

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

<p>AQTECH, INC,</p> <p style="text-align: center;">Plaintiff</p> <p style="text-align: center;">v.</p> <p>LG ELECTRONICS, INC.,</p> <p style="text-align: center;">Defendant</p>	<p style="text-align: center;">Case No. 6:21-cv-00095</p> <p style="text-align: center;">JURY TRIAL DEMANDED</p>
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COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff AQTECH, Inc. (“AQTECH”). files this Complaint against LG Electronics, Inc. for infringement of U.S. Patent No. 10,635,377.

THE PARTIES

1. AQTECH is a Texas company with its headquarters and principal place of business at 14425 Falcon Head Blvd, Building E, Austin, Texas 78738.

2. Defendant LG is a corporation formed under the laws of the Republic of Korea, with its principal place of business at LG Twin Towers 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, South Korea 07336. Upon information and belief, LG does business in Texas, directly and through intermediaries, and offers its products, and services, including those accused herein of infringement, to customers and potential customers located in Texas, including in the judicial Western District of Texas.

3. Defendant has authorized sellers and sales representatives that offer and sell products pertinent to this Complaint through the State of Texas, including in this Judicial District, and to consumers throughout this Judicial District, by authorized retailers throughout this District, including stores in Austin, San Antonio, and El Paso such as: AT&T, 4330 W Waco Dr, Waco, Texas 76710; 2320 W Loop 340 #100A, Waco, Texas 76710; and 1428 Wooded Acres Dr #120, Waco, Texas 76710; TMobile, 2448 W Loop 340 Suite 24A, Waco, Texas 76711; 100 N New Rd Ste 110, Waco, Texas 76710; and 208 Hewitt Dr Suite #200, Waco, Texas 76712; and Verizon, 1820 S Valley Mills Dr, Waco, Texas 76711; 2812 W Loop 340 Suite# H-12, Waco, Texas 76711; and 5301 Bosque Blvd Ste 120, Waco, Texas 76710.

BUY NOW FROM THESE CARRIERS



https://www.lg.com/us/mobile-phones/v60-thinq-dual-screen/specs#iw_comp1552886069288.

JURISDICTION AND VENUE

4. This patent infringement suit is brought under the United States Patent Act, namely 35 U.S.C. §§ 271, 281, and 284-285, among other laws. This Court has subject-matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. Venue is proper in this Judicial District pursuant to 28 U.S.C. §§ 1400(b) and 1391(b) and (c) because the Defendant is subject to personal jurisdiction in this Judicial District, has committed acts of patent infringement in this Judicial District, and has a regular and established place of business in this Judicial District. The Defendant, through its own acts, makes, uses, sells, and/or offers to sell infringing products within this Judicial District, regularly does and solicits business in this Judicial District, and has the requisite minimum contacts with the Judicial District such that this venue is a fair and reasonable one. Further, venue is proper in this Judicial District because the Defendant is a foreign corporation formed under the laws of Korea with a principal place of business in Korea.

AQTECH'S PATENT

6. Sang Hoon Lee and Jim Hwa Kim invented the subject matter claimed in the asserted patent, which is owned by AQTECH.

7. On April 28, 2020, the United States Patent duly and legally issued U.S. Patent No. 10,635,377 (the "377 Patent") titled "NFC-Enabled Apparatus and Method

of Operation Thereof.” A true and correct copy of the is available at <https://pdfpiw.uspto.gov/.piw?PageNum=0&docid=10635377>.

8. AQTECH holds all substantial rights in and to the '377 patent including the exclusive right to sue for infringement and all rights to recover damages past and future infringement of the '377 Patent.

9. LG has been on notice of the '377 Patent at least as early as the date it received service of this complaint.

10. The technologies of the Patent-in-Suit generally covers apparatus and methods for providing capturing images for use in NFC-enabled transactions. For example, the abstract of the '377 Patent describes the tagging of data during an NFC transaction:

(57)

ABSTRACT

An NFC-enabled apparatus is disclosed. The apparatus includes a touch screen display and a near field communication (NFC) module comprising an NFC antenna and an NFC controller. In response to tagging between the NFC-enabled apparatus and the external NFC terminal, an NFC communication channel is established between the NFC-enabled apparatus and the external NFC terminal for data communication therebetween.

