliates, clients and/or consumers.

93. Defendant Fifth Third Bancorp directly infringes the '509 patent at least through its direct involvement in the activities of its subsidiaries, for example, Defendant Fifth Third Bank, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' divisions, subsidiaries, partners, and affiliates conduct activities that constitute 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. Specifically, Fifth Third Bank, as Fifth Third Bancorp's subsidiary, identifies itself, including via branding, as the entity that provides Fifth Third Bank credit and debit cards to Defendants' clients, consumers, and customers.

94. Defendant Fifth Third Bancorp is vicariously liable for this infringing conduct of its subsidiaries, for example, Defendant Fifth Third Bank, (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants Fifth Third Bancorp and Fifth Third Bank are essentially the same company. Fifth Third Bancorp has the right and ability to direct and control its subsidiaries' infringing acts and receives a direct financial benefit from their infringement. Fifth Third Bancorp and Fifth Third Bank have the right and ability to direct and control other subsidiaries' infringing acts, and each receives a direct financial benefit from their infringement.

95. Defendants also directly infringe the '509 patent via at least their own provision of credit and debit card services that implement EMV standards in mobile or contactless credit and debit card transactions. On information and belief, Defendants, via Defendant Fifth Third Bank, are the issuers of Fifth Third Bank-branded credit and debit cards offered as personal and commercial products. *See, e.g., Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

96. For instance, Defendants infringe at least claim 1 of the '509 patent via at least 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 issuers, perform and/or direct and control, including via their alter egos, agents, suppliers, affiliates, partners, divisions, and subsidiaries, the operation of these mobile or contactless payments conducted using Fifth Third Bank issued payment cards, including by provisioning the mobile devices with EMV-compliant card payment applications.

97. 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 is 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.

98. 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 April 2, 2020, when, via email, Plaintiff's affiliate Dominion Harbor Group, LLC ("DHG") initially informed Defendants of Plaintiff's acquisition of the American Express patent portfolio, invited Defendants to engage in licensing discussions relating to Plaintiff's patent portfolio, and provided Defendants with access to a data room containing claim charts for patents in the portfolio, including the '509 patent. From at least April 2, 2020, to at least December 8, 2022, Plaintiff continued to reach out to Defendants, for example, via emails, calls, and the opportunity to view a data room containing claim charts. As a part of these efforts, Plaintiff further informed Defendants of the patents in the portfolio, including the '509 patent, for example, by sending a letter to Defendants on August 11, 2020, (via email).

99. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under 35 U.S.C. § 271(b), their distributors, suppliers, partners, customers, clients, divisions, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, supply, purchase, offer to sell, 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 making, using, offering for sale, selling, and/or servicing the Accused Instrumentalities. Since at least the notice provided on the above-mentioned date, the Defendants do so with knowledge, or with willful blindness of the fact, that the induced acts constitute an infringement of the '509 patent.

100. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, suppliers, 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 Defendants' 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/or 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, videos or manuals for these products and related processes to purchasers and prospective buyers; testing Defendants' mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., <https://www.53.com> and <https://cbios.53.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 in the United States. *See, e.g., Digital Wallets*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/digital-wallet.html> (last visited March 13, 2023) (“Digital Wallets: Make fast, secure payments right from your device.”); *Online and Mobile Banking—Now 166.7% Better*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking.html>

(last visited March 13, 2023) (informing consumers of several digital payment options); *Mobile Banking at Your Fingertips*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/mobile-banking.html> (last visited March 13, 2023); *Fifth Third Contactless Debit Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023); *Fifth Third 1.67% Cash/Back Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards/fifth-third-cash-back.html> (last visited March 13, 2023); *Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

101. 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.

102. 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)

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

104. 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.

105. 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.

106. 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.

107. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '369 patent, which includes Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing banking, credit and debit accounts and related products and services for Defendants' customers, consumers, and clients, for example, as used in mobile payments and digital wallets.

108. Defendant Fifth Third Bank directly infringes 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, for example, to or for FT Bancorp's and/or Fifth Third Bank's alter egos, agents, intermediaries, distributors, customers, divisions, subsidiaries, partners, affiliates, clients and/or consumers.

