

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

MOBILEPAY LLC,

Plaintiff

v.

**BANK OF AMERICA
MERCHANT SERVICES, LLC,**

**BANK OF AMERICA
NATIONAL ASSOCIATION,**

AND

FIRST DATA CORPORATION,

Defendants

Case No. 6:18-cv-00321

JURY TRIAL DEMANDED

AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff MobilePay LLC (“Plaintiff” or “MobilePay”) hereby asserts the following claims for patent infringement against Defendant Bank of America Merchant Services, LLC (“BAMS”), Bank of America National Association (“BOA”), and First Data Corporation (“First Data”) (collectively “Defendants”), and alleges, on information and belief, as follows:

THE PARTIES

1. MobilePay is a limited liability company organized and existing under the laws of the Texas with its principal place of business at 17330 Preston Road, Ste 200, Dallas, Texas 75252.

2. Defendant Bank of America Merchant Services, LLC is a limited liability company organized under the laws of Delaware.

3. Defendant Bank of America is a national banking corporation organized and existing under the laws of the United States.

4. First Data Corporation is a corporation organized and existing under the laws of the State of Delaware.

JURISDICTION AND VENUE

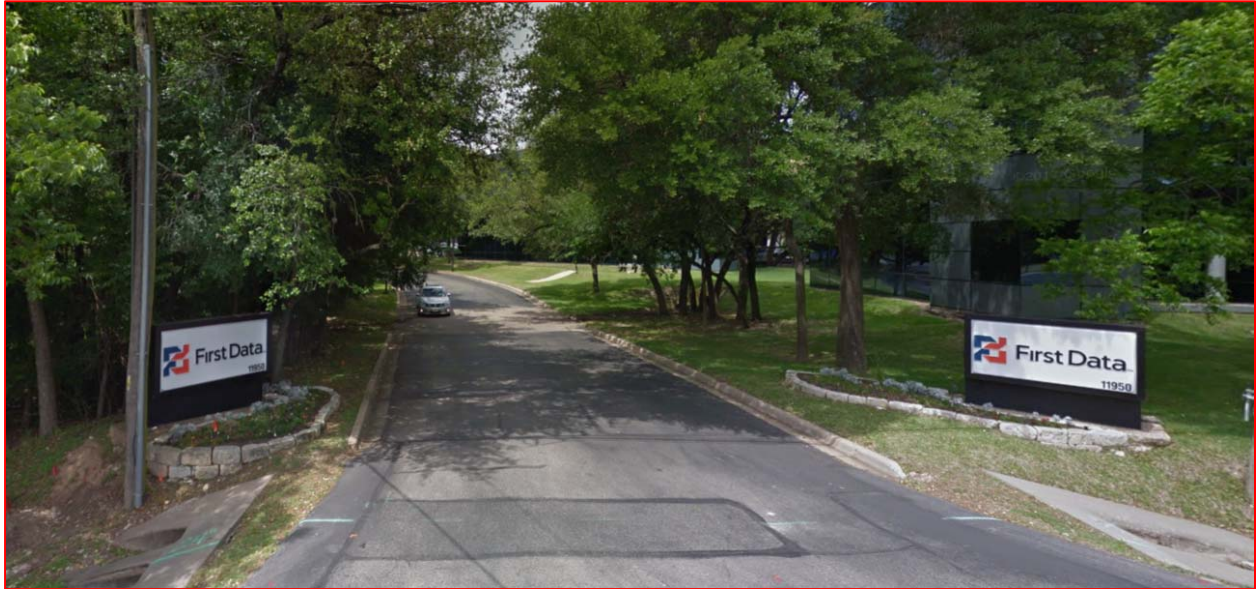
5. This action arises under the patent laws of the United States, 35 U.S.C. § 1, *et seq.* This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

6. On information and belief, BOA maintains regular and established places of business in Austin, Texas at 3600 N Capital of Texas Hwy, Austin, Texas 78746.

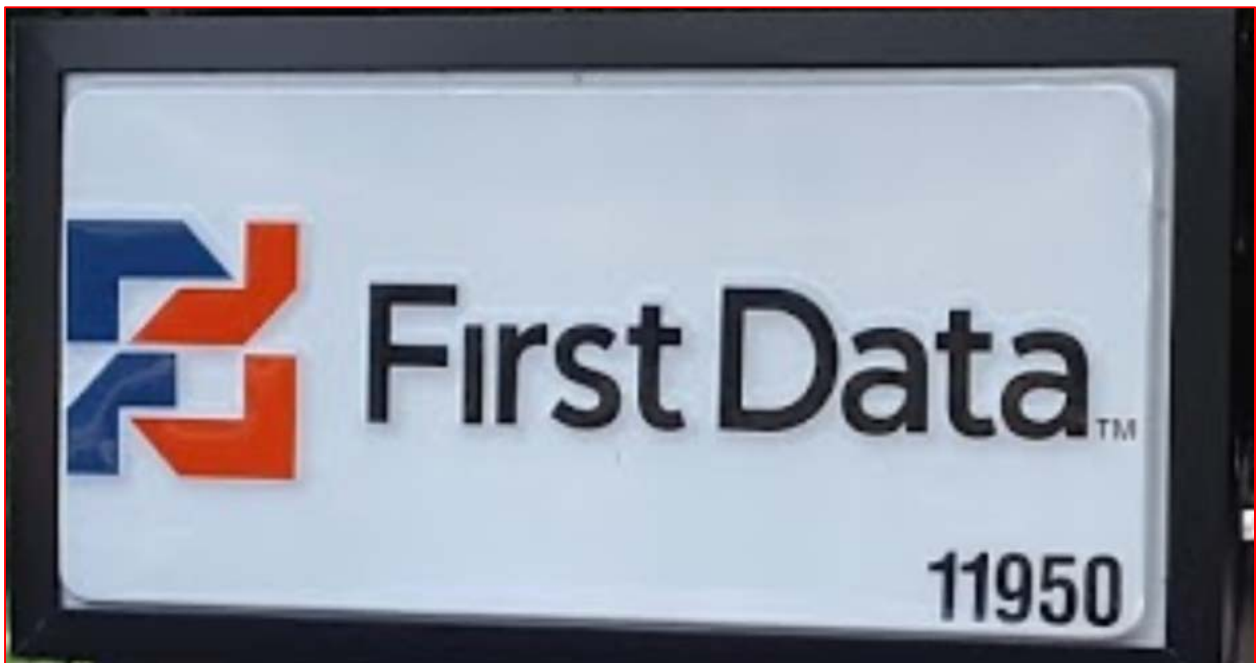


<https://www.google.com/maps/place/3600+N+Capital+of+Texas+Hwy,+Austin,+TX+78746/@30.3347321,-97.8076407,3a,75y,307.81h,96.98t/data=!3m6!1e1!3m4!1silyQV4tdf3LLcWUQTgqwUg!2e0!7i13312!8i6656!4m5!3m4!1s0x865b351f2d514a61:0xf0e1e3df72a0e3d1!8m2!3d30.3348505!4d-97.8082031>

On information and belief, First Data maintains regular and established places of business in Austin, Texas at 11950 Jollyville Road, Austin, Texas 78759.



https://www.google.com/maps/@30.4251413,-97.7576092,3a,75y,242.54h,75.5t/data=!3m6!1e1!3m4!1sG5PheU_XPPaJ6MsnkWWddA!2e0!7i13312!8i6656



7. The “TM” indicated on the signage leading to First Data’s offices in Austin identifies “First Data” as a registered trademark.
8. First Data is the assigned owner of the “First Data” trademark registration.

The screenshot shows the USPTO TESS search results for the trademark 'FIRST DATA'. The page header includes the USPTO logo and navigation links. The search results are displayed in a table format with various fields and their corresponding values.


Field	Value
Word Mark	FIRST DATA
Goods and Services	IC 036. US 100 101 102. G & S: Check verification, credit recovery and collection services; check authorization services; check acceptance services; che authorization services; payment transaction processing via form factor devices employing contactless or magnetic stripe technologies; electronic process transmission of bill payment data; bill payment services allowing consumers to pay for goods and services by credit, debit or stored value card or check a remittance and retention services; financial transaction capture, settlement, reconciliation and reporting; chargeback handling and payment authentication implementation and management of online banking systems for financial institutions; account services, namely, providing information from databases and providing interactive databases in the field of credit card management and authorization; providing an online inventory management system; providing an an online computer database which enables merchants to access and download check, credit card, debit card, stored value card and electronic benefits t transactions and check authorizations; providing online interactive computer databases and online-provider services enabling online authentication and o namely, currency conversion services that allow the customer to pay for goods in the currency of their choice and allow the merchant to receive payment services processing industry used to respond to consumer financial activities; issuing credit, debit, and stored value cards; customized financial statemen healthcare card processing solutions, namely, an account administration and benefits tracking system that enables multiple fund balances for medical ben identification card; and financial services for the healthcare industry, namely, validation of charges for insurance claims. FIRST USE: 20080501. FIRST U
Standard Characters Claimed	
Mark Drawing Code	(4) STANDARD CHARACTER MARK
Serial Number	88171193
Filing Date	October 26, 2018
Current Basis	1A
Original Filing Basis	1A
Owner	(APPLICANT) First Data Corporation CORPORATION DELAWARE 5565 Glenridge Connector NE, Suite 2000 Atlanta GEORGIA 30342
Attorney of Record	James H. Johnson, Jr.
Prior Registrations	1872025;1912728;1974381
Type of Mark	SERVICE MARK
Register	PRINCIPAL

<http://tmsearch.uspto.gov/bin/showfield?f=doc&state=4809:24k9mr.2.2>

9. On information and belief, BAMS solicits, recruits, and hires employees to work in this judicial district, including Austin, San Antonio, El Paso, and McAllen, Texas.

