

Exhibit A

Claim Chart for U.S. Patent No. 9,462,411

The Accused Products include all Samsung-branded smartphones that support Samsung Pay/Samsung Wallet (“Samsung Pay”) and/or Google Pay/Google Wallet (“Google Pay”) and associated methods of using Samsung Pay and/or Google Pay. Based on the information presently available, Telcom is informed and believes that Samsung directly and indirectly infringes U.S. Patent No. 9,462,411 (the “’411 Patent”) as set forth herein. Samsung directly infringes claims 1-4 of the ’411 Patent when it makes, uses, sells, offers for sale, and/or imports the Accused Products. Samsung indirectly infringes claims 1-4 of the ’411 Patent by actively inducing direct infringement by its customers and end-users of the Accused Products.

When Samsung or its customers or end-users make, use, sell, offer for sale, or import the Accused Products capable of carrying out Samsung Pay and/or Google Pay functionality, the asserted apparatus claims are infringed. When Samsung or its customers or end-users use the Samsung Pay and/or Google Pay functionality in the Accused Products, the asserted method claims are infringed. Samsung and its customers and end-users commit acts of direct infringement when, for example, Samsung and its customers and end-users make, use (including testing), sell, offer for sale, or import the Accused Products. Samsung commits acts of indirect infringement when, for example, Samsung contributes to or induces its customers and end-users to infringe by, for example, making instructions available on Samsung’s and others’ websites, or otherwise providing documentation directly or indirectly to customers and end-users that instructs, describes, educates, encourages, and/or explains how to operate the Accused Products in an infringing manner, as shown, for example, by the exemplary documentation cited in this chart. By way of example, Samsung’s and its customers’ documentation instruct, describe, educate, encourage, and/or explain the use of the Accused Products in an infringing manner, including through the Samsung Pay and Google Pay functionality as claimed herein. The Accused Products include at least one component that constitutes a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of the patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use. Samsung is therefore liable for all acts of direct infringement and indirect infringement of the patent.

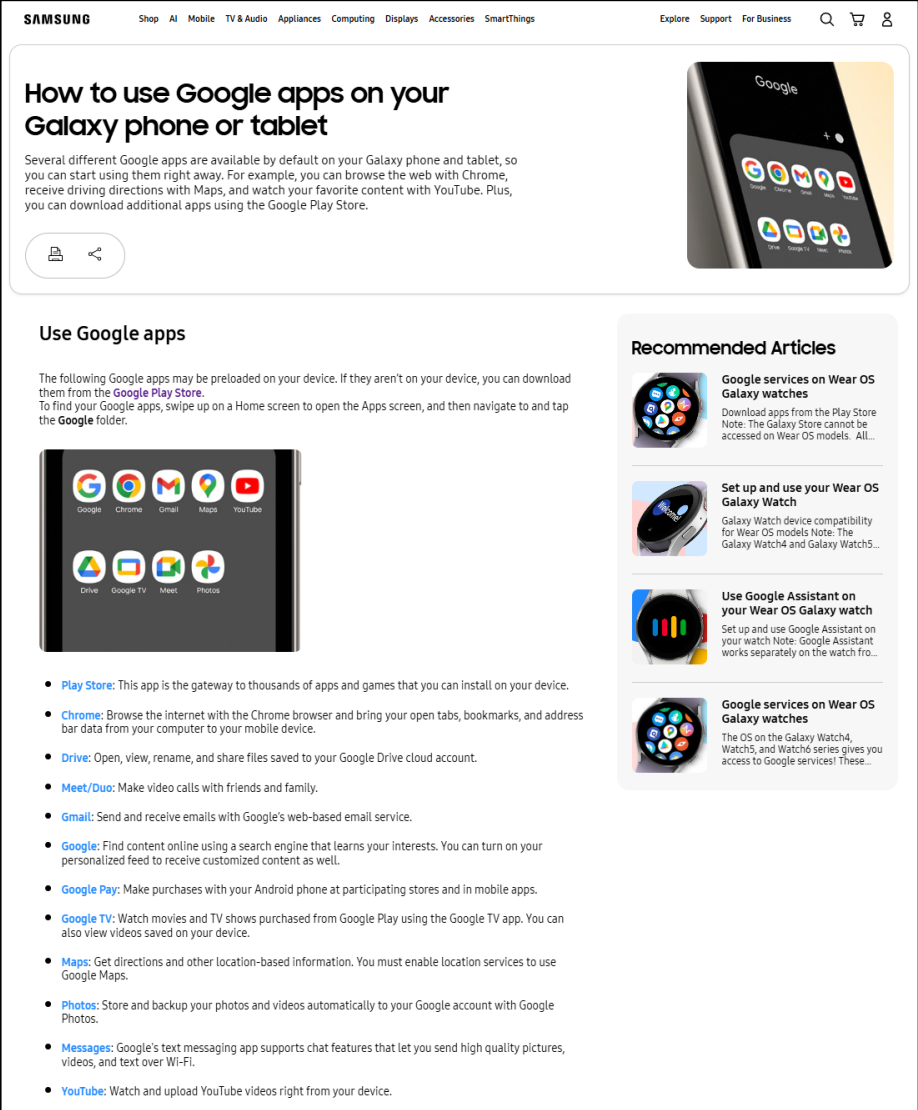
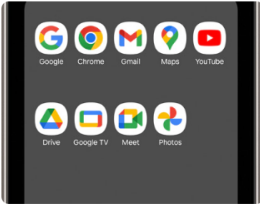
Claim	Exemplary Infringement Analysis ¹
[1.p.] A method comprising:	The Accused Products are capable of performing “a method.”