109. Defendant Fifth Third Bancorp directly infringes the '369 patent at least through its direct involvement in the activities of its subsidiaries, for example, Defendant Fifth Third Bank, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' divisions, subsidiaries, partners, and affiliates conduct activities that constitute 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. Specifically, Fifth Third Bank, as Fifth Third Bancorp's subsidiary, identifies itself, including via branding, as the entity that provides Fifth Third Bank credit and debit cards to Defendants' clients, consumers, and customers.

110. Defendant Fifth Third Bancorp is vicariously liable for this infringing conduct of its subsidiaries, for example, Defendant Fifth Third Bank, (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants Fifth Third Bancorp and Fifth Third Bank are essentially the same company. Fifth Third Bancorp has the right and ability to direct and control its subsidiaries' infringing acts and receives a direct financial benefit from their infringement. Fifth Third Bancorp and Fifth Third Bank have the right and ability to direct and control other subsidiaries' infringing acts, and each receives a direct financial benefit from their infringement.

111. Defendants also directly infringe the '369 patent via at least their own provision of debit card services that implement EMV standards in mobile or contactless debit card transactions.

On information and belief, Defendants are the issuers of Fifth Third Bank branded credit and debit cards offered as personal and commercial products. *See, e.g., Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

112. For example, Defendants infringe at least claim 1 of the '369 patent via at least 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 the physical credit or debit card of Fifth Third Bank. Defendants, as the payment card issuers, perform and/or direct and control, including via their alter egos, suppliers, agents, affiliates, partners, divisions and subsidiaries, the operation of these mobile or contactless payments conducted using Fifth Third Bank issued payment cards.

113. 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 is 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.

114. 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 April 2, 2020, when, via email, Plaintiff's affiliate Dominion Harbor Group, LLC ("DHG") initially informed Defendants of Plaintiff's acquisition of the American Express patent portfolio, invited Defendants to engage in licensing discussions relating to Plaintiff's patent portfolio, and provided Defendants with access to a data room containing claim charts for patents in the portfolio, including the '369 patent. From at least April 2, 2020, to at least December 8, 2022, Plaintiff continued to reach out to Defendants, for example, via emails, calls, and the opportunity to view a data room containing claim charts. As a part of these efforts, Plaintiff further informed Defendants of the patents in the portfolio, including the '369 patent, for example, by sending a letter to Defendants on August 11, 2020, (via email).

115. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under 35 U.S.C. § 271(b), their distributors, suppliers, partners, customers, divisions, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, supply, purchase, offer to sell, 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 making, 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 an infringement of the '369 patent.

116. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, suppliers, partners, customers, divisions, 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 Defendants' 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/or 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, videos or manuals for these products and related processes to purchasers and prospective buyers; testing Defendants' mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., <https://www.53.com> and <https://cbios.53.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 in the United States. *See, e.g., Digital*

*Wallets*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/digital-wallet.html> (last visited March 13, 2023) (“Digital Wallets: Make fast, secure payments right from your device.”); *Online and Mobile Banking—Now 166.7% Better*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking.html> (last visited March 13, 2023) (informing consumers of several digital payment options); *Mobile Banking at Your Fingertips*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/mobile-banking.html> (last visited March 13, 2023); *Fifth Third Contactless Debit Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023); *Fifth Third 1.67% Cash/Back Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards/fifth-third-cash-back.html> (last visited March 13, 2023); *Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

117. 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.

118. 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)

119. Plaintiff incorporates paragraphs 1 through 118 herein by reference.

120. 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.

121. 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.

122. 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.

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

for Defendants' customers, consumers, and clients, for example, as used in mobile payments and digital wallets.

124. Defendant Fifth Third Bank directly infringes 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, for example, to or for FT Bancorp's and/or Fifth Third Bank's alter egos, agents, intermediaries, distributors, customers, divisions, subsidiaries, partners, affiliates, clients and/or consumers.