LG'S INFRINGING PRODUCTS

11. LG introduced LG Pay, an NFC contactless tap to pay feature available on its mobile phones. LG describes LG Pay App on its website.




<https://www.lg.com/us/lg-pay>.

12. LG published on its website the following description of its LG Pay App and the ease and benefits of using it and encourages its users to use its phones with the LG Pay App:

Contactless Payments, Virtually Everywhere

Leave your plastic cards at home and pay quickly and securely with your phone. LG Pay is a digital wallet that lets you put your credit/debit, gift and loyalty cards into one simple-to-use app.¹ LG Pay is compatible with most NFC readers and Magstripe payment terminals, so you can use it virtually everywhere. And for added convenience, it's also available via voice commands.



 <p>Credit/Debit Cards</p> <p>LG Pay lets you add your credit and debit cards and use any of them right from your phone.</p>	 <p>LG PayQuick™</p> <p>Just swipe up on your phone to pay at the register. LG Pay is always ready, even if the phone is asleep or you're using another app.</p>	 <p>Lost Your Phone? Keep Your Cool.</p> <p>Conveniently maintain your account, even if your phone is lost or stolen. With a quick visit to MyLGPay.com, you can remove cards registered within the app.</p>
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Compatible Virtually Everywhere


LG Pay supports both NFC readers and magstripe payment terminals. That means you can use it virtually everywhere for contactless payments. Just follow these simple steps to get started.



Magnetic Stripe Reader

- Swipe to open LG PayQuick.
- Scan fingerprint or enter PIN to approve transaction.
- Position phone over magnetic stripe reader on terminal to complete payment.

NFC Reader

- Look for NFC symbol on the payment terminal:

- Swipe to open LG PayQuick.
- Scan fingerprint or enter PIN to approve transaction.
- Position phone over NFC reader on terminal to complete payment.



Get Real Money From LG

Take advantage of exclusive LG Pay offers to receive real money on your LG Pay Perks card, which can then be used to make purchases in stores anywhere Visa is accepted.⁴

<https://www.lg.com/us/lg-pay>.

13. LG's products, including at least the LG K92 5G, LG Wing 5G, LG Velvet, LG V60 ThinQ 5G Dual Screen, LG G8X ThinQ Dual Screen, LG V50ThinQ 5G, LG G8 ThinQ, LG V40 ThinQ, LG V35 ThinkQ, and LG G7 ThinkQ mobile phones

infringe the asserted patents (“Accused Products”). LG makes, imports, sells, offers to sell, distributes, licenses, markets and/or uses Accused Products:



* LG Pay is only available on select carrier devices with Android 10 (S) or above.

** Supports Default Transit Payment.

+ Supports NFC payments only.

Download LG Pay App



<https://www.lg.com/us/support/lgpay#supported-devices>.

14. LG provides detailed instructions regarding downloading and installing,

if necessary, LG Pay App on the Accused Products.

Download and Install LG Pay

NOTE: LG Pay comes preloaded on any supported LG phones. If you don't have it, please follow the step-by-step guide in installing LG Pay.

1. Navigate to and select Play Store on your phone.
2. Select the Search bar.
3. Enter LG Pay and then select Search.
4. Select INSTALL. If you can't find LG Pay from the Play Store, your device is not compatible.
5. Select OPEN.

<https://www.lg.com/us/support/lgpay#supported-devices>.

15. LG Pay provides detailed instructions regarding setting up LG Pay on the Accused Products.

Setup LG Pay

1. Select LG Pay.
2. Select GET STARTED.
3. Sign in with google account or LG account.
4. Enter your user information such as name, mobile number, shipping address and press NEXT.
5. Create and enter PIN and backup PIN.
6. Set up fingerprints (optional).
7. To add a card, select loyalty cards or credit/debit cards.
8. Align your card to fit inside the frame. To enter your card information manually, select enter card manually.
9. Enter the card information, then select NEXT.
10. Review the TERMS OF SERVICE, and then select AGREE.
11. Select an option to verify the card. For this example, select SMS.
12. Enter the verification code, and then select VERIFY.
13. Use your fingerprints, Select USE or LATER.
14. Select Done to complete adding the card. In the new UX release for transit, there will be option to add the card as the default Transit Payment Card


<https://www.lg.com/us/support/lgpay#supported-devices>.