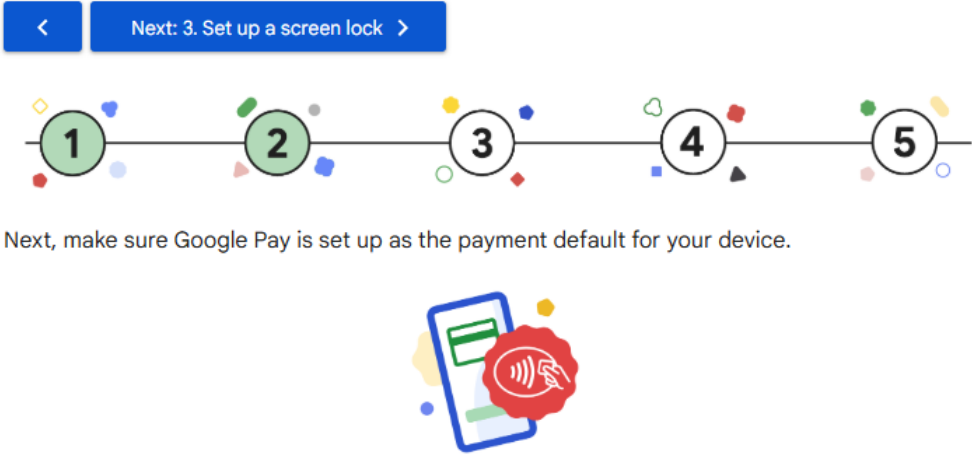
¹ These infringement contentions are prepared with publicly available information. Telcom’s investigation is ongoing, and discovery has not yet begun. Telcom hereby incorporates by reference the cover pleading to which this claim chart is attached. Telcom reserves the right to seek leave of the Court to amend or supplement these contentions after further investigation and discovery from Samsung and non-parties. Such supplemental information may include, but is not

Claim	Exemplary Infringement Analysis ¹
	For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay satisfies claim 1. Fast, secure payments with Samsung Pay Samsung Pay allows you to tap to pay with your device anywhere NFC is available, making in-store payments quick and secure¹. You can also use Samsung Pay for in-app and online purchases at participating merchants, including Samsung.com. Learn more https://www.samsung.com/us/apps/samsung-wallet/

limited to, design specifications, deposition testimony, testing information, reference designs, implementation and utilization information, source code, and/or schematics. Telcom also reserves the right to accuse different products or find alternative literal and/or equivalent infringing elements in Samsung's products based on further investigation and discovery or other circumstances. Any elements found not to be literally infringed are infringed under the doctrine of equivalents because the differences between the claimed inventions and the Accused Products, if any, are insubstantial. In addition, Samsung has not yet advised Telcom of any non-infringement arguments as to any claim or claim element. If and when Samsung does so, Telcom reserves the right to seek leave of the Court to address such arguments, including by providing any appropriate additional discussion pertaining to the application of the doctrine of equivalents with respect to Samsung's argument concerning non-infringement.

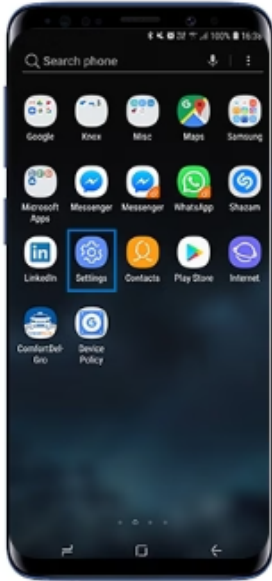
Claim	Exemplary Infringement Analysis ¹
	Settings > How to set up Google Pay All categories Change device All topics  1 Pay with ease using your Samsung Galaxy S10. Google Pay allows you to make payments for purchases you make in-store and online. Follow these steps to learn how to set up Google Pay. 2 Go to the Home screen. To open the menu, swipe up or down on the screen. 3 Choose Google Pay. Previous 1 / 23 Next https://www.t-mobile.com/support/tutorials/device/samsung/galaxy-s10/topic/settings/how-to-set-up-google-pay