125. Defendant Fifth Third Bancorp directly infringes the '985 patent at least through its direct involvement in the activities of its subsidiaries, for example, Defendant Fifth Third Bank, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' divisions, subsidiaries, partners, and affiliates conduct activities that constitute 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. Specifically, Fifth Third Bank, as Fifth Third Bancorp's subsidiary, identifies itself, including via branding, as the entity that provides Fifth Third Bank credit and debit cards to Defendants' clients, consumers, and customers.

126. Defendant Fifth Third Bancorp is vicariously liable for this infringing conduct of its subsidiaries, for example, Defendant Fifth Third Bank, (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants Fifth Third Bancorp and Fifth Third Bank are essentially the same company. Fifth Third Bancorp has the right and ability to direct and control its subsidiaries' infringing acts and receives a direct financial benefit from their infringement. Fifth Third Bancorp and Fifth Third Bank have the right and ability to direct and

control other subsidiaries' infringing acts, and each receives a direct financial benefit from their infringement.

127. Defendants also directly infringe the '985 patent via at least their own provision of credit and debit card services that implement EMV standards in mobile or contactless credit and debit card transactions. On information and belief, Defendants are the issuers of Fifth Third Bank-branded credit and debit cards offered as personal and commercial products. *See, e.g., Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards.html> (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

128. For example, Defendants infringe at least claim 1 of the '985 patent via at least 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, as the payment card issuers, perform and/or direct and control, including via their alter egos, agents, suppliers, affiliates, partners, and subsidiaries, the operation of these mobile payments conducted using Fifth Third Bank issued payment cards. For example, Fifth Third Bank's 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.

129. 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 is 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.

130. 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 April 2, 2020, when, via email, Plaintiff's affiliate Dominion Harbor Group, LLC ("DHG") initially informed Defendants of Plaintiff's acquisition of the American Express patent portfolio, invited Defendants to engage in licensing discussions relating to Plaintiff's patent portfolio, and provided Defendants with access to a data room containing claim charts for patents in the portfolio, including the '985 patent. From at least April 2, 2020, to at least December 8, 2022, Plaintiff continued to reach out to Defendants, for example, via emails, calls, and the opportunity to view a data room containing claim charts. As a part of these efforts, Plaintiff further informed Defendants of the patents in the portfolio, including the '985 patent, for example, by sending a letter to Defendants on August 11, 2020, (via email).

131. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under 35 U.S.C. § 271(b), their distributors, suppliers, partners, customers, divisions, clients, subsidiaries, and/or consumers and also other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, supply purchase, offer to sell, 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 making, 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 an infringement of the '985 patent.

132. On information and belief, Defendants intend to cause, and have taken affirmative steps to induce, infringement by distributors, suppliers, 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 Defendants' 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/or 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, videos or manuals for these products and related processes to purchasers and prospective buyers; testing Fifth Third Bank’s mobile and contactless payment features in the Accused Instrumentalities; providing websites (e.g., <https://www.53.com> and <https://cbios.53.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 in the United States. *See, e.g., Digital Wallets*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/digital-wallet.html> (last visited March 13, 2023) (“Digital Wallets: Make fast, secure payments right from your device.”); *Online and Mobile Banking—Now 166.7% Better*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking.html> (last visited March 13, 2023) (informing consumers of several digital payment options); *Mobile Banking at Your Fingertips*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/online-mobile-banking/mobile-banking.html> (last visited March 13, 2023); *Fifth Third Contactless Debit Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/debit-cards/contactless-debit-card.html> (last visited March 13, 2023); *Fifth Third 1.67% Cash/Back Card*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards/fifth-third-cash-back.html> (last visited March 13, 2023); *Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying credit card products provided by Fifth Third Bank, National Association) (last visited March 13, 2023); *Fifth Third Bank Debit Cards*, FIFTH THIRD BANK, <https://www.53.com/content/fifth->

third/en/personal-banking/bank/debit-cards.html (identifying debit card products provided by Fifth Third Bank) (last visited March 13, 2023).

133. 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.

134. 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. 6,886,101)

135. Plaintiff incorporates paragraphs 1 through 134 herein by reference.

136. Plaintiff is the assignee of the '101 patent, entitled "Privacy Service," with ownership of all substantial rights in the '101 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

137. The '101 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '101 patent issued from U.S. Patent Application No. 10/283,434.

138. Defendants have and continue to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '101 patent in this District and elsewhere in Texas and the United States.

139. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '101 patent, which includes Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing banking, credit and debit accounts and related products and services for Defendants' customers, consumers, and clients, for example, as used in mobile payments and digital wallets.

140. Defendant Fifth Third Bank directly infringes the '101 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 '101 patent, for example, to or for FT Bancorp's and/or Fifth Third Bank's alter egos, agents, intermediaries, distributors, customers, divisions, subsidiaries, partners, affiliates, clients and/or consumers.

141. Defendant Fifth Third Bancorp directly infringes the '101 patent at least through its direct involvement in the activities of its subsidiaries, for example, Fifth Third Bank, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' divisions, subsidiaries, partners, and affiliates conduct activities that constitute direct infringement of the '101 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities.

142. Defendant Fifth Third Bancorp is vicariously liable for this infringing conduct of its subsidiaries, for example, Defendant Fifth Third Bank, (under both the alter ego and agency

theories) because, as an example and on information and belief, Defendants Fifth Third Bancorp and Fifth Third Bank are essentially the same company. Fifth Third Bancorp has the right and ability to direct and control its subsidiaries' infringing acts and receives a direct financial benefit from their infringement. Fifth Third Bancorp and Fifth Third Bank have the right and ability to direct and control other subsidiaries' infringing acts, and each receives a direct financial benefit from their infringement.

143. As an example, Defendants infringe at least claim 1 of the '101 patent via at least their Accused Instrumentalities that utilize methods that facilitate self audit of a user's privacy data. Defendants provide, for example, account creation and registration processes to consumers allowing users to sign up for online banking and online bill pay services via Defendants' website, <https://www.53.com/>. The enrollment process includes prompts from Defendants' website for a user's privacy data which is stored on web servers. Users are allowed to review and change their privacy data utilizing the user profile section of their online account or, in the alerts section, the user can change communications preferences, including the types of alerts the user wishes to receive. Defendants, as the owners and operators of the Fifth Third website, perform and/or direct and control, including via their alter egos, suppliers, agents, affiliates, partners, and subsidiaries, the operation of these self-auditing processes conducted using Defendants' online interfaces with users.

144. The Accused Instrumentalities implement the method of claim 1 of the '101 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 for facilitating a self audit of a first privacy data associated with a first user and a second privacy data associated with a second user. The method includes the

following steps: collecting the first privacy data associated with the first user; storing the first privacy data in a central database; collecting the second privacy data associated with the second user; storing the second privacy data in the central database; facilitating the first user to self audit the first privacy data, wherein the first user is restricted from auditing the second privacy data, and wherein the self audit comprises: retrieving audit information for the stored first privacy data; reviewing the retrieved audit information; and changing a first privacy policy and the first privacy data associated with the first user based on the first user's review of the audit information; and facilitating the second user to self audit the second privacy data, wherein the second user is restricted from auditing the first privacy data, and wherein the self audit comprises: retrieving audit information for the stored second privacy data; reviewing the retrieved audit information; and changing a second privacy policy and the second privacy data associated with the second user based on the second user's review of the audit information.

145. At a minimum, Defendants have known of the '101 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '101 patent since at least April 2, 2020, by virtue of notice of the American Express patent portfolio. On this date, via email, Plaintiff's affiliate Dominion Harbor Group, LLC ("DHG") initially informed Defendants of Plaintiff's acquisition of the American Express patent portfolio, invited Defendants to engage in licensing discussions relating to Plaintiff's patent portfolio, and provided Defendants with access to a data room containing claim charts for patents in the portfolio. The American Express patent portfolio includes the '101 patent. From at least April 2, 2020, to at least December 8, 2022, Plaintiff continued to reach out to Defendants, for example, via emails, calls, and the opportunity to view a data room containing claim charts. As a part of these efforts, Plaintiff further informed Defendants of the patents in the portfolio.

146. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under 35 U.S.C. § 271(b), their distributors, suppliers, partners, customers, clients, subsidiaries, consumers, and/or other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, supply, purchase, offer to sell, sell, use, and service the Accused Instrumentalities that include or are made using all of the limitations of one or more claims of the '101 patent to directly infringe one or more claims of the '101 patent by making, 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 an infringement of the '101 patent.