16. LG provides detailed instructions regarding using its LG Pay App on the

Accused Products.

Make a Payment

NOTE: Making a payment using your phone with a phone case can sometimes cause issues. If so, remove the phone case before tapping your phone on the terminal.

Place the back of the phone over the Magstripe / Swipe reader with at least ½ inch of space between the phone and the reader, or tap the back of the phone on top of the contactless card reader with the symbol. 

Depending on your settings, you can access LG PayQuick from the Lock or Home screen, or when the screen is off.

1. To activate the LG PayQuick Card (the card you want to use for payments), swipe up from the bottom of the screen.
2. To access LG Pay, select PIN or Fingerprint.

NOTE: Swipe left or right to select another Card in LG PayQuick mode. Options for Gift , Loyalty cards are also available.

3. Place the back of the phone against the Magentic card/NFC reader.
4. If you exceed the 50 secs timer to transmit the card information to the terminal, you would need to try again entering PIN/fingerprint and tapping your phone until the transaction is completed.

<https://www.lg.com/us/support/lgpay#supported-devices>.

COUNT I **INFRINGEMENT OF U.S. PATENT NO. 10,635,377**

17. Plaintiff incorporates the above paragraphs herein by reference.

18. The '377 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

19. AQTECH has not licensed or otherwise authorized LG to make, use, offer for sale, sell, or import any products that embody the '377 Patent.

20. LG infringes, contributes to the infringement of, and/or induces infringement of the '377 Patent in violation of 35 U.S.C. §§ 271 (a), (b), and/or (c) by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States products and/or methods covered by one or more claims of the '377 Patent, including, but not limited to the Accused Products.

21. LG has directly infringed and continues to directly infringe the '377 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '377 Patent. Upon information and belief, these products include the Accused Products that practice the methods and systems covered by the '377 Patent, including, for example, card NFC payment functionality implemented by LG Pay running on an LG device such as the representative LG V60 ThinQ. For example, these infrastructures infringe at least claim 1 of the '377 Patent.

22. Claim 1 of the '377 Patent recites:

1. An NFC-enabled apparatus comprising:

a camera;

at least one memory configured to store a plurality of selectable pieces of information and a plurality of tag data; and

a near field communication (NFC) module comprising an NFC antenna and an NFC controller,

wherein the NFC-enabled apparatus is configured:

to capture an image using the camera,

to process the camera-captured image to obtain data relating to the camera-captured image,

to send, to at least one server, the data relating to the camera-captured image,

to receive, from the at least one server, a first tag datum corresponding to the data relating to the camera captured image, and

to store the first tag datum in the at least one memory as part of the plurality of tag data,

wherein the NFC-enabled apparatus is configured to display at least one of the selectable pieces of information on the digital information display,

wherein the NFC-enabled apparatus is configured to have a default setting for selecting a predetermined one of the selectable pieces of information in the absence of a user selection of one of the selectable pieces of information,


wherein, in response to a tagging between the NFC-enabled apparatus and a first external NFC-enabled terminal, and without a user selection of one of the selectable pieces of information, the NFC-enabled apparatus is configured to cause a transfer of a tag datum corresponding to the predetermined one of the selectable pieces of information from the NFC module to the first external NFC-

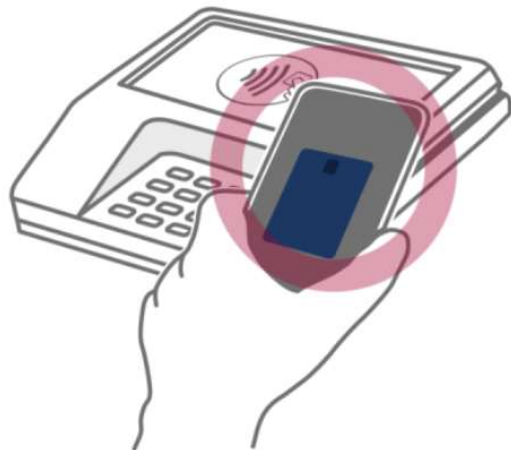
enabled terminal via an NFC communication channel established between the NFC-enabled apparatus and the first external NFC-enabled terminal,

wherein the tag datum corresponding to the predetermined one of the selectable pieces of information comprises the first tag datum that corresponds to the data relating to the camera-captured image.