Claim	Exemplary Infringement Analysis ¹
	 SAMSUNG Shop AI Mobile TV & Audio Appliances Computing Displays Accessories SmartThings Explore Support For Business How to use Google apps on your Galaxy phone or tablet Several different Google apps are available by default on your Galaxy phone and tablet, so you can start using them right away. For example, you can browse the web with Chrome, receive driving directions with Maps, and watch your favorite content with YouTube. Plus, you can download additional apps using the Google Play Store. Use Google apps The following Google apps may be preloaded on your device. If they aren't on your device, you can download them from the Google Play Store. To find your Google apps, swipe up on a Home screen to open the Apps screen, and then navigate to and tap the Google folder.  • Play Store: This app is the gateway to thousands of apps and games that you can install on your device. • Chrome: Browse the internet with the Chrome browser and bring your open tabs, bookmarks, and address bar data from your computer to your mobile device. • Drive: Open, view, rename, and share files saved to your Google Drive cloud account. • Meet/Duo: Make video calls with friends and family. • Gmail: Send and receive emails with Google's web-based email service. • Google: Find content online using a search engine that learns your interests. You can turn on your personalized feed to receive customized content as well. • Google Pay: Make purchases with your Android phone at participating stores and in mobile apps. • Google TV: Watch movies and TV shows purchased from Google Play using the Google TV app. You can also view videos saved on your device. • Maps: Get directions and other location-based information. You must enable location services to use Google Maps. • Photos: Store and backup your photos and videos automatically to your Google account with Google Photos. • Messages: Google's text messaging app supports chat features that let you send high quality pictures, videos, and text over Wi-Fi. • YouTube: Watch and upload YouTube videos right from your device. Recommended Articles Google services on Wear OS Galaxy watches Download apps from the Play Store Note: The Galaxy Store cannot be accessed on Wear OS models. All... Set up and use your Wear OS Galaxy Watch Galaxy Watch device compatibility for Wear OS models Note: The Galaxy Watch4 and Galaxy Watch5... Use Google Assistant on your Wear OS Galaxy watch Set up and use Google Assistant on your watch Note: Google Assistant works separately on the watch fro... Google services on Wear OS Galaxy watches The OS on the Galaxy Watch4, Watch5, and Watch6 series gives you access to Google services! These... https://www.samsung.com/us/support/answer/ANS10002548/

Claim	Exemplary Infringement Analysis ¹
	Set up tap to pay on your phone 2. Set Google Pay as your default payment app  Next, make sure Google Pay is set up as the payment default for your device. 1. On your Android device, open the Settings app. 2. In the search bar, type "NFC." 3. Tap NFC > Contactless payments > Payment default. 4. Select Google Pay. 5. Tap OK. Steps may differ depending on your device. https://support.google.com/wallet/answer/14187052?sjid=3604572701579461674-NA Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.a.] sensing by a smartphone,	The Accused Products use a method that involves “sensing by a smartphone, using a smartphone-based sensor, physiological data associated with a living organism.”

Claim	Exemplary Infringement Analysis ¹
using a smartphone-based sensor, physiological data associated with a living organism;	For example, Samsung makes a variety of smartphones capable of utilizing Samsung Pay and/or Google Pay. Galaxy Z Series Galaxy Z Fold6 Z Flip6 Galaxy Z Fold5 Z Flip5 Galaxy Z Fold4 Z Flip4 Galaxy Z Fold3 Z Flip3 5G Galaxy Z Fold2 5G* Galaxy Z Flip* Galaxy Fold* Galaxy Note Series Galaxy Note20 Note20 Ultra 5G* Galaxy Note10 Lite Galaxy Note10 Note10+* Galaxy Note9* Galaxy Note8* Galaxy Note Fan Edition* Galaxy Note5* Galaxy S Series Galaxy S24 S24+ S24 Ultra Galaxy S23 FE 5G Galaxy S23 S23+ S23 Ultra 5G Galaxy S22 S22+ S22 Ultra 5G Galaxy S21 FE 5G Galaxy S21 S21+ S21 Ultra 5G Galaxy S20 FE S20 FE 5G Galaxy S20 S20+ S20 Ultra* Galaxy S10 Lite Galaxy S10e S10 S10+* Galaxy S9 S9+* Galaxy S8 S8+* Galaxy S7 edge S7* Galaxy S6 edge+* See https://www.samsung.com/my/samsung-pay/supported-devices/

Claim	Exemplary Infringement Analysis ¹
	On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. Using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes using a smartphone-based fingerprint scanner, iris scanner, or facial scanner to sense physiological data such as a fingerprint, facial recognition, or an iris associated with the user of the smartphone. How is Samsung Pay secured? Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure. https://www.samsung.com/uk/samsung-pay/faq/

Claim	Exemplary Infringement Analysis ¹
	Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps: 1 Tap Settings  https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/