Sign in (/talentcommunity/login/?returnurl=/talentcommunity/profile/&locale=en_US)

[/](#)

Bank of America 

Merchant Services

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VP, Data Scientist- New York, Austin, TX, Atlanta, GA; Charlotte, NC

[Apply now](#)

Date: Oct 9, 2018
Location: Atlanta, GA, US, 21742
Company: Bank of America Merchant Services

Ever wonder what it takes for a business to process credit card payments? Interested in helping small business owners do more with their point-of-sale systems? At **Bank of America Merchant Services**, we'll help you become a payments expert. We'll show you the intricacies of payment processing, eCommerce and security solutions so that you can become a trusted partner for a variety of small businesses.

Every day, we deliver innovative solutions that help small business owners across the U.S. better serve customers, manage operations, accept digital payments and ultimately grow their businesses. Formed in 2009 by powerhouse brands Bank of America and First Data, we've grown to process more than 16 billion transactions at approximately 529,000 merchant locations in 2017 alone. We're a leader with deep expertise and momentum.

Bank of America Merchant Services is an Equal Opportunity and Affirmative Action Employer of Females, Minorities, Veterans and Disabled.

The Data Science Analytics Manager is a senior contributor and member of the Insights team within the Enterprise Analytics Group. This position will be reporting to the Head of Insights for Bank of America Merchant Services. This role is responsible for working across functional areas (product, marketing, pricing, etc.) to provide market and competitive intelligence, deep analytical modeling, and synthesis of stories to drive adoption of recommendations. The person will provide up-to-date movements in the merchant services market area as well as understand trends in the industry.

Essential Functions

- Partner across Enterprise to integrate competitive intelligence
- Identify, evaluate and obtain 3rd party information, data, and market news
- Synthesize and distribute competitive insights to Executive Team members
- Identify and size key risks and opportunities based on Competitive Insights
- Develop communication plan that is effective to migrate competitive insights into revenue driving actions

Experience

- 7+ years in financial services required
- 3+ years in card services preferred
- 3+ in market insights / competitive intelligence preferred
- Bachelor's Degree in quantitative field (e.g. Statistics, Engineering, Computer Science, or a related field) required
- Advanced Degree (e.g. MS, MBA, PhD) or course work in quantitative field strongly preferred

Skills

- Strong Proficiency in SQL, Excel, PowerPoint, and Tableau
- Excellent data visualization capabilities
- Strong written and verbal communication skills
- Familiarity with statistical modeling and big data environments
- Advanced data intuition
- Ability to handle/manage multiple high priority projects

Tools

- Microsoft Office Suite products
- Data Query software tools (SQL/SAS, Tableau)
- Salesforce.com and other data portal querying
- Statistical Software (SAS, R, or related software)
- Big Data platform skills a plus

Physical Requirements

- Standard office environment: Work typically involves close visual acuity on a computer to access, view, read, prepare and analyze data and other written communications.

Travel

- Approximately {10%} travel may be required to conference and/or training and/or client meetings

This is not necessarily an exhaustive list of all responsibilities, performance standards, measurements, skills or requirements associated with this job. While this is intended to be an accurate reflection of the current job, management reserves the right to revise the job or to require other or different tasks to be performed when circumstances change.

5330
#LI-BD1

Bank of America Merchant Services ensures equal employment opportunity without discrimination or harassment on the basis of race, color, creed, religion, national origin, alienage or citizenship status, age, sex, sexual orientation, gender identity or expression, marital or domestic/civil partnership status, disability, protected veteran status, genetic information, or any other basis protected by law.


The employer will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. However, employees who have access to the compensation information of other employees or applicants as a part of their essential job functions cannot disclose the pay of other employees or applicants to individuals who do not otherwise have access to compensation information, unless the disclosure is (a) in response to a formal complaint or charge, (b) in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or (c) consistent with the employer's legal duty to furnish information.

Job Segment: Database, Developer, Banking, Bank, SQL, Technology, Finance

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[Privacy Policy \(/sites/bams/docs/Bank-of-America-Merchant-Services-Online-Privacy-Policy-Updated.pdf\)](#)



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Send me alerts every days [Create Alert](#)

VP, Data Scientist - New York, NY; Austin, TX; Atlanta, GA; Charlotte, NC





Date: Jan 4, 2019
Company: Bank of America Merchant Services
Sorry, this position has been filled.

<https://careers.bams.bankofamerica.com/job/Dallas-AVP%2CInside-Sales-Specialist-Client-Managed-Dallas%2CTX-1-TX-75244/468445500/>



Lacey Thomas • 2nd
Merchant Specialist at Bank of America Merchant Services
Austin, Texas


 Bank of America Merchant Services
 Colorado State University
 See contact info
 500+ connections

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I am a Financial Executive with broad experience in all aspects of Banking, Merchant Banking and Financial Sales & Management. I have direct experience with Merchant Consulting, Small Business Banking, and Business consulting, I am interested in assisting Companies, as well as Individual Merchants, analyze their current financial positions and recommend cost saving measures for their Merchant Services. I also offer industry-leading technology solutions for payment processing through a personal, consultative and hands-on approach.

[Show less](#) ^

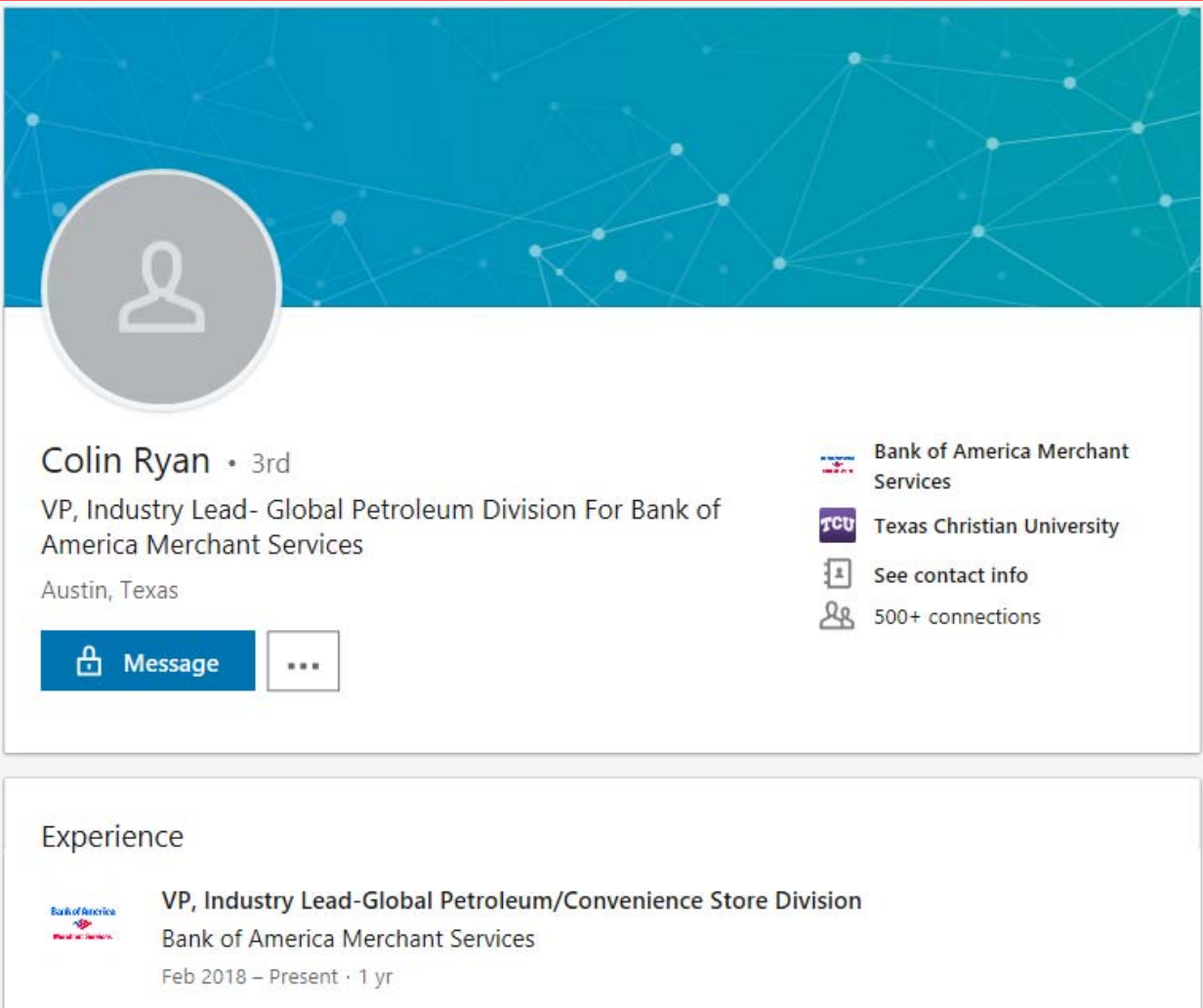
Experience

 **Merchant Specialist**
Bank of America Merchant Services
Feb 2014 – Present · 5 yrs
Austin, TX

I am proud to be a part of Bank of America Merchant Services, one of the nations largest Credit Card Processors, I specialize in creating affordable solutions for Small to Medium sized businesses, including Credit Card processing, Electronic Check Acceptance, Gift Card and Loyalty Solutions, as well as the sale and lease of state of the art Terminals and Point of Sale equipment. I also specialize in training new hires and helping with all sides of operations.

PLATINUM CLUB 2010 AND 2017

<https://www.linkedin.com/in/lacey-thomas-084b4145/>



The image shows a LinkedIn profile card for Colin Ryan. The header features a teal background with a white network diagram. On the left is a circular profile picture placeholder with a person icon. Below the header, the name "Colin Ryan" is followed by "3rd" (degree). The current position is "VP, Industry Lead- Global Petroleum Division For Bank of America Merchant Services" in Austin, Texas. A blue "Message" button with a lock icon and a three-dot menu are visible. To the right, a list of affiliations includes "Bank of America Merchant Services" and "Texas Christian University" (TCU). Below the affiliations are options to "See contact info" and "500+ connections". The "Experience" section lists the current role at Bank of America Merchant Services from February 2018 to the present (1 year).