23. For example, the Accused Products include NFC capability for performing NFC-enabled payment transactions.

NFC Reader

- Look for NFC symbol on the payment terminal: 
- Swipe to open LG PayQuick.
- Scan fingerprint or enter PIN to approve transaction.
- Position phone over NFC reader on terminal to complete payment.



<https://www.lg.com/us/lg-pay>.

24. The Accused Products include a camera:

LG V60 ThinQ™ 5G



DUAL SCREEN¹

360° Freestop Hinge Detachable Case
Ultimate Multitasking for Gaming,
Entertainment and Camera
6.8" OLED FHD+ Cinematic FullVision™
Displays 20.5:9 (2460 x 1080)



UNPARALLELED VIDEO & AUDIO

8K and HDR10+ Video Recording
4 Microphones for Voice Bokeh
and ASMR Recording
32 Bit Hi-Fi Quad DAC²



AMAZING CAMERA

Triple Rear Cameras: 64 MP Standard,
13 MP Wide-Angle & Z Camera
10 MP Front-Facing Camera



LEADING PERFORMANCE

5,000 mAh Battery
Qualcomm® Quick Charge™ 4.0+
Qualcomm Snapdragon™
865 Octa-Core Processor



5G CONNECTIVITY

www.lg.com/us/v60_thinq

 Cameras

LG V60 ThinQ™ 5G SPECIFICATIONS & FEATURES

	TRIPLE REAR CAMERAS			FRONT CAMERA
	Standard Angle	Wide Angle	ToF Z Camera	Standard Angle
Field of View	78°	117°	80°	72.5°
Maximum Aperture	f/1.8	f/1.9	f/1.4	f/1.9
Sensor Size	1/1.7"	1/3.4"	1/4"	1/3.1"
Sensor Pixel Size	0.8 µm (1.6 µm pixel binning)	1.00 µm	14 µm	1.22 µm
Resolution (up to)	64 MP (9248 x 6936)	13 MP (4160 x 3120)	N/A	10 MP (3648 x 2736)
Flash	LED	LED	N/A	Selfie-Light

TRIPLE REAR CAMERAS

- **Z Camera** – enables Depth (ToF) and 3D camera features
- **OIS** – capture sharp images quickly with less blur¹
- **2x-10x Crop Zoom**
- **Manual Camera/Video**² – adjust shutter speed, ISO, exposure, white balance, and more; save image as raw (DNG) and JPEG
- **Night view** – take sharper photos at night by adjusting the brightness with the slider
- **3D Tilting Photo** – tilt phone to see more of the background behind the subject
- **Google Lens** – searches what you see and provides relevant online information; features QR code and real-time translator
- **Burst Shot** – take multiple shots quickly by pressing and holding the shutter button
- **Other Camera Modes:** Night View, Panorama, Slo-mo, Youtube Live, Cine shot

TRIPLE REAR CAMERAS & FRONT CAMERA

- **AI Cam**³ – intelligently suggests the optimal effect and angle by automatically identifying what's in the shot
- **Auto Scene Optimizer**¹ – auto adjusts settings based on the subject or scene
- **AI Action Shot**⁴ – automatically adjusts ISO and shutter speed to minimize blur
- **AI Composition**⁵ – recognizes up to 3 people and adjusts the picture composition based on photography's rule of thirds
- **Tips**⁶ – review if subject's eyes are closed or if a photo is blurry
- **PDAF** – autofocus using PD pixel sensor