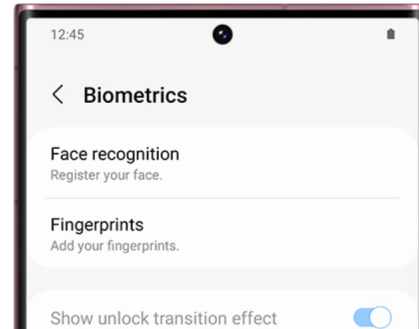
Claim	Exemplary Infringement Analysis ¹
	Set up and use fingerprint unlock  It's time to set up fingerprint security and register your prints. The steps will be almost exactly the same, no matter what device you have. The only difference will be where the fingerprint sensor is located. 1 Navigate to Settings, then tap Security and privacy, and then tap Biometrics. Tap Fingerprints. 2 Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap Continue. 3 Tap Register, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap Done. 4 Next, make sure that the switch next to Fingerprint unlock is turned on. Note: If the fingerprint sensor on your device is located on the Side key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks. 5 To unlock your device using your finger, tap the screen or press the Power button or Side button. Then, place the registered finger on the fingerprint scanner, wherever it's located. The device will automatically unlock if it recognizes your fingerprint. https://www.samsung.com/us/support/answer/ANS10001613/

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

1. From **Settings**, swipe to and tap **Security and privacy**, and then tap **Biometrics**.
2. Tap **Face recognition**, and then enter your PIN or password. If you do not already have a secure screen lock, you will need to set one up.
3. Tap **Continue**, and then hold the phone 8-20 inches away as you position your face inside the circle. Hold the position until the progress bar reaches 100%. You may be prompted to remove your glasses to finish the process.
4. When you're done, adjust your desired settings.



<https://www.samsung.com/us/support/answer/ANS00062630/>

Claim	Exemplary Infringement Analysis ¹
	How to enable Iris authentication for Samsung Pay? Last Update date : Oct 08. 2020 The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device. Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay. https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/ Pay in a store Step 1: Wake up & unlock your phone Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. Tip: In most countries or regions, smaller transactions don't require you to unlock your phone. https://support.google.com/wallet/answer/12060043?hl=en

Claim	Exemplary Infringement Analysis ¹
	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap Security. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap Screen lock. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.b.] detecting that a proximity criterion is satisfied between the	The Accused Products use a method that involves “detecting that a proximity criterion is satisfied between the smartphone and an entity, wherein the entity is not the living organism.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung

Claim	Exemplary Infringement Analysis ¹
smartphone and an entity, wherein the entity is not the living organism;	smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes detecting that a proximity criterion is satisfied between the Samsung smartphone and an entity that is not a living organism such as a point-of-sale terminal utilizing near-field communication (NFC) technology. Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/ How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/

Claim	Exemplary Infringement Analysis ¹
	Where you can use Google Wallet Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:   <i>Google Pay symbol Contactless symbol</i> https://support.google.com/wallet/answer/12060043?hl=en

Claim	Exemplary Infringement Analysis ¹
	Step 2: Hold the back of your phone to the payment reader When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. https://support.google.com/wallet/answer/12060043?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.c.] selectively communicating by the smartphone using a first air interface of a plurality of air interfaces with which the smartphone is capable of	The Accused Products use a method that involves “selectively communicating by the smartphone using a first air interface of a plurality of air interfaces with which the smartphone is capable of communicating, responsive to the proximity criterion having been detected as being satisfied and responsive to a value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes communicating using NFC (a first air interface out of a plurality of air interfaces with which the Samsung smartphone is capable of communicating). The communicating is responsive to the proximity criterion having been detected as being satisfied and is responsive to a value

Claim	Exemplary Infringement Analysis ¹
communicating, responsive to the proximity criterion having been detected as being satisfied and responsive to a value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor;	of the physiological data (such as a fingerprint, facial recognition, or an iris) associated with the user that was sensed by the Samsung smartphone using the smartphone-based sensor. How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

Claim	Exemplary Infringement Analysis ¹
	 The screenshot shows a black background with a blue Visa Debit card at the top. The card displays the Visa logo, the word 'DEBIT', and a blue geometric logo. To the right of the card, the text 'for cashier) 7064' is visible. Below the card, a small circle contains the number '14'. Further down, the text 'Place the back of the device against the card/NFC reader.' is displayed, followed by a link that says 'View tutorial'. https://www.samsung.com/us/support/answer/ANS00045102/

Claim	Exemplary Infringement Analysis ¹
	Where you can use Google Wallet Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:   <i>Google Pay symbol Contactless symbol</i> https://support.google.com/wallet/answer/12060043?hl=en

Claim	Exemplary Infringement Analysis ¹
	Pay in a store Step 1: Wake up & unlock your phone Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. Tip: In most countries or regions, smaller transactions don't require you to unlock your phone. Step 2: Hold the back of your phone to the payment reader When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. Step 3: If prompted, follow the on-screen instructions Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • Debit cards: Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • Credit cards: For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en#