Colin Ryan • 3rd
VP, Industry Lead- Global Petroleum Division For Bank of America Merchant Services
Austin, Texas


Bank of America Merchant Services
TCU Texas Christian University
See contact info
500+ connections


Message

Experience

Bank of America Merchant Services
VP, Industry Lead-Global Petroleum/Convenience Store Division
Bank of America Merchant Services
Feb 2018 – Present · 1 yr

<https://www.linkedin.com/in/colin-ryan-05754b4/>







Robin White • 2nd


Bank of America Merchant Services Consultant - Central Texas


Austin, Texas Area

[Connect](#) [Message](#) [More...](#)

 Bank of America Merchant Services


 The University of Texas at Austin

 See contact info

 247 connections

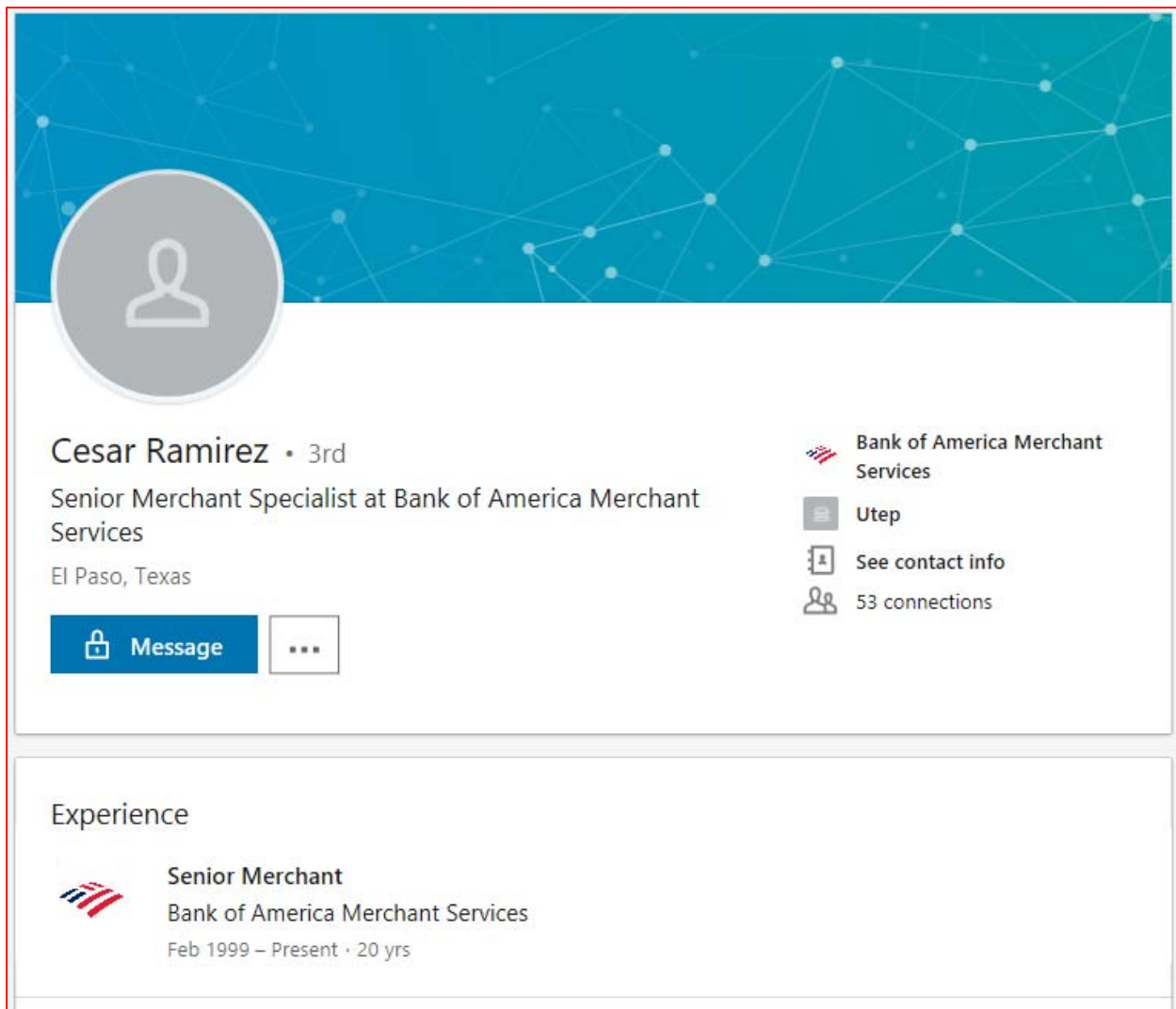
I have over 10 years of payment processing industry experience, particularly in merchant services sales and operations, ACH, and payment security and compliance. I am a trusted cash flow and payment processes analyst and advisor, delivering tailored processing solutions to companies of all sizes and industries, and yielding increased efficiencies and savings.

Experience

 **VP , Business Consultant III**
Bank of America Merchant Services
Apr 2017 – Present · 1 yr 10 mos
Austin, Texas Area





- Responsible for company's product and service sales to commercial and business banking clients throughout Central Texas.
- Ensure customers' needs and objectives are met by leveraging our team of experts to address each client's unique payment environment.
- Assist in all aspects of new business on-boarding and remain involved as each client grows and expands.
- Support company's Account Management teams; assist clients with new product implementations, and any additional tasks to ensure an excellent customer experience.



<https://www.linkedin.com/in/robinrwhite/>




The image shows a LinkedIn profile card for Cesar Ramirez. The header features a teal background with a white network diagram. A circular profile picture placeholder is on the left. The main text identifies Cesar Ramirez as a 3rd-degree connection, Senior Merchant Specialist at Bank of America Merchant Services, located in El Paso, Texas. To the right, there are four icons with corresponding text: Bank of America Merchant Services, Utep, See contact info, and 53 connections. Below this is a blue 'Message' button with a lock icon and a three-dot menu icon. The 'Experience' section below lists 'Senior Merchant' at 'Bank of America Merchant Services' from February 1999 to the present, a 20-year tenure.

Cesar Ramirez • 3rd
Senior Merchant Specialist at Bank of America Merchant Services
El Paso, Texas


 Bank of America Merchant Services
 Utep
 See contact info
 53 connections


 Message 

Experience

 **Senior Merchant**
Bank of America Merchant Services
Feb 1999 – Present · 20 yrs

<https://www.linkedin.com/in/cesar-ramirez-5036357a/>









Natalie Greco-Gonzalez • 3rd


AVP- Business Consultant Merchant Services - Platinum Club Winner. Bank of America Merchant Services


San Antonio, Texas

 **Message** 


 R&N Towing LLC


 The University of Texas at San Antonio

 See contact info

 128 connections

Go getter! I am a very competitive person and push myself hard to make sure my job and my business are always doing well. As well as juggling being a mother and a wife!

 business card



AVP - Business Consultant Merchant Services

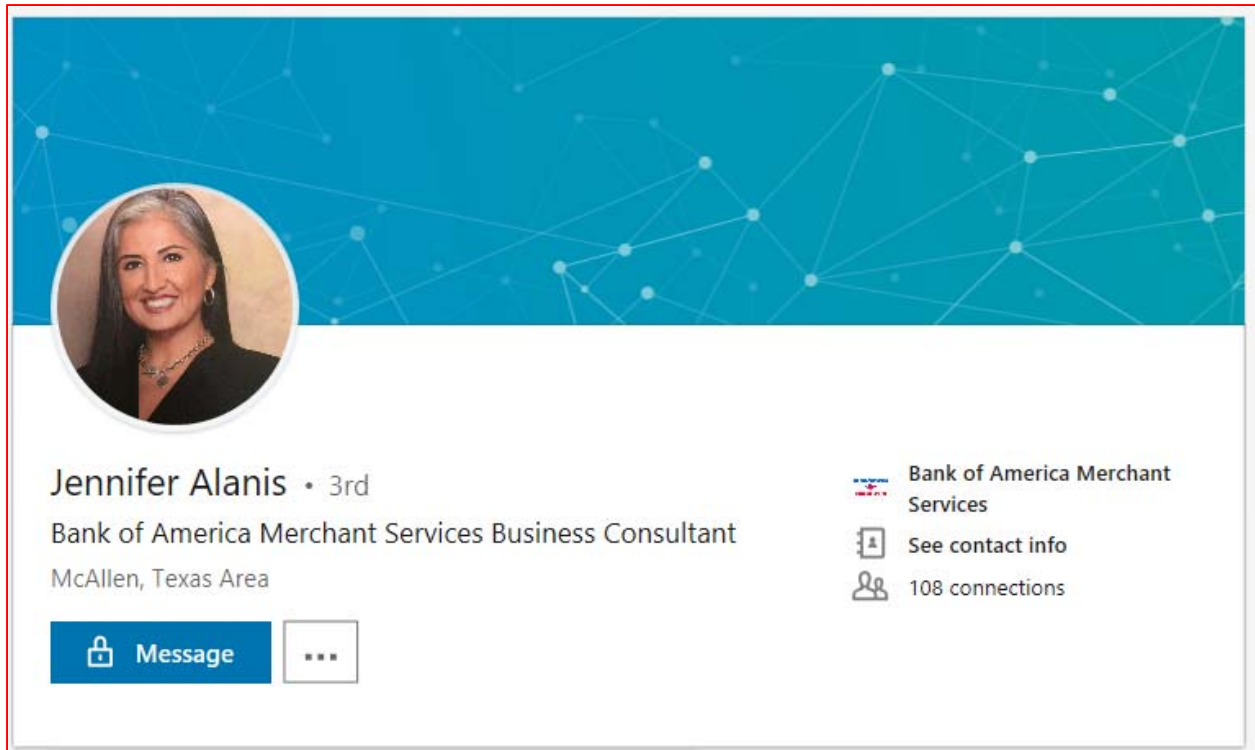
Bank of America Merchant Services

Aug 2011 – Present · 7 yrs 6 mos

San Antonio, Texas Area



Consult new and existing business owners banking with Bank of America on the Merchant Services products. Help them understand how they can grow and manage the business by using different applications on the POS that help manage not only employees, inventory, sales, marketing, and more. Develop and maintain relationships with Relationship Managers, Financial Center ... See more