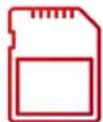
- **Portrait** – bokeh effect blurs the background while keeping the subject in focus
- **HDR** – corrects backlighting with multiple exposure techniques
- **My Avatar** – take a picture of yourself to create a personalizable animated emoji
- **Live photo** – record the action right before and after you take a photo
- **3D AR Effect** – personalize photos with a variety of pre-loaded stickers
- **Quick Sharing** – access sharing apps instantly after taking pictures and videos
- **Timer** – set a 3, 5, or 10 second timer
- **Save as HEIF** – save photos in the high efficiency image format (HEIF) for smaller file size
- **Cheese Shutter** – use your voice to take a picture

FRONT CAMERA

- **Dual Mirror Mode** – use the second screen as a live viewfinder to preview selfies as they are taken
- **Makeup Pro** – manually change the appearance of selfies by adjusting complexion, lip color, or enhancing eyes and eyelashes
- **Auto shot** – take a selfie with automatic face detection
- **Gesture shot** – take a selfie with a simple hand gesture
- **Gesture interval shot** – make a fist twice to take four selfies in a row
- **Gesture view** – automatically preview the image when bringing the phone close
- **Selfie Light** – screen illuminates for well-lit selfies
- **Beauty Shot** – softens facial features

https://www.lg.com/us/mobile-phones/v60-thinq-dual-screen/assets/pdf/Specs_LG_V60_ThinQ_DualScreen_Generic_0316.pdf.

25. The Accused Products include at least one memory configured to store a plurality of selectable pieces of information and a plurality of tag data.

**MEMORY**

- Internal Memory: 128 GB (up to 99 GB usable)¹
- Expandable up to 2 TB with Micro SD Card

https://www.lg.com/us/mobile-phones/v60-thinq-dual-screen/specs#iw_comp1552886069288.

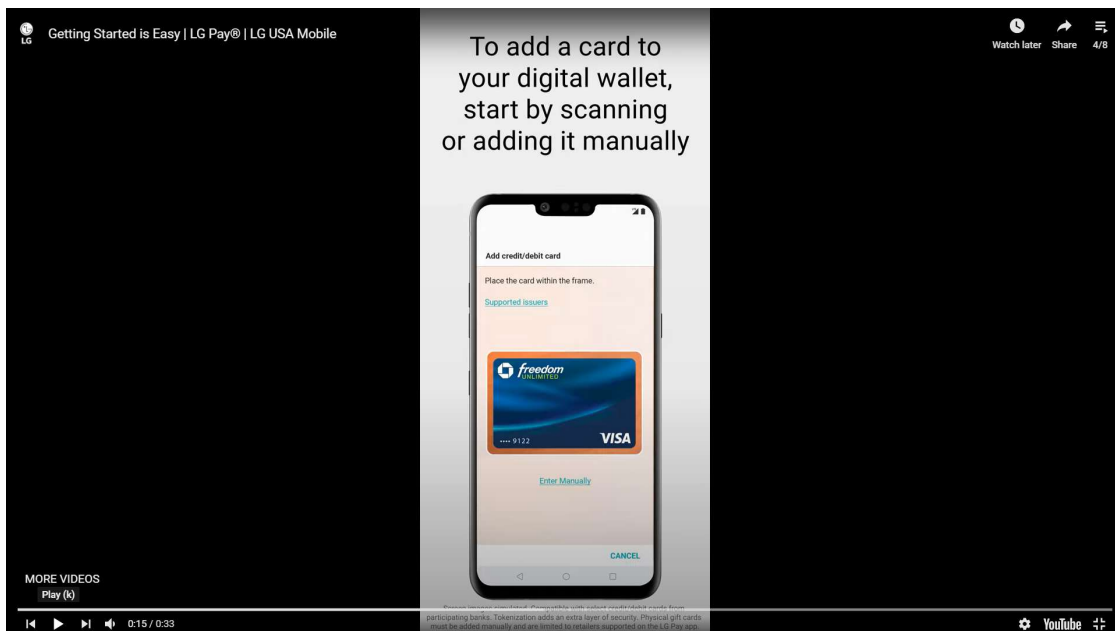
26. The Accused Products include a near field communication (NFC) module comprising an NFC antenna and an NFC controller for use with, among others, LG Pay App.