Claim	Exemplary Infringement Analysis ¹
	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap Security. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap Screen lock. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.d.] refraining from communicating by the smartphone using the first air interface absent	The Accused Products use a method that involves “refraining from communicating by the smartphone using the first air interface absent said value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor satisfying a criterion, even though the proximity criterion is detected as being satisfied.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes refraining from communicating

Claim	Exemplary Infringement Analysis ¹
said value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor satisfying a criterion, even though the proximity criterion is detected as being satisfied;	using NFC (the first air interface) absent the value of the physiological data (iris, facial recognition, or fingerprint) associated with the user that was sensed by the Samsung smartphone's sensor such as a face scanner, an iris scanner, or fingerprint scanner. That is so even though the Samsung smartphone detects that the proximity criterion is satisfied. How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. Is Samsung Pay blocked by entering the PIN or fingerprint incorrectly? Samsung Pay allows you to make 5 attempts to unlock the application by authenticating with their IRIS (available on selected phones), fingerprint or PIN. After 5 attempts, the device then requests a security password (also 5 attempts). Thereafter, using an incorrect security password locks the phone for 30 seconds. The process is repeated 20 times (each block is longer) and then all data is deleted. https://www.samsung.com/uk/samsung-pay/faq/

Claim	Exemplary Infringement Analysis ¹
	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap Security. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap Screen lock. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.e.] selectively sending information by the smartphone to one or more other devices and receiving	The Accused Products use a method that includes “selectively sending information by the smartphone to one or more other devices and receiving information by the smartphone from the one or more other devices responsive to said value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor satisfying the criterion.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung

Claim	Exemplary Infringement Analysis ¹
information by the smartphone from the one or more other devices responsive to said value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor satisfying the criterion; and	smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes selectively sending information by the Samsung smartphone to one or more other devices (such as the point-of-sale terminal) and receiving information (such as a confirmation) from the point-of sale terminal responsive to the value of the physiological data (a fingerprint, facial recognition, or iris) associated with the user of the Samsung smartphone using the smartphone-based sensor satisfying the criterion. How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ When you make a payment When you make a payment, you will need to authenticate your identity by using your fingerprint or Samsung Pay PIN before the information can be sent to the payment terminal. The merchant will only receive a token, and your payment information will be kept secure. The token will be sent to the payment network, where it will be decrypted and verified against the information stored in a secure vault on internal networks. Once authenticated, the payment will be approved and sent back to the merchant. Only the payment network and your bank will have information about the transaction. https://www.samsung.com/us/support/answer/ANS00043932/ What is Tokenization? Samsung Pay uses network tokenization technology that replaces your real card details with a dynamic digital token that is transmitted instead of your physical card's number. So your transactions remain secure, and your shopping stays safe.

Claim	Exemplary Infringement Analysis ¹
	Will I receive a receipt after making a purchase with Samsung Pay? When paying with Samsung Pay you will receive a receipt for your purchases just as you would with a physical card. You will receive a notification confirmation about your transaction, but you will not receive a separate physical or digital receipt from Samsung Pay. https://www.samsung.com/uk/samsung-pay/faq/ Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap Security. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap Screen lock. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en

Claim	Exemplary Infringement Analysis ¹
	Pay in a store Step 1: Wake up & unlock your phone Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions. Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app. Tip: In most countries or regions, smaller transactions don't require you to unlock your phone. Step 2: Hold the back of your phone to the payment reader When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. Step 3: If prompted, follow the on-screen instructions Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen. • Debit cards: Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device. • Credit cards: For larger transactions, sign the receipt or the on-screen signature box. https://support.google.com/wallet/answer/12060043?hl=en#

Claim	Exemplary Infringement Analysis ¹
	What device tokens are When you pay for something with a physical card — credit, debit or prepaid — the merchant usually charges you through the printed number on the front of your card, known as the Funding Primary Account Number (FPAN). Every time this happens, you provide that number to the merchant, and that number is then sent along to a handful of other parties like the merchant’s bank, the card network (an organization that facilitates transactions between banks and merchants), the payment service provider and more. In contrast, Google Wallet creates a device-specific virtual account number, or device token, for each payment method you add, so your real card number isn’t stored on your device or shared with merchants. Thanks to this tokenization, the only parties who have your actual FPAN when you make a purchase are the bank that issued the card and the card network. What’s more, your device token functions independently from your physical card. It’s linked to your bank account or line of credit, not the card itself. So you can think of a device token as a super-safe messenger between your bank account or line of credit and whoever you’re buying something from. https://blog.google/products/google-pay/device-tokens-google-wallet/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[1.f.] communicating by the smartphone using a second interface of the plurality of air interfaces with	The Accused Products use a method that includes “communicating by the smartphone using a second interface of the plurality of air interfaces with which the smartphone is capable of communicating that differs from the first air interface.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a user can use a Samsung smartphone for communicating using a second interface (a cellular data network or WiFi) of the plurality of air interfaces with which the Samsung smartphone is capable of communicating. The second air interface (a cellular data network or WiFi) differs from the first air interface (NFC).