<https://www.linkedin.com/in/natalie-greco-gonzalez-23428363/>

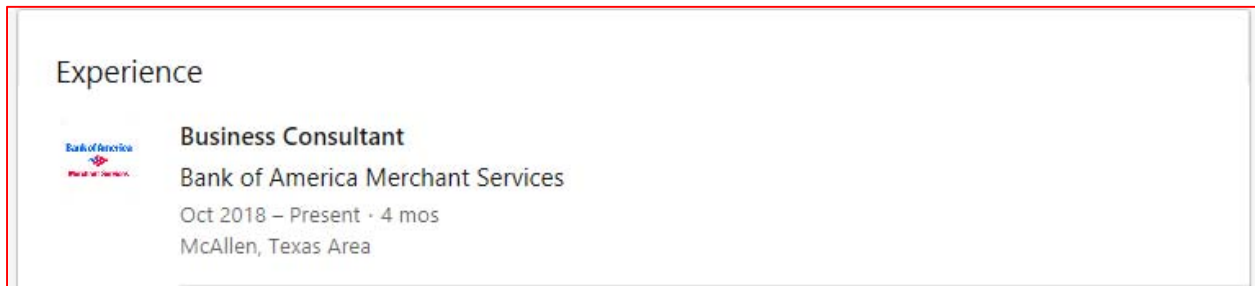


The header of a LinkedIn profile for Jennifer Alanis. It features a circular profile picture of a woman with grey hair, a blue background with a white network pattern, and a white text area containing her name, title, location, and interaction buttons.

Jennifer Alanis • 3rd
Bank of America Merchant Services Business Consultant
McAllen, Texas Area


 **Message** 

 **Bank of America Merchant Services**
 **See contact info**
 **108 connections**

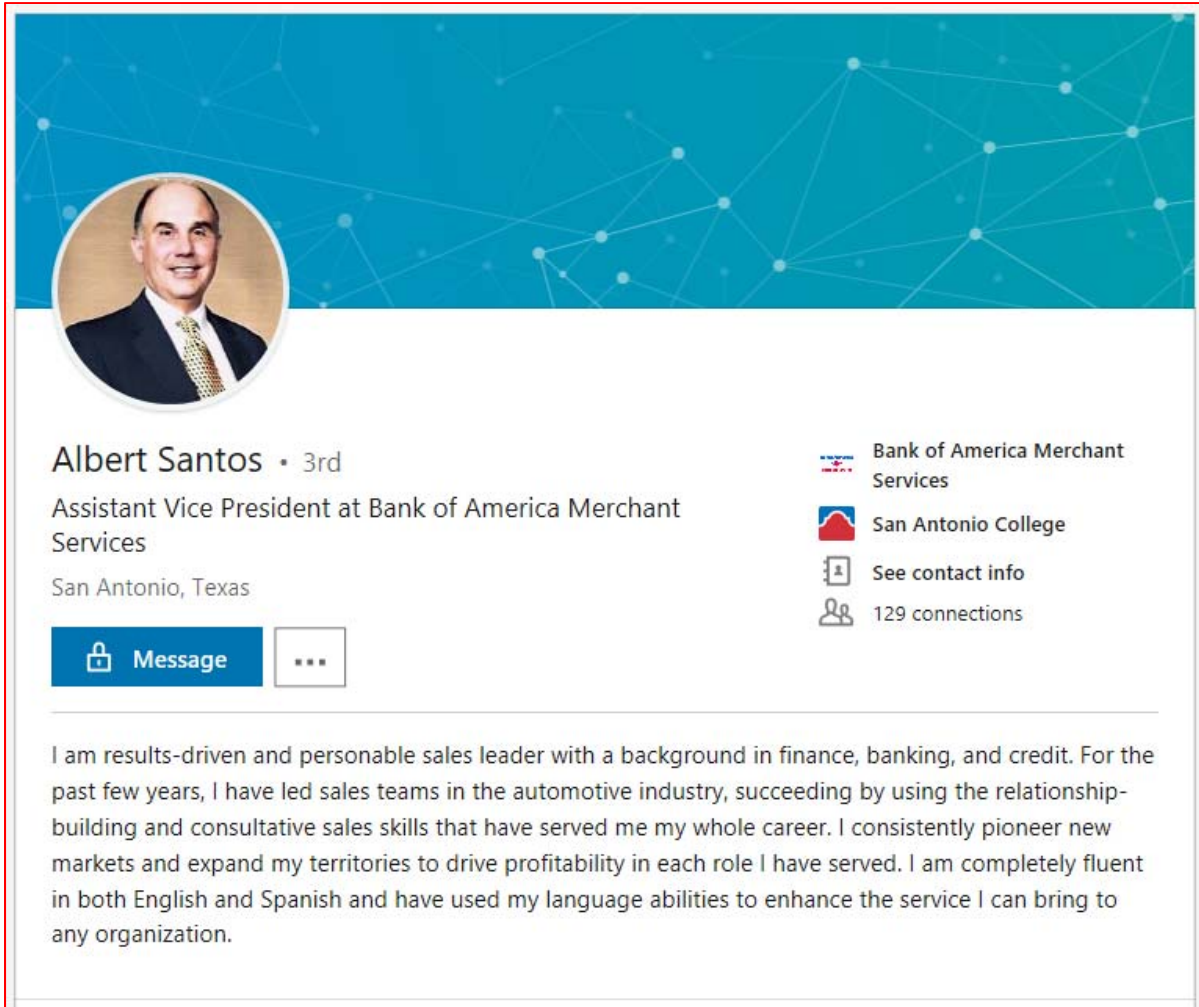


The Experience section of the LinkedIn profile, showing a single entry for Bank of America Merchant Services.

Experience

 **Business Consultant**
Bank of America Merchant Services
Oct 2018 – Present · 4 mos
McAllen, Texas Area

<https://www.linkedin.com/in/jennifer-alanis-117904b/>




Albert Santos • 3rd
Assistant Vice President at Bank of America Merchant Services
San Antonio, Texas

[Message](#) [...](#)


Bank of America Merchant Services
San Antonio College
See contact info
129 connections

I am results-driven and personable sales leader with a background in finance, banking, and credit. For the past few years, I have led sales teams in the automotive industry, succeeding by using the relationship-building and consultative sales skills that have served me my whole career. I consistently pioneer new markets and expand my territories to drive profitability in each role I have served. I am completely fluent in both English and Spanish and have used my language abilities to enhance the service I can bring to any organization.


Experience


 **Bank of America Merchant Services**
3 mos

- Assistant to Vice President**
Nov 2018 – Present · 3 mos
San Antonio, Texas Area
- Assistant Vice President**
Nov 2018 – Present · 3 mos
San Antonio, Texas Area



 **Small Business Payment Services | B...**





<https://www.linkedin.com/in/albert-santos-9447ab67/>






Michelle L. • 3rd
 VP Business Consultant at Bank Of America Merchant Services
 San Antonio, Texas

 **Message** 

-  Bank of America Merchant Services
-  University of the Incarnate Word
-  See contact info
-  423 connections

Genuinely pride myself in being self efficient, goal oriented, and I have a drive for continued success. I believe that strengthening relationships will lead to future success. You will reap the benefits when your clients are happy.
 I have over 20 years of experience in Banking, Merchant Sales, and Portfolio Management.





VP Business Consultant
 Bank of America Merchant Services
 May 2015 – Present · 3 yrs 9 mos
 United States

Providing comprehensive payment solutions to mid-market businesses both domestically and internationally (revenues of generally \$10MM - \$100MM).

- Portfolio Management- Currently managing over 200 Clients
- Build a strong pipeline for new revenue growth and maintain and grow existing accounts and banking centers to identify/solicit new revenue growth opportunities.
- Identify, Develop, and Implement strategic business opportunities to achieve sales objectives and market growth while maintaining effective cost control practices.
- Provide high level of customer service to existing customers and actively develop a prospecting network both domestically and internationally
- Prospecting external sources such as association relationships, centers of influence and vendor relationships, among others.
- Understanding of financial performance, planning, and forecasting
- Contract Negotiation and Retention
- Able to sell industry-leading suite of payment processing products and services to business owners, including the latest mobile payment technologies and solutions to help businesses expand and grow.
- Plan, direct, and ensure successful on time delivery of customized solutions package
- Efficient in Salesforce CRM See less

<https://www.linkedin.com/in/michelle-l-1905635a/>







Sanquan Evans • 3rd


A result-oriented and proficient professional with broad experience in electronic solutions and project management.

Austin, Texas Area

[Connect](#) ⋮


 Bank of America Merchant Services

 See contact info

 155 connections

A driven and talented person that would add real value to any information technology implementation, project management or business analysis in the Austin and surrounding areas such as San Marcos or San Antonio.

Experience

 **Inside Sales Representative**
Bank of America Merchant Services
Sep 2013 – Present · 5 yrs 5 mos

<https://www.linkedin.com/in/sanquan-evans-37b40915/>

10. On information and belief, BAMS and its employees residing in this judicial district operate and maintain control over computer equipment and their physical location. The use of this equipment serves BAMS’ business interests.

11. On information and belief, the above employees and other employees that work for BOA in this judicial district, together with the operation and control over equipment in this district,

individually and collectively, establish a regular and established place of business for BOA in this district. *In re Google LLC*, Case No. 2018-152, 2018 U.S. App. LEXIS 3100, 2018 WL 5536478 (Fed. Cir., Oct. 29, 2018).

12. On information and belief, BOA provides its premises for use by BAMS employees as a regular and established place to conduct business in this judicial district.