Contactless Payments, Virtually Everywhere

Leave your plastic cards at home and pay quickly and securely with your phone. LG Pay is a digital wallet that lets you put your credit/debit, gift and loyalty cards into one simple-to-use app.¹ LG Pay is compatible with most NFC readers and Magstripe payment terminals, so you can use it virtually everywhere. And for added convenience, it's also available via voice commands.

<https://www.lg.com/us/lg-pay>.

27. The Accused Products are configured as a digital wallet that allows users to provision credit cards in the digital wallet and perform NFC transactions using a default credit card in the wallet. To provision a credit card in the LG Pay digital wallet, the camera of the Accused Products is used to capture and image of a credit card.



<https://www.lg.com/us/lg-pay#video-4>

28. The Accused Products are configured to process the camera-captured image to obtain data relating to the camera-captured image. When adding a credit card to the LG Pay digital wallet, the Accused Products automatically captures a picture of the credit card to be added. The image of the credit card is processed to extract data, such as the credit card number and the expiration date of the credit card.

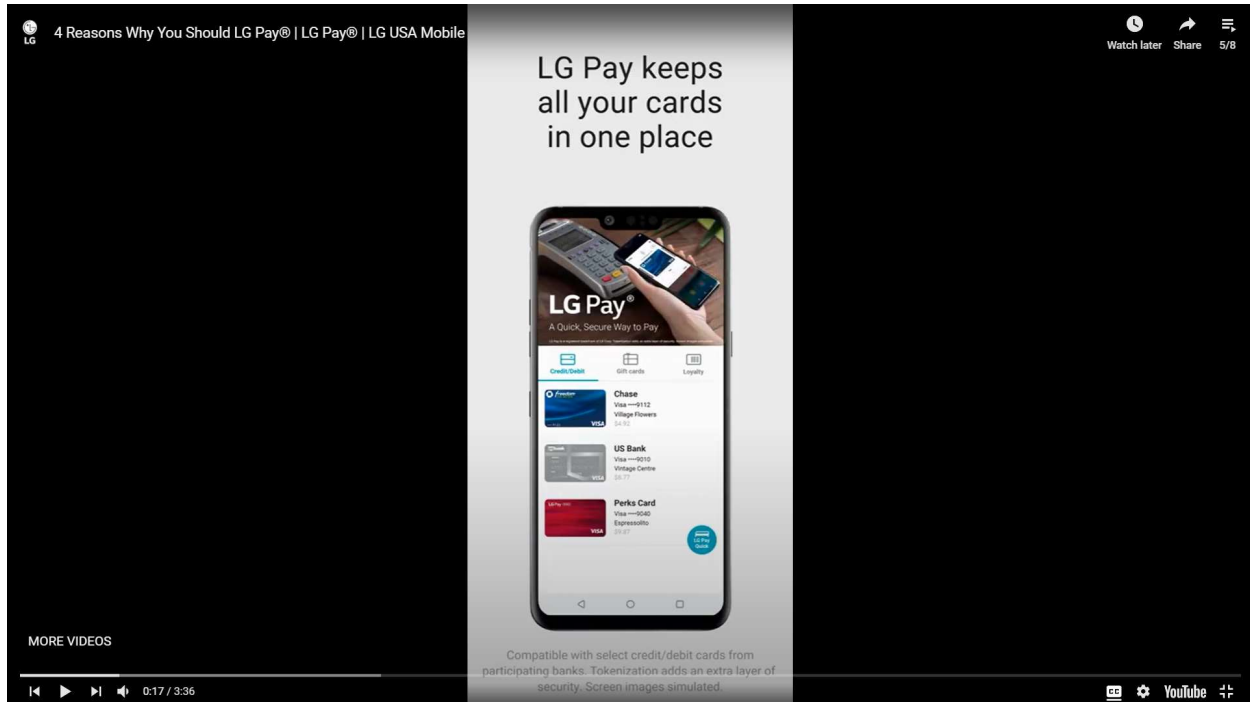
29. The Accused Products are configured to send, to at least one server, the data relating to the camera-captured image. When adding a credit card to the LG Pay digital wallet, the captured data is sent to a server such as a server operated by a payment network, such as Visa or Mastercard.