Claim	Exemplary Infringement Analysis ¹
which the smartphone is capable of communicating that differs from the first air interface.	What is mobile data & how do I turn it on or off Mobile data is the internet connectivity provided by your mobile network provider. While your phone will automatically switch to Wi-Fi if a network is available, you can manually control your mobile data use by enabling and disabling it. You can also enable Data saver to prevent mobile data usage by apps that are running in the background. If you have disabled mobile data and would like to activate Wifi calling, <a data-bbox="1163 656 1440 680" href="#">you can find out more here.
	<a data-bbox="371 711 1575 740" href="https://www.samsung.com/uk/support/mobile-devices/how-do-i-enable-or-disable-mobile-data/">https://www.samsung.com/uk/support/mobile-devices/how-do-i-enable-or-disable-mobile-data/ How to enable or disable Mobile data on your Galaxy phone Last Update date : Nov 17, 2021 Mobile data is an internet connection provided by a mobile network provider. You can <a data-bbox="371 1105 1911 1135" href="https://www.samsung.com/latin_en/support/mobile-devices/how-to-enable-or-disable-mobile-data-on-your-galaxy-phone/">https://www.samsung.com/latin_en/support/mobile-devices/how-to-enable-or-disable-mobile-data-on-your-galaxy-phone/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

Claim	Exemplary Infringement Analysis ¹
[2.a.] The method according to claim 1, wherein said detecting that a proximity criterion is satisfied between the smartphone and an entity comprises: detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity;	The Accused Products use a method including “wherein said detecting that a proximity criterion is satisfied between the smartphone and an entity comprises: detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity (the point-of-sale terminal). How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/

Claim	Exemplary Infringement Analysis ¹
	Where you can use Google Wallet Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:   <i>Google Pay symbol Contactless symbol</i> https://support.google.com/wallet/answer/12060043?hl=en NFC is limited to short-range communication, which has important implications for physical access security. A user must be within 3.5 inches (10 cm) of an NFC terminal to process a payment or open a door. Another important aspect is that no power is required for the basic https://www.techtarget.com/searchmobilecomputing/definition/Near-Field-Communication Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

[2.b.] wherein the detecting is performed by the smartphone, by a device that is associated with the entity, by a system that is associated with the smartphone, or a combination thereof.

The Accused Products use a method that includes “wherein the detecting is performed by the smartphone, by a device that is associated with the entity, by a system that is associated with the smartphone, or a combination thereof.”

For example, using a Samsung smartphone to conduct financial transactions via Samsung Pay and/or Google Pay includes the smartphone, a system associated with the smartphone, or a combination thereof detecting that the proximity criterion is satisfied.

How does Samsung Pay work?

Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments.

How do I make in-store purchases with Samsung Pay?

- Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen.
- Next, select the card you want to pay with.
- You can authenticate by IRIS (available on selected phones), fingerprint or pin.
- Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction.

<https://www.samsung.com/uk/samsung-pay/faq/>

Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity.

NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with [Samsung Pay](#). NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam.

<https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/>

	Where you can use Google Wallet Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app. To use tap to pay on Pixel Fold or another foldable device, fold your device. You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout. You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:   <i>Google Pay symbol Contactless symbol</i> https://support.google.com/wallet/answer/12060043?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[3.p]. A smartphone comprising:	The Accused Products are “smartphone[s].” For example, a Samsung smartphone that conducts financial transactions via Samsung Pay and/or Google Pay satisfies claim 3.

Galaxy Z Series

Galaxy Z Fold6 | Z Flip6
Galaxy Z Fold5 | Z Flip5
Galaxy Z Fold4 | Z Flip4
Galaxy Z Fold3 | Z Flip3 5G
Galaxy Z Fold2 5G*
Galaxy Z Flip*
Galaxy Fold*

Galaxy Note Series

Galaxy Note20 | Note20 Ultra 5G*
Galaxy Note10 Lite
Galaxy Note10 | Note10+*
Galaxy Note9*
Galaxy Note8*
Galaxy Note Fan Edition*
Galaxy Note5*

Galaxy S Series

Galaxy S24 | S24+ | S24 Ultra
Galaxy S23 FE 5G
Galaxy S23 | S23+ | S23 Ultra 5G
Galaxy S22 | S22+ | S22 Ultra 5G
Galaxy S21 FE 5G
Galaxy S21 | S21+ | S21 Ultra 5G
Galaxy S20 FE | S20 FE 5G
Galaxy S20 | S20+ | S20 Ultra*
Galaxy S10 Lite
Galaxy S10e | S10 | S10+*
Galaxy S9 | S9+*
Galaxy S8 | S8+*
Galaxy S7 edge | S7*
Galaxy S6 edge+*

See <https://www.samsung.com/my/samsung-pay/supported-devices/>

Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.