13. On information and belief, BAMS employees utilizes BOA banking premises, located in this judicial district, as regular and established places of business.

14. As described below, the Defendants have committed acts of infringement in this judicial district.

15. On information and belief, the Court has personal jurisdiction over Defendants because Defendants have committed, and continue to commit, acts of infringement in the state of Texas, has conducted business in the state of Texas, and/or has engaged in continuous and systematic activities in the state of Texas.

16. On information and belief, Defendants' instrumentalities that are alleged herein to infringe were and continue to be used, imported, offered for sale, and/or sold in the Western District of Texas.

17. Venue is proper in the Western District of Texas pursuant to 28 U.S.C. § 11400(b).

JOINT VENTURE

18. On information and belief, in 2009, BAMS was founded as a joint venture between BOA and First Data. (Dkt. No. 10 at 2).

NEW YORK (Reuters) - Bank of America Corp (BAC.N), the largest U.S. bank, and First Data Corp have created a joint venture to offer electronic payment services to merchants, the companies said on Monday.

The venture will combine Bank of America's brand name — and its 240,000 merchant relationships — with First Data's payment services technology, Thomas Bell, chief executive of the new company, said in an interview.

<https://www.reuters.com/article/us-bankofamerica-firstdata/bofa-first-data-create-payments-company-idUSTRE55S3V120090629>

CHARLOTTE, N.C. and DENVER, June 29, 2009 /PRNewswire via COMTEX/ -- Bank of America N.A. and First Data Corp. announced today the formation of a new company that will deliver next-generation payments solutions to merchants ranging from small business to commercial and corporate clients worldwide.

Banc of America Merchant Services, LLC will provide clients with the most comprehensive suite of innovative payments solutions including credit, debit and prepaid cards to merchant loyalty, check and eCommerce payments, the companies said.

Thomas Bell, chief strategy officer and president of First Data's financial services business, was named chief executive officer of Banc of America Merchant Services.

Banc of America Merchant Services will be approximately 46.5 percent owned by Bank of America and 48.5 percent by First Data, with the remaining stake held by Rockmount Investments, LLC, an investment vehicle controlled by a third party investor.

<http://investor.bankofamerica.com/phoenix.zhtml?c=71595&p=irol-newsArticle&ID=1302921#fbid=0J4yAhEoLHn>

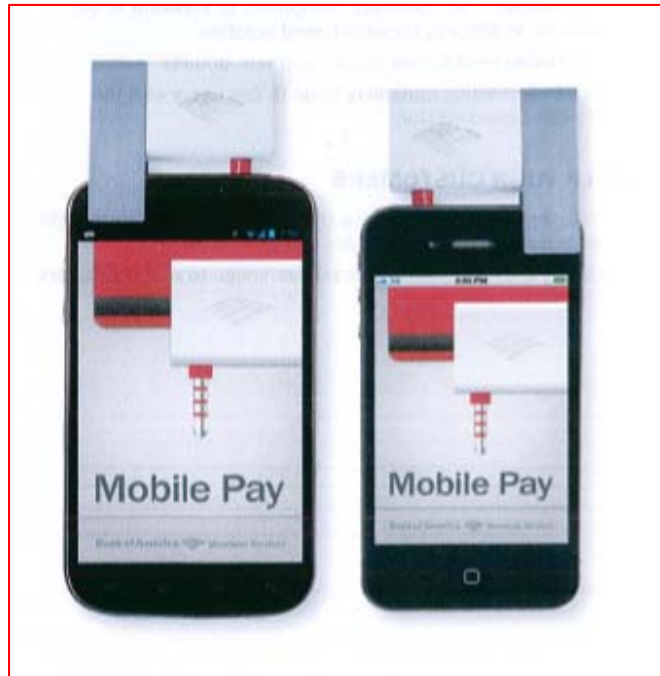
ACCUSED PRODUCTS

19. Upon information and belief, Defendants make, use, import, sell, and/or offer for sale and promote, support, encourage the use of the BOA Mobile Pay Card Reader and the Clover Go Card Reader (the “**Accused Products**”). The Accused Products are described by and is exemplified by the following references:

- “Mobile Pay – Bank of America Merchant Services” (“**Mobile Pay**”), available at <https://www.youtube.com/watch?v=01aEn5vnIUA> (last accessed September 18, 2018);
- “EFM32 Tiny Gecko Series 1 Family EFM32TG11 Family Data Sheet (“**EFM32**”), Preliminary Rev. 0.5, available at <https://www.silabs.com/documents/public/data-sheets/efm32tg11-datasheet.pdf> (last accessed January 21, 2018);


- “K21P80M50SF4 K21 Sub-Family Data Sheet: Technical Data” (“**K21**”), available at <https://www.nxp.com/docs/en/data-sheet/K21P80M50SF4.pdf> (last accessed January 31, 2019)
- “Audio - How does the phone detect if 3.5 mm jack circuit is closed? - Electrical Engineering Stack Exchange” (“**3.5 mm jack circuit**”), available at <https://electronics.stackexchange.com/questions/95575/how-does-the-phone-detect-if-3-5-mm-jack-circuit-is-closed> (last accessed September 18, 2018);
- “3.5 mm Headset: Accessory Specification | Android Open Source Project” (“**3.5 mm headset**”), available at <https://source.android.com/devices/accessories/headset/plug-headset-spec> (last accessed January 21, 2018);
- “**Mobile Pay Business**” (“**Mobile Pay Business**”), available at http://finance.fiu.edu/controller/Docs/Mobile_Pay_Business.pdf (last accessed September 18, 2018);
- “Mobile Point of Scam: Attacking the Square Reader” (“**Blackhat**”), available at <https://www.blackhat.com/docs/us-15/materials/us-15-Mellen-Mobile-Point-Of-Scam-Attacking-The-Square-Reader-wp.pdf> (last accessed September 18, 2018);
- “What Is SSL (Secure Sockets Layer)? | DigiCert.com” (“**SSL**”), available at <https://www.digicert.com/ssl/> (last accessed September 18, 2018);
- “Merchant Services: Credit Card & Payment Processing Solutions” (“**Solutions**”), available at <https://www.bankofamerica.com/smallbusiness/merchant-services/> (last accessed January 18, 2019);
- “Why choose Bank of America Merchant Services? Learn the Benefits” (“**Why choose BAMS?**”), available at <https://www.bankofamerica.com/smallbusiness/merchant-services/why-bankofamerica/> (last accessed January 18, 2019);
- “Clover Go Accept Smartphone Payments | Bank of America Merchant Services” (“**Clover Go**”), available at <https://merch.bankofamerica.com/small-business/pos-devices/clover-go/> (last accessed January 19, 2019);
- “Clover Go – Apps on Google Play” (“**Clover Go App**”), available at https://play.google.com/store/apps/details?id=com.firstdata.clovergo&hl=en_US (last accessed January 21, 2019);

- “First Data Introduces Clover Go Card Reader to Compete with Square – Small Business Trends” (“**First Data**”), available at <https://smallbiztrends.com/2016/01/clover-go-card-reader-first-data.html> (last accessed January 21, 2019); and
- “POS Device Solutions for Small Business” (“**POS Devices**”), available at <https://merch.bankofamerica.com/small-business/pos-devices/> (last accessed January 19, 2019).



Mobile Pay Business.

Clover Go overview



- ✓ Accept payments virtually anywhere via your smartphone or tablet, including EMV®, swipe, and contactless.¹
- ✓ Choose from two connection options: Bluetooth® or audio jack.
- ✓ Signatures on your tablet or smartphone, delivered to customers by email or text.
- ✓ Low-cost entry into accepting card payments.
- ✓ TransArmor® Data Protection helps protect your card data if your system is breached.²

Clover Go.

20. On information and belief, the Accused Products include devices sourced from Ingenico Group.

COUNT I
(Infringement of U.S. Patent No. 9,800,706)

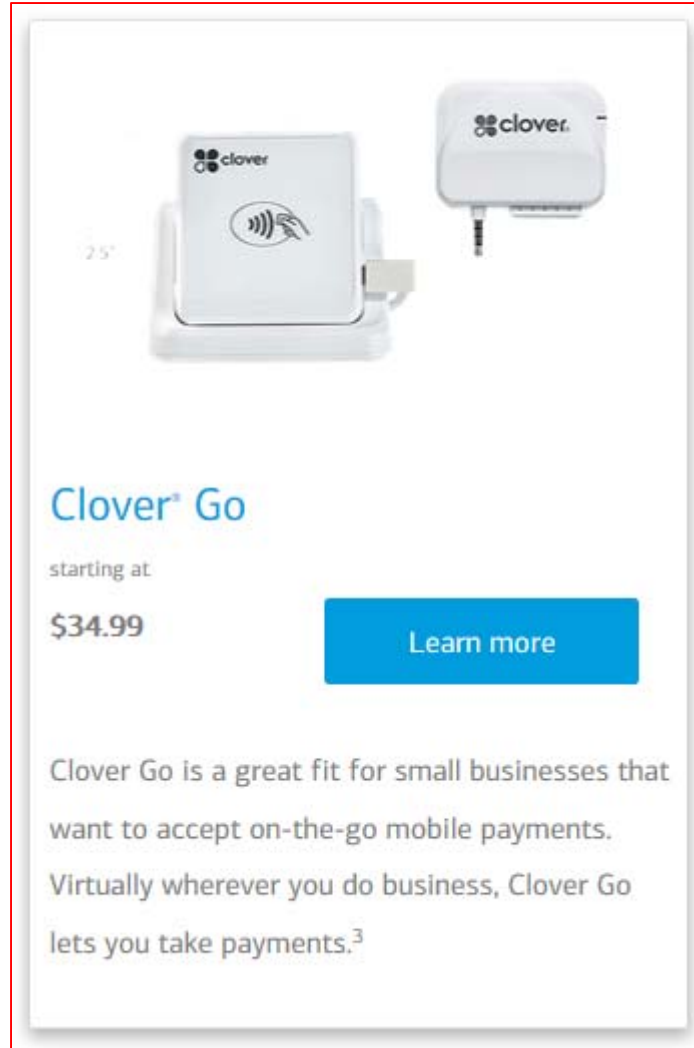
21. Plaintiff incorporates the above paragraphs herein by reference.