30. The Accused Products are configured to receive, from the at least one server, a first tag datum corresponding to the data relating to the camera captured image and to store the first tag datum in the at least one memory as part of the plurality of tag data.

31. During card authorization, the credit card information becomes tokenized via a token that represents the credit card account number and corresponds to the camera captured data. In one example, the token is generated by a token service operated by a payment network such as Visa or Mastercard. The token is received by the Accused Products and stored in the memory of the Accused Products. The token is an example of a tag datum that may be used in an NFC financial transaction.

32. The Accused Products are configured to display at least one of the

selectable pieces of information on the digital information display. For example, each credit card entered into the digital wallet is selectable information displayed by the Accused Products. A user may use the default credit card or may select another credit card when performing an NFC financial transaction.

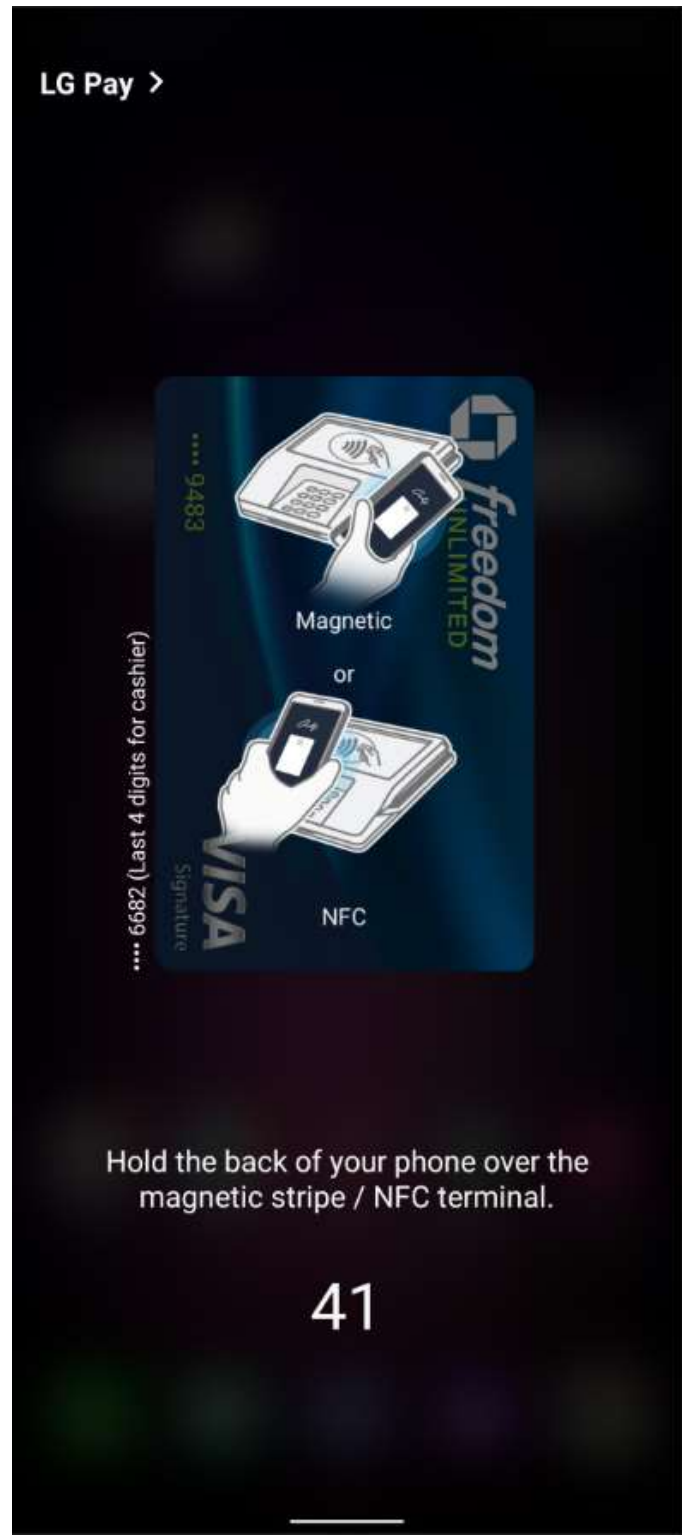


[https://www.lg.com/us/lg-pay#video-4.](https://www.lg.com/us/lg-pay#video-4)

33. The Accused Products are configured to have a default setting for selecting a predetermined one of the selectable pieces of information in the absence of a user selection of one of the selectable pieces of information. This credit card is used when performing an NFC transaction if the user chooses not to select a credit card for use in the NFC transaction.