[3.a.] a processor that is configured to control the smartphone to perform operations comprising:	The Accused Products include “a processor that is configured to control the smartphone to perform operations.” For example, a Samsung smartphone has a processor. In one example, the Samsung Exynos processors are configured to control the Galaxy S22 Ultra to perform operations. As another example, Samsung utilizes Qualcomm® Snapdragon® processors in its Galaxy S24 Plus smartphones. Smartphone Samsung Exynos processors for smartphone is designed to deliver a superior experience with powerful performance, energy efficiency, and fast internet connection. Galaxy S22 Ultra Exynos 2200 https://semiconductor.samsung.com/processor/showcase/ Processor <table> <tr> <td>Chipset</td><td>Qualcomm® Snapdragon® 8 Gen 3 for Galaxy</td></tr> <tr> <td>Cores</td><td>Octa-core, 1 @ 3.39GHz, 3 @ 3.1GHz, 2 @ 2.9GHz, 2 @ 2.2GHz</td></tr> </table> https://www.att.com/buy/phones/samsung-galaxy-s24plus.html Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.	Chipset	Qualcomm® Snapdragon® 8 Gen 3 for Galaxy	Cores	Octa-core, 1 @ 3.39GHz, 3 @ 3.1GHz, 2 @ 2.9GHz, 2 @ 2.2GHz
Chipset	Qualcomm® Snapdragon® 8 Gen 3 for Galaxy				
Cores	Octa-core, 1 @ 3.39GHz, 3 @ 3.1GHz, 2 @ 2.9GHz, 2 @ 2.2GHz				
[3.b.] sensing, using a	The Accused Products are configured for “sensing, using a smartphone-based sensor, physiological data associated with a living organism.”				

smartphone-based sensor, physiological data associated with a living organism;

For example, Samsung makes a variety of smartphones capable of utilizing Samsung Pay and/or Google Pay.

Galaxy Z Series

Galaxy Z Fold6 | Z Flip6
Galaxy Z Fold5 | Z Flip5
Galaxy Z Fold4 | Z Flip4
Galaxy Z Fold3 | Z Flip3 5G
Galaxy Z Fold2 5G*
Galaxy Z Flip*
Galaxy Fold*

Galaxy Note Series

Galaxy Note20 | Note20 Ultra 5G*
Galaxy Note10 Lite
Galaxy Note10 | Note10+*
Galaxy Note9*
Galaxy Note8*
Galaxy Note Fan Edition*
Galaxy Note5*

Galaxy S Series

Galaxy S24 | S24+ | S24 Ultra
Galaxy S23 FE 5G
Galaxy S23 | S23+ | S23 Ultra 5G
Galaxy S22 | S22+ | S22 Ultra 5G
Galaxy S21 FE 5G
Galaxy S21 | S21+ | S21 Ultra 5G
Galaxy S20 FE | S20 FE 5G
Galaxy S20 | S20+ | S20 Ultra*
Galaxy S10 Lite
Galaxy S10e | S10 | S10+*
Galaxy S9 | S9+*
Galaxy S8 | S8+*
Galaxy S7 edge | S7*
Galaxy S6 edge+*

See <https://www.samsung.com/my/samsung-pay/supported-devices/>

On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. A Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including using a smartphone-based fingerprint scanner, iris scanner, or facial scanner to sense physiological data such as a fingerprint, facial recognition, or an iris associated with the user of the smartphone.

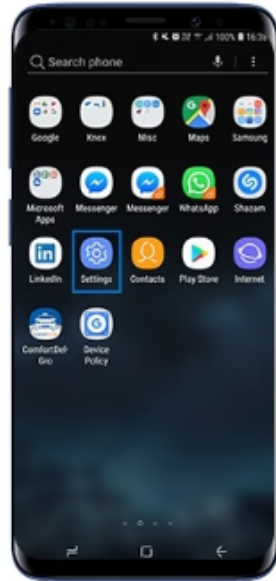
How is Samsung Pay secured?

Samsung Pay uses Tokenization and Samsung KNOX to secure your payment information. Additionally, your fingerprint or a 4-digit PIN is required to authorize in-store purchases. On the new Galaxy S9, S9+, Note9, S8, S8+ or Note8 you can also use iris scanning* technology to keep your transactions secure.

<https://www.samsung.com/uk/samsung-pay/faq/>

Face recognition lets you unlock your phone in one quick move. To use Face Recognition, follow these steps:

1 Tap Settings



<https://www.samsung.com/sg/support/mobile-devices/how-to-use-face-recognition-to-unlock-samsung-mobile-device/>

Set up and use fingerprint unlock

It's time to set up fingerprint security and register your prints. The steps will be almost exactly the same, no matter what device you have. The only difference will be where the fingerprint sensor is located.

- 1** Navigate to **Settings**, then tap **Security and privacy**, and then tap **Biometrics**. Tap **Fingerprints**.
- 2** Enter your lock screen credentials. If you do not have a screen lock set up, you may be prompted to create one at this point. When you're ready, read the information, and then tap **Continue**.
- 3** Tap **Register**, and then use the on-screen prompts to register your fingerprint. When registering your fingerprint, make sure to fully cover the fingerprint sensor with your finger to prevent strong light from entering the fingerprint sensor. When you're finished, tap **Done**.
- 4** Next, make sure that the **switch** next to Fingerprint unlock is turned on.
Note: If the fingerprint sensor on your device is located on the Side key or below the Side key, you can disable the "Fingerprint always on" option to prevent accidental unlocks.
- 5** To unlock your device using your finger, tap the screen or press the **Power** button or **Side** button. Then, place the registered finger on the fingerprint scanner, wherever it's located. The device will automatically unlock if it recognizes your fingerprint.

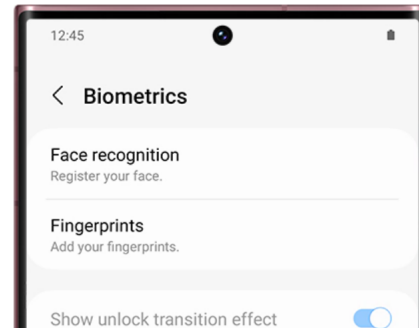
<https://www.samsung.com/us/support/answer/ANS10001613/>

Set up Facial recognition

Note: To use Face recognition, you need to set a PIN, Pattern, or Password first.

Your face is unique to you, which makes it one of the best security features in your arsenal.

1. From **Settings**, swipe to and tap **Security and privacy**, and then tap **Biometrics**.
2. Tap **Face recognition**, and then enter your PIN or password. If you do not already have a secure screen lock, you will need to set one up.
3. Tap **Continue**, and then hold the phone 8-20 inches away as you position your face inside the circle. Hold the position until the progress bar reaches 100%. You may be prompted to remove your glasses to finish the process.
4. When you're done, adjust your desired settings.



<https://www.samsung.com/us/support/answer/ANS00062630/>

How to enable Iris authentication for Samsung Pay?

Last Update date : Oct 08, 2020

The iris recognition feature uses the unique characteristics of your irises to strengthen the security of your device.

Once your irises are registered, you can set the device to enable Iris authentication for Samsung Pay.

<https://www.samsung.com/sg/support/mobile-devices/how-to-enable-iris-authentication-for-samsung-pay/>

Pay in a store

Step 1: Wake up & unlock your phone

Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions.

Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app.

Tip: In most countries or regions, smaller transactions [don't require you to unlock your phone](#).

<https://support.google.com/wallet/answer/12060043?hl=en>

	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap Security. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap Screen lock. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[3.c.] detecting that a proximity criterion is satisfied between the smartphone and an entity,	The Accused Products are configured for "detecting that a proximity criterion is satisfied between the smartphone and an entity, wherein the entity is not the living organism." On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pays is configured to perform operations including

wherein the entity is not the living organism;	detecting that a proximity criterion is satisfied between the Samsung smartphone and an entity that is not a living organism such as a point-of-sale terminal utilizing near-field communication (NFC) technology. How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/
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Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:



Google Pay symbol Contactless symbol

<https://support.google.com/wallet/answer/12060043?hl=en>

	Step 2: Hold the back of your phone to the payment reader When you're done paying, a blue check mark appears on the screen. If the check mark isn't on your screen: • Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device. • Hold your phone closer to the payment reader. • Hold your phone to the payment reader for a few extra seconds. If there's a check mark but the cashier says that the payment didn't work: • Double-check if the store accepts mobile payments. • Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged. https://support.google.com/wallet/answer/12060043?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[3.d.] selectively communicating using a first air interface of a plurality of air interfaces with which the smartphone is capable of communicating, responsive to the proximity	The Accused Products are configured for “selectively communicating using a first air interface of a plurality of air interfaces with which the smartphone is capable of communicating, responsive to the proximity criterion having been detected as being satisfied and responsive to a value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including communicating using NFC (a first air interface out of a plurality of air interfaces with which the Samsung smartphone is capable of communicating). The communicating is responsive to the proximity criterion having been detected as being satisfied and is responsive to a value of the physiological data (such as a fingerprint, facial recognition, or an iris) associated with the user that was sensed by the Samsung smartphone using the smartphone-based sensor.

criterion having been detected as being satisfied and responsive to a value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor

How does Samsung Pay work?

Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments.

How do I make in-store purchases with Samsung Pay?