22. Plaintiff is the owner, by assignment, of U.S. Patent No. 9,800,706 (the “’706 Patent”), entitled ELECTRONIC DEVICE INPUT/OUTPUT SYSTEM AND METHOD, which issued on October 24, 2017. A copy of the ’706 Patent is attached as **Exhibit A**.

23. The ’706 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

24. Upon information and belief, Defendant has infringed and continues to infringe one or more claims, including Claim 1, of the ’706 Patent by making, using, importing, selling, and/or, offering for sale the Accused Products. Defendant has infringed and continues to infringe the ’706 Patent either directly or through the acts of contributory infringement or inducement in violation of 35 U.S.C. § 271. Defendant has been on notice of the ’706 Patent at least as early as the date it received service of this complaint.

25. Defendant sells, offers to sell, and/or uses the Accused Products, and any similar products, which infringe at least Claim 1 of the ’706 Patent. The Accused Products are designed to connect to and work with a mobile device. (collectively “**the Accused System**”).



POS Devices.

26. Claim 1 of the '706 Patent recites:

1. A system for coupling a credit card reader to a mobile device, the system comprising:

a hardware component that connects to the mobile device and the credit card reader, the

hardware component including:

a first mechanism configured to receive data provided by the credit card reader;

a communication controller for buffering the data received from the credit card

reader prior to conversion by a first circuit;

the first circuit configured to convert the data to an analog audio signal;
a connector to couple the hardware component to an audio input port of the mobile device, wherein:

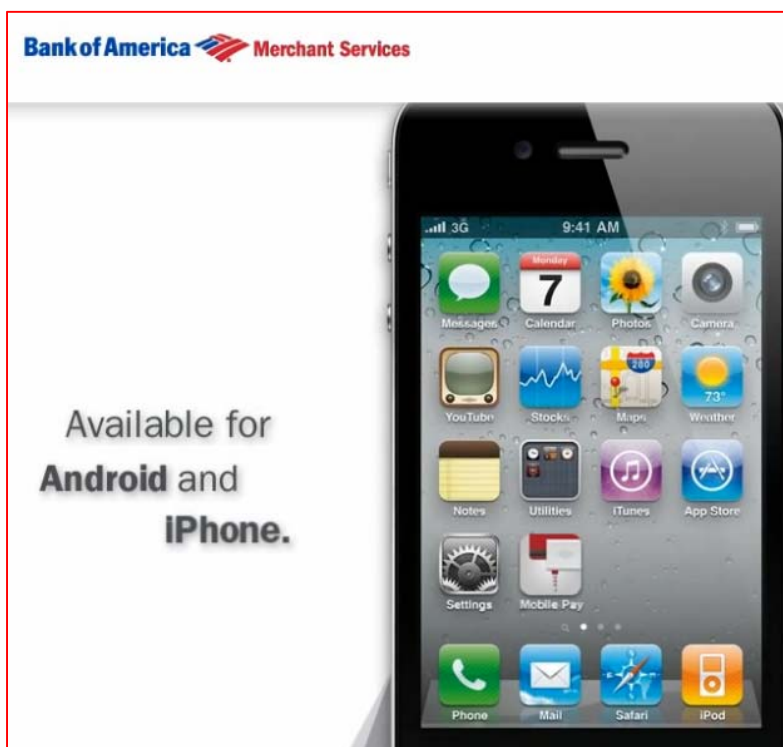
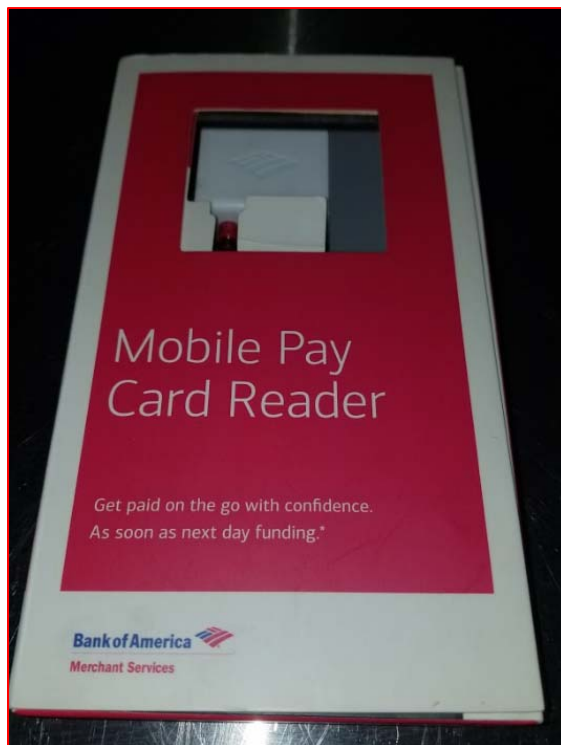
the connector bridges a microphone pin of the audio input port such that the mobile device detects a presence of the connector in the audio input port;
and

the connector provides an audio communication between the hardware component and the mobile device and communicates the analog audio signal from the hardware component to the mobile device;

a second mechanism on the mobile device configured to receive the analog audio signal and convert the analog audio signal into binary data; and

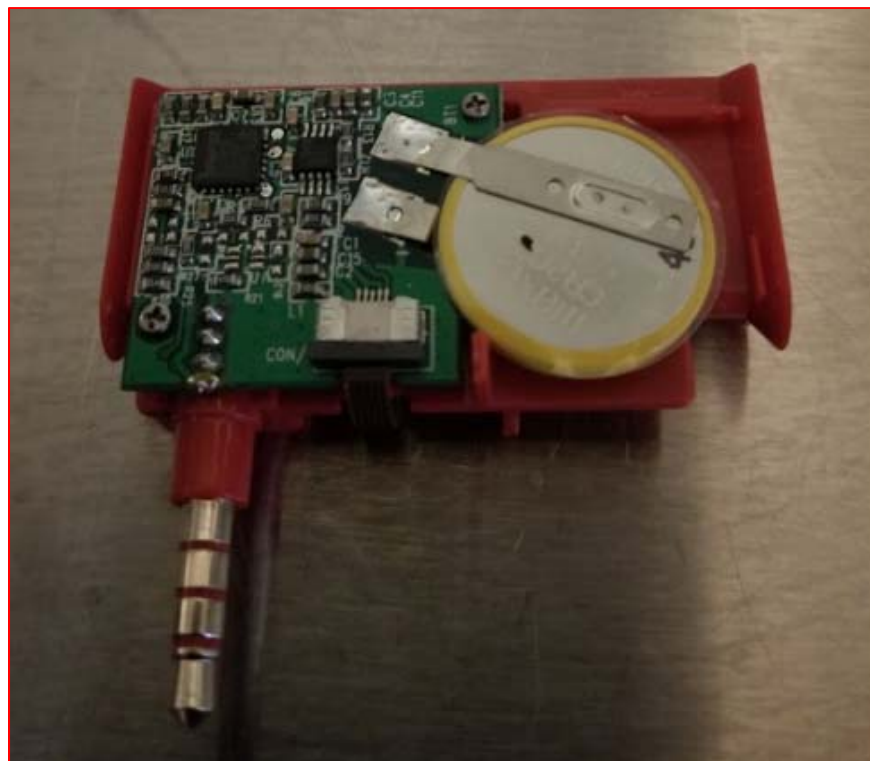
a third mechanism on the mobile device configured to upload the binary data to a cloud service for decoding.

27. The Accused System is a system for coupling a credit card reader to a mobile device. *See*, e.g., **Mobile Pay**. An example is illustrated below:

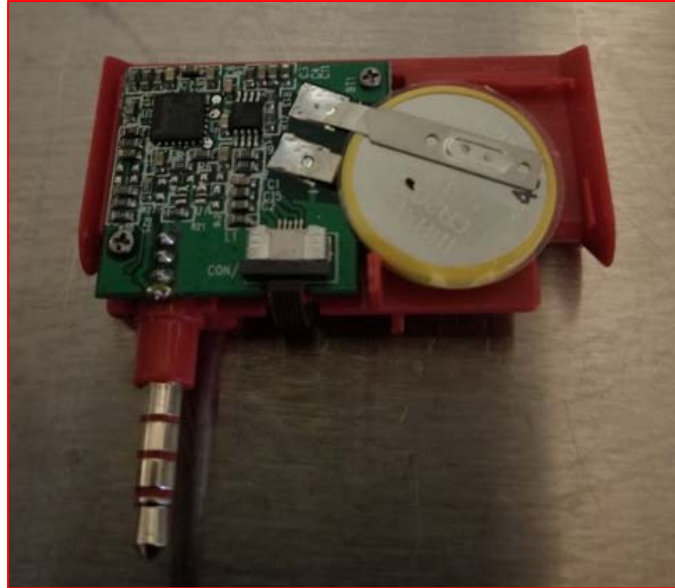


Mobile Pay.