34. In response to a tagging between the Accused Products and a first external NFC-enabled terminal, and without a user selection of one of the selectable pieces of

information, the NFC-enabled apparatus is configured to cause a transfer of a tag datum corresponding to the predetermined one of the selectable pieces of information from the NFC module to the first external NFC-enabled terminal via an NFC communication channel established between the NFC-enabled apparatus and the first external NFC-enabled terminal. When making an NFC transaction, the user taps the phone on or near the NFC point of sale terminal. When the LG phone comes into close proximity to the NFC point of sale terminal, the LG phone automatically sends the token corresponding to the default card as tag data to the point of sale device. This tag data is transferred through an NFC communication channel



established between the LG phone and the point-of-sale device.

35. During this NFC transaction, the tag datum corresponding to the predetermined one of the selectable pieces of information comprises the first tag datum that corresponds to the data relating to the camera-captured image.

36. During an NFC transaction, the LG phone sends the token stored in the Accused Products to the point of sale terminal. This token is stored on the Accused Products during card authorization and corresponds to the camera captured image of the credit card that has been provisioned on the Accused Products. Once tokenized, the primary account number of the credit card is replaced by a token, which is stored in the memory of the Accused Products.

37. LG has had knowledge and notice of the '377 Patent at least as of the filing date of the Complaint.

38. LG has indirectly infringed and continues to indirectly infringe one or more claims of the '377 Patent, as provided by 35 U.S.C. § 271(b), by inducing infringement by others, such as LG's customers and end-users, in this District and elsewhere in the United States. For example, LG's customers and end-users directly infringe, either literally or under the doctrine of equivalents, through their use of the inventions claimed in the '377 Patent. LG induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other

information to customers and end-users suggesting that they use the Accused Products in an infringing manner, including technical support, marketing, product manuals, advertisements, and online documentation. Because of LG's inducement, LG's customers and end-users use the Accused Products in a way LG intends and they directly infringe the '377 Patent. LG performs these affirmative acts with knowledge of the '377 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '377 Patent.

39. LG has indirectly infringed and continues to indirectly infringe one or more claims of the '377 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement by others, such as customers and end-users, in this District and elsewhere in the United States. LG's affirmative acts of selling and offering to sell the Accused Products in this District and elsewhere in the United States and causing the Accused Products to be manufactured, used, sold and offered for sale contributes to others' use and manufacture of the Accused Products such that the '377 Patent is directly infringed by others. The accused components within the Accused Products are material to the invention of the '377 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by LG to be especially made or adapted for use in the infringement of the '377 Patent. LG performs these affirmative acts with knowledge of the '377 Patent and with intent, or willful blindness, that they cause the direct infringement of the '377 Patent.

40. Because of LG's direct and indirect infringement of the '377 Patent, AQTECH has suffered, and will continue to suffer, damages in an amount to be proved at trial.

41. Because of LG's direct and indirect infringement of the '377 Patent, AQTECH has suffered, and will continue to suffer, irreparable harm for which there is no adequate remedy at law, unless LG's infringement is enjoined by this Court.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the Court enter judgment in favor of AQTECH and against LG:

1. declaring that the Defendant has infringed the asserted patents;
2. awarding Plaintiff its damages suffered as a result of Defendant's infringement;
3. awarding Plaintiff its costs, attorneys' fees, expenses, and prejudgment and post-judgment interest; and
4. granting Plaintiff such further relief as the Court deems just and proper.

JURY DEMAND

Plaintiff hereby demands a trial by jury of all issues so triable pursuant to Fed. R. Civ. P. 38.

Dated: January 29, 2021

Respectfully Submitted,

By: /s/ Cabrach Connor
Cabrach J. Connor

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