147. 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; creating online interfaces for users to securely access their Fifth Third accounts and self audit their privacy data via their communication devices; 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, videos, or manuals for these products and related processes to purchasers and prospective buyers; providing websites (e.g., <https://www.53.com> and <https://cbios.53.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 computer safety and fraud protection services, in the United States. *See, e.g., Tips to Keep Data Secure When Using Digital Banking*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/financial-insights/personal/fraud-protection/keep-digital-data-secure-when-using-digital-banking.html> (last visited March 14, 2023) (providing links to the Fifth Third Momentum® Checking website, among others); *Login*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/login.html/> (last visited March 15, 2023) (providing instructions for “Existing Users” to use their “customer User ID” and “associated Online Banking password” and providing instructions for “First Time Users” indicating that they “will be prompted to create an exclusive password for Online Banking”).

148. On information and belief, despite having knowledge of the '101 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '101 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '101 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.

149. 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 VI**

(INFRINGEMENT OF U.S. PATENT NO. 7,904,386)

150. Plaintiff incorporates paragraphs 1 through 149 herein by reference.

151. Plaintiff is the assignee of the '386 patent, entitled "System, Method, and Computer Program Product for Saving and Investing Through Use of Transaction Cards," with ownership of all substantial rights in the '386 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

152. The '386 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '386 patent issued from U.S. Patent Application No. 11/493,662.

153. Defendants have and continue to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '386 patent in this District and elsewhere in Texas and the United States.

154. On information and belief, Defendants design, develop, manufacture, distribute, sell, offer for sale, and use the Accused Instrumentalities that infringe the '386 patent, which includes Defendants' offering, issuing, providing, registering, facilitating, maintaining, transacting, authenticating, and processing banking, credit and debit accounts and related products and services for Defendants' customers, consumers, and clients, for example, as used in mobile payments, digital wallets, and cash back rewards programs.

155. Defendant Fifth Third Bank directly infringes the '386 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 '386 patent, for example, to or for FT Bancorp's and/or Fifth Third Bank's alter

egos, agents, intermediaries, distributors, customers, divisions, subsidiaries, partners, affiliates, clients and/or consumers.

156. Defendant Fifth Third Bancorp directly infringes the '386 patent at least through its direct involvement in the activities of its subsidiaries, for example, Fifth Third Bank, including by selling, offering for sale, and servicing the Accused Instrumentalities in the U.S. directly for Defendants. On information and belief, Defendants' divisions, subsidiaries, partners, and affiliates conduct activities that constitute direct infringement of the '386 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or using those Accused Instrumentalities. Defendant Fifth Third Bancorp is vicariously liable for this infringing conduct of its subsidiaries, for example, Defendant Fifth Third Bank, (under both the alter ego and agency theories) because, as an example and on information and belief, Defendants Fifth Third Bancorp and Fifth Third Bank are essentially the same company. Fifth Third Bancorp has the right and ability to direct and control its subsidiaries' infringing acts and receives a direct financial benefit from their infringement. Fifth Third Bancorp and Fifth Third Bank have the right and ability to direct and control other subsidiaries' infringing acts, and each receives a direct financial benefit from their infringement.

157. As an example, Defendants infringe at least claim 1 of the '386 patent via at least their Accused Instrumentalities that utilize methods that facilitate cash back deposits. Defendants provide and/or use, for example, an account issuing system to automatically deposit cash back funds from a transaction account into a deposit account in response to verifying criteria is met and verifying a predetermined bill payment status is met. Defendants provide and/or use the account issuing system for depositing funds into the deposit account through use of the transaction account. Defendants use the account issuing system to associate the transaction account with the deposit account, and the account issuing system includes a processor and non-transitory memory.

Defendants use the account issuing system to store an amount of funds to be deposited from the transaction account into the deposit account based on a cash back amount established for the transaction account. Defendants use the account issuing system to verify criteria is met and to verify a predetermined bill payment status is met. Defendants, as the owners and operators of the account issuing system, perform and/or direct and control, including via their alter egos, suppliers, agents, affiliates, partners, and subsidiaries, the operation of these processes conducted using Defendants' account issuing system.

158. The Accused Instrumentalities implement the method of claim 1 of the '386 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 includes the following steps: associating, by an account issuing system for depositing funds into a deposit account through use of a transaction account, the transaction account with the deposit account, wherein the account issuing system includes a processor and non-transitory memory; storing, by the account issuing system, an amount of funds to be deposited from the transaction account into the deposit account based on a cash back amount established for the transaction account; verifying, by the account issuing system, that criteria for receiving cash back from the transaction account issuer is met; verifying, by the account issuing system, the transaction account has a predetermined bill payment status; and automatically depositing, by the account issuing system, the cash back amount of funds from the transaction account into the deposit account, in response to both (1) the verifying the criteria is met and (2) the verifying the predetermined bill payment status is met.

159. At a minimum, Defendants have known of the '386 patent at least as early as the filing date of this complaint. In addition, Defendants have known about the '386 patent since at

least April 2, 2020, by virtue of notice of the American Express patent portfolio. On this date, via email, Plaintiff's affiliate Dominion Harbor Group, LLC ("DHG") initially informed Defendants of Plaintiff's acquisition of the American Express patent portfolio, invited Defendants to engage in licensing discussions relating to Plaintiff's patent portfolio, and provided Defendants with access to a data room containing claim charts for patents in the portfolio. The American Express patent portfolio includes the '386 patent. From at least April 2, 2020, to at least December 8, 2022, Plaintiff continued to reach out to Defendants, for example, via emails, calls, and the opportunity to view a data room containing claim charts. As a part of these efforts, Plaintiff further informed Defendants of the patents in the portfolio.

160. On information and belief, since at least the above-mentioned date when Defendants were on notice of their infringement, Defendants have actively induced, under 35 U.S.C. § 271(b), their distributors, suppliers, partners, customers, clients, subsidiaries, consumers and/or other payment platforms (e.g., Samsung and Google mobile wallets) that distribute, supply, purchase, offer to sell, sell, use, and service the Accused Instrumentalities that include or are made using all of the limitations of one or more claims of the '386 patent to directly infringe one or more claims of the '386 patent by making, 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 an infringement of the '386 patent.

161. 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;

systems to automatically deposit cash back funds from a transaction account into a deposit account in response to verifying criteria is met and verifying a predetermined bill payment status is met; 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, videos, or manuals for these products and related processes to purchasers and prospective buyers; testing Defendants' implementations of the Accused Instrumentalities; and/or providing websites (e.g., <https://www.53.com> and <https://cbios.53.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 in the United States. *See, e.g., Fifth Third Bank Credit Card Options*, FIFTH THIRD BANK, <https://www.53.com/content/fifth-third/en/personal-banking/bank/credit-cards.html> (identifying and marketing cash back credit card products provided by Fifth Third Bank) (last visited March 13, 2023).

162. On information and belief, despite having knowledge of the '386 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '386 patent, Defendants have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendants' infringing activities relative to the '386 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.

163. 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**

164. 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.

165. 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**

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

### **PRAYER FOR RELIEF**

167. 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: March 20, 2023

Respectfully submitted,

/s/ Terry A. Saad

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Terry A. Saad (lead attorney)

Texas Bar No. 24066015

E-mail: tsaad@bosfirm.com

Jeffrey R. Bragalone

Texas Bar No. 02855775

E-mail: jbragalone@bosfirm.com

Marcus Benavides

Texas Bar No. 24035574

E-mail: mbenavides@bosfirm.com

Brandon V. Zuniga

Texas Bar no. 24088720

E-mail: bzuniga@bosfirm.com

Mark M.R. Douglass

Texas Bar No. 24131184

E-mail: mdouglass@bosfirm.com

**BRAGALONE OLEJKO SAAD PC**

901 Main Street

Suite 3800

Dallas, Texas 75202

Telephone: (214) 785-6670

Facsimile: (214) 785-6680

**ATTORNEYS FOR PLAINTIFF  
LIBERTY PEAK VENTURES,  
LLC**