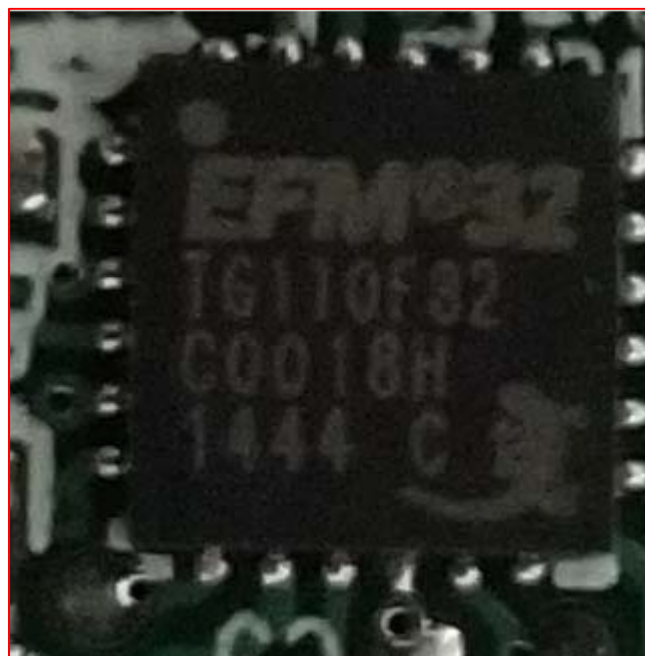
28. The Accused System is a hardware component that connects to a mobile device and a credit card reader. An example is illustrated below:

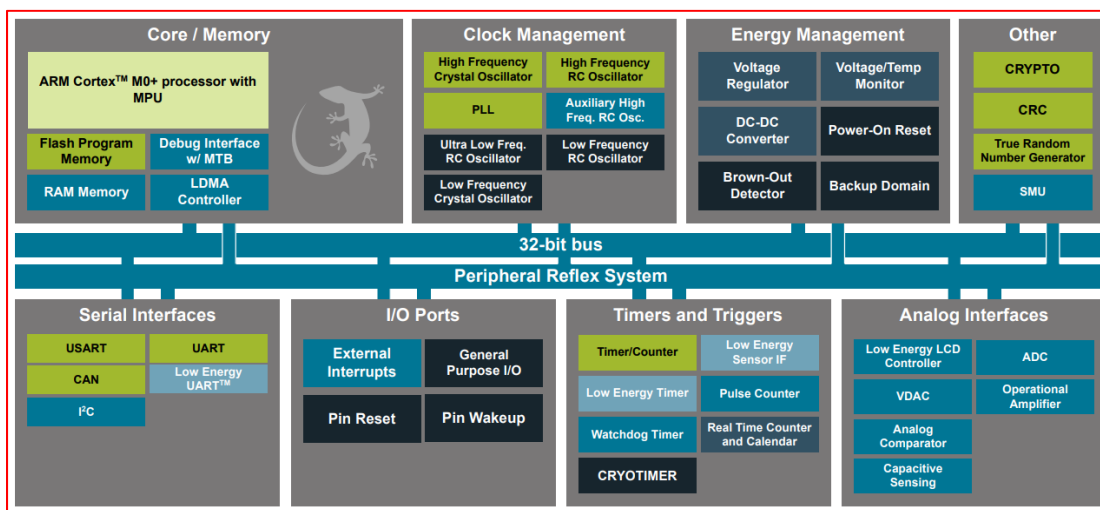
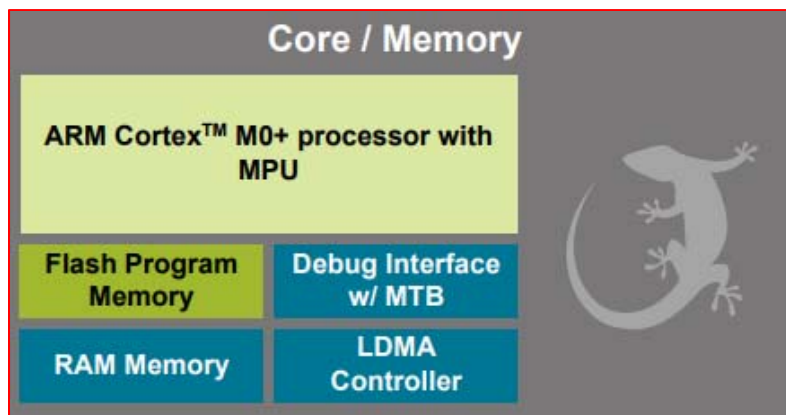


29. The Accused System includes a first mechanism configured to receive data provided by the credit card reader. An example is illustrated below:



30. The Accused System includes a communication controller for buffering the data received from the credit card reader prior to conversion by a first circuit. *See, e.g., EFM32*. An example is illustrated below:





EFM32 at p. 1.

- Up to 128 kB flash program memory
- Up to 32 kB RAM data memory

EFM32 at p. 2.

31. The first circuit in the Accused System is configured to convert the data to an analog audio signal. See, e.g., EFM32. An example is illustrated below:

- 2 × 12-bit 500 ksamples/s Digital to Analog Converter (VDAC)

EFM32 at p. 2.

3.8.5 Digital to Analog Converter (VDAC)

The Digital to Analog Converter (VDAC) can convert a digital value to an analog output voltage. The VDAC is a fully differential, 500 ksp/s, 12-bit converter. The opamps are used in conjunction with the VDAC, to provide output buffering. One opamp is used per single-ended channel, or two opamps are used to provide differential outputs. The VDAC may be used for a number of different applications such as sensor interfaces or sound output. The VDAC can generate high-resolution analog signals while the MCU is operating at low frequencies and with low total power consumption. Using DMA and a timer, the VDAC can be used to generate waveforms without any CPU intervention. The VDAC is available in all energy modes down to and including EM3.

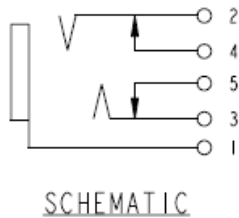
EFM32 at p. 15.

32. The Accused System includes a 3.5 mm headphone connector to couple the hardware component to an audio input port of the mobile device. An example is illustrated below:



33. The connector in the Accused System bridges a microphone pin of the audio input port such that the mobile device detects a presence of the connector in the audio input port. *See, e.g., 3.5 mm jack circuit.* An example is illustrated below:

Headphone jacks have extra contacts inside, which act as switches. The the drawing below, pins 4 and 5 are intended for sensing that the plug was inserted. They are not intended for audio signal. When the plug is not present, the switche, which are formed by 2 & 4 and 3 & 5, are closed. When the plug is inserted, these switches are open. The plug flexes 2 and 3 slightly, and they break contact with 4 and 5. You could insert a 3.5mm plastic rod [a dummy] into the jack, which will open the contacts, and the phone might think that earphones are plugged in.



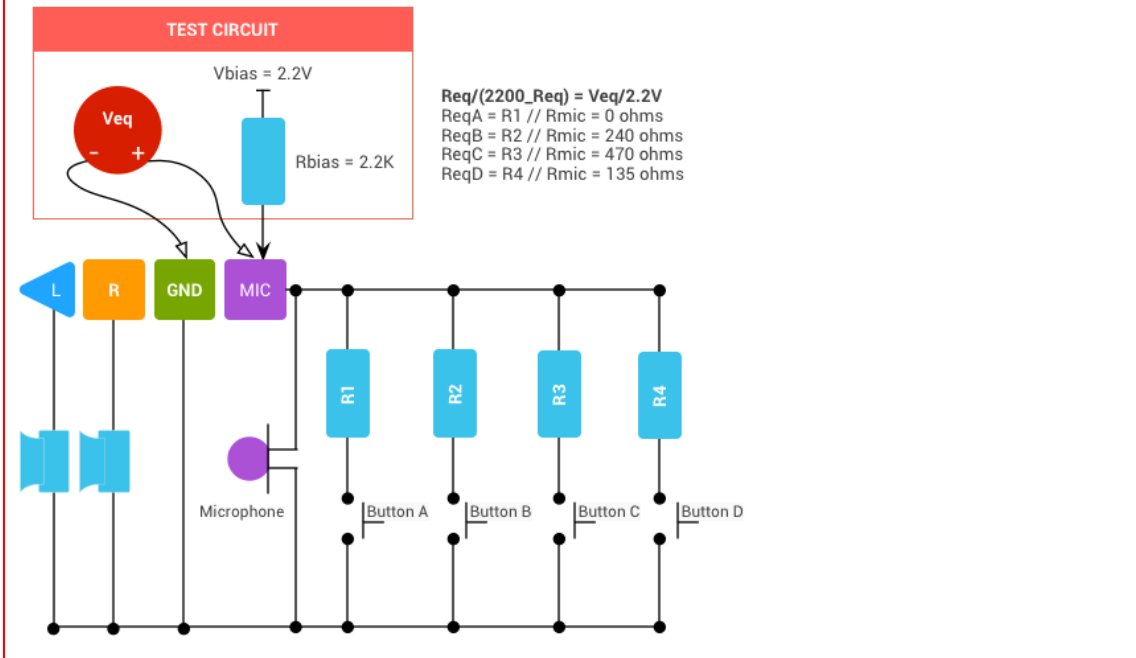
3.5 mm jack circuit.

34. The connector in the Accused System provides an audio communication between the hardware component and the mobile device and communicates the analog audio signal from the hardware component to the mobile device. *See, e.g., 3.5 mm headset.* An example is illustrated below:

Mechanical		
Function	Accessory Support	Notes
4 conductor 3.5 mm plug	Required	Ref: EIAJ-RC5325A standard
CTIA pinout order (LRGM)	Required	Except in regions with legal requirements for OMTP pinout
OMTP pinout order (LRMG)	Optional	
Microphone	Required	Must not be obstructed when operating headset controls

3.5 mm headset.

The following diagram for Reference Headset Test Circuit 1 shows the CTIA pinout for a 4-segment plug. For the OMTP pinout, switch the positions of the MIC and GND segments.



3.5 mm headset.

35. The Accused System includes a second mechanism on the mobile device configured to receive the analog audio signal and convert the analog audio signal into binary data. *See, e.g., Mobile Pay Business and Blackhat.* An example is illustrated below:

Built-in security

Card numbers are encrypted and truncated instantly, helping to keep your customer's card data secure, whether you swiped a physical card or entered the numbers into the browser. Both card security and Authentication Verification Service are supported to further help guard against fraud.

Mobile Pay Business.

The initial models of the Square Reader, models S1 and S2, are quite simple and do not contain any integrated circuitry. The devices consist of a magnetic head connected to a headphone jack with a microphone output, which is sufficient to read a magnetic stripe. By sampling a phone's microphone input fast enough, an application is able to read the small voltages produced by the magnetic head and, by examining the zero-crossings in the signal, decode them into unencrypted credit card information.

Later models of the Square Reader, models S3 and S4, contain integrated circuitry that can read and modify the signal before transmitting it to the phone in order to provide encryption and amplification. However, the signal is still transmitted as a varying voltage, recorded by an app, and decoded into binary digits that represent encrypted or unencrypted data. In the case of encrypted data, the encrypted bits can then be sent to external servers for decryption.

Blackhat at p. 2.

We have examined the security of the Square Reader, one of many mobile card-reading devices designed to allow merchants to more easily enter the market of processing transactions. In our analysis, we have demonstrated a number of vulnerabilities in the Square Reader, including unenforced deprecation of old hardware, allowance of out-of-order transactions, and insufficient tamper-proof hardware features. We suggest that similar attacks could possibly be performed on other mobile point-of-sale competing systems such as Intuit GoPayments and PayPal Here, which utilize similar end-to-end encryption [2][26]. We emphasize that mobile card-reading devices face additional challenges beyond traditional point-of-sale hardware, given that they are smaller, cheaper, and compatible with commodity hardware. These challenges are manifest in the vulnerabilities that we have identified and in the responses we received to our disclosure reports outlined in Section VII.

Blackhat at p. 7.

36. The Accused System includes a third mechanism on the mobile device configured to upload the binary data to a cloud service for decoding. *See, e.g., Mobile Pay, Mobile Pay Business, and SSL.* An example is illustrated below:



Mobile Pay.

FEATURES

- The Mobile Pay App Solution is compatible with the Android and iPhone
- Secure login with username and password
- Easy-to-use interface requires minimal training
- Support for all major credit card types
- Real-time mobile processing
- Fraud protection tools
- SSL encryption technology
- Real-time reporting capabilities
- Account manager to add or remove users (browser only)
- E-receipt delivered to customer's email after the transaction is complete
- 24/7 customer support

Mobile Pay Business.

What is Secure Sockets Layer (SSL)?

Secure Sockets Layer (SSL) is a standard security technology for establishing an encrypted link between a server and a client—typically a web server (website) and a browser, or a mail server and a mail client (e.g., Outlook).

SSL allows sensitive information such as credit card numbers, social security numbers, and login credentials to be transmitted securely. Normally, data sent between browsers and web servers is sent in plain text—leaving you vulnerable to eavesdropping. If an attacker is able to intercept all data being sent between a browser and a web server, they can see and use that information.

SSL.

Inducement:

37. Defendant offers, supports, promotes, and encourages use of its solution of point-of-sale hardware and software, including the Accused Products, to merchants for processing credit, debit, and mobile device payments utilizing Defendant's processing services.

Sell more. Get paid. Repeat.

Whether your business is new on the scene or a fixture in the marketplace, we can help. Our intuitive point-of-sale hardware and software, along with a simplified pricing plan, enable you to affordably accept credit cards and better manage your business.

Receive cash rewards on your Bank of America Merchant Services monthly card processing volume when you qualify and enroll in Business Advantage Relationship Rewards¹. [Learn more.](#)



Solutions.

More for you at Bank of America Merchant Services

Your customers require options, a seamless payment experience, and above all, simplicity. As a leader in payments, eCommerce and security solutions, we can help you deliver that every day. We securely process more than 16.6 billion transactions across 705,000 merchant locations, providing the innovative and cost-effective solutions to help you succeed.² Enjoy a suite of products and services that help you accept credit card payments, engage customers, and so much more.



Credit, debit and mobile device payments

Provide a wide variety of payment options for your customers and deliver a great checkout experience. We offer fast, easy and secure processing services for all major credit cards including Visa®, Mastercard®, American Express®, and Discover®. Swipe, dip or tap, we've got you covered.



Manage your cash flow

Access funds as soon as the next business day when you have a Bank of America business checking account.³



Point-of-sale hardware and software

Save time and increase efficiency with the latest technology. Choose from 100+ apps to help you manage critical functions such as inventory, scheduling and reporting.⁴



Helping you save on fees

There is no monthly fee on your Bank of America Business Advantage Checking account when you also have an active Merchant Services account.⁵



U.S.-based 24/7 customer service

Enjoy peace of mind knowing help is ready whenever you need it, day or night.



Advanced security tools

TransArmor® Data Protection is the ultimate protection against card data theft. Dual layers of security—encryption and tokenization—assure that when a transaction is made with your POS device, the cardholder's full card number never enters your environment.⁶

Id.











38. Defendant touts many features and benefits to merchants that use Defendant's point-of-sale hardware/software and processing solutions, including the Accused Products and the Accused System.

Your customers are asking for more. Bank of America Merchant Services offers simple solutions to help you give them more.

Your customers want options, a seamless payment experience, and above all, simplicity. As a leader in payments, eCommerce and security solutions,¹ we can help you deliver that to them every day. We securely processed more than 16.6 billion transactions across 705,000 merchant locations in 2017, providing the innovative and cost-effective solutions you need to succeed.

Why Choose BAMS?

Features & benefits

<p> Simplified payment plan Our intuitive point-of-sale hardware and software, along with a simplified payment plan, enable you to affordably accept credit cards and better manage your business.</p>	<p> Helping you save on fees There is no monthly fee on your Bank of America Business Advantage Checking account when you also have an active Merchant Services account.²</p>
<p> Credit, debit, and mobile device payments Provide a wide variety of payment options for your customers, and deliver a great customer experience at checkout.</p>	<p> U.S.-based 24/7 customer service Get peace of mind knowing you have help whenever you need it, day or night.</p>
<p> Point-of-sale hardware and software solutions Clover point-of-sale devices integrate card payments with business management tools and more than 100 apps³ to make running your business easier.</p>	<p> Accept payments on your website Grow your business by expanding to new customers who prefer to pay online.</p>
<p> Improve your cash flow Access funds as soon as the next business day when you have a Bank of America Business Advantage account.⁴</p>	<p> Advanced security tools help protect you and your customers TransArmor® Data Protection is the ultimate protection against card data theft — because the cardholder's full card number never enters your environment.⁵</p>
<p> Experienced business consultants Our experienced teams are made up of specialists in the merchant services industry, and they're ready to help you navigate payment options and recommend solutions to help grow your business.</p>	<p> Innovative reporting tools and apps Web-based and paper reporting tools assist you in managing your payment processing activity through comprehensive and easy-to-share options.</p>

Id.

39. By using the Accused Products and Accused System, Defendant's merchants directly infringe the '706 Patent.

40. With knowledge of the '706 Patent and by promoting, encouraging, and supporting the use of the Accused System by Defendant's merchants, Defendant has and continues to induce infringement of the '706 Patent under 35 U.S.C. § 271(b).

Contributory Infringement:

41. The Accused Products are components that are configured to operate with a mobile device.

42. The Accused Products are material parts of the inventions claimed in the '706 Patent, including at least Claim 1.

43. The Accused Products are especially made and adapted for use with a mobile device in a manner that infringes at least Claim 1 of the '706 Patent.

44. The Accused Products are not a staple article or commodity of commerce suitable for non-infringing use.

45. By selling, offering to sell, or importing into the United States the BOA Mobile Pay Card Reader for use with a mobile device, Defendant is liable as a contributory infringer under 35 U.S.C. § 271(c).

Joint Enterprise:

46. Defendants have in concert with each other to form a joint enterprise to infringe the '706 Patent by making, using, importing, selling, and/or, offering for sale the Accused Products and by promoting, encouraging, and supporting the use of the Accused Products by their customers and merchants.

47. BOA and First Data entered into the joint venture to establish BAMS for the common purpose of promoting, facilitating, and profiting from credit and debit card processing transactions through their processing system via use of the Accused Products.

48. For each processed transaction using the Accused Products, Defendants collect a portion of the total sales amount of the transaction.



Clover Go.

49. The establishment of this joint venture for the common purpose of profiting from the venture establishes a joint venture.

50. In particular:

- the Defendants had an agreement, express or implied, to create the BAMS entity and to use the BAMS entity to provide merchant services, including the sale and support of the Accused Products;
- the Defendants had a common purpose of promoting and facilitating credit and debit card processing transactions through their processing system via use of the Accused Products;
- the Defendants shared a community of pecuniary interest in that purpose, namely by profiting from the transaction fees associated with use of the Accused Products when processing credit and debit card transactions; and
- each Defendant had a “voice” in the direction of establishing, participating, and controlling the enterprise, such that each had an equal right of control.

51. As an additional component of this joint venture and joint enterprise, BOA provides its premises for use by BAMS employees as a regular and established place to conduct business in this judicial district.

52. As a result of this joint enterprise, each defendant is charged with the acts of the other Defendants, rendering each liable jointly and severally for the infringement of the '706 Patent.

Direction and Control:

53. Upon information and belief, BOA and First Data, through this joint venture, direct and control the operations of BAMS, including the promotion, sell, and use of the Accused Products.

54. Upon information and belief, BAMS acts as an agent of BOA and First Data, including in its acts of promoting, selling, and using the Accused Products.

55. Upon information and belief, BAMS obtains the Accused Products from First Data. First Data has the right to stop or limit BAMS infringement of the '706 Patent.

56. As a result of the joint venture and actions by BOA and First Data, BOA and First Data are vicariously liable for the infringement of BAMS.

Damages:

57. Plaintiff has been damaged by Defendant's infringement of the '706 Patent.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the Court enter judgment against Defendant:

1. declaring that the Defendant has infringed the '706 Patent;
2. awarding Plaintiff its damages suffered as a result of Defendant's infringement of the '706 Patent;
3. awarding Plaintiff its costs, attorneys' fees, expenses, and interest; and

4. granting Plaintiff such further relief as the Court finds appropriate.

JURY DEMAND

Plaintiff demands trial by jury, Under Fed. R. Civ. P. 38.

Dated: January 31, 2019

Respectfully Submitted

/s/ Raymond W. Mort, III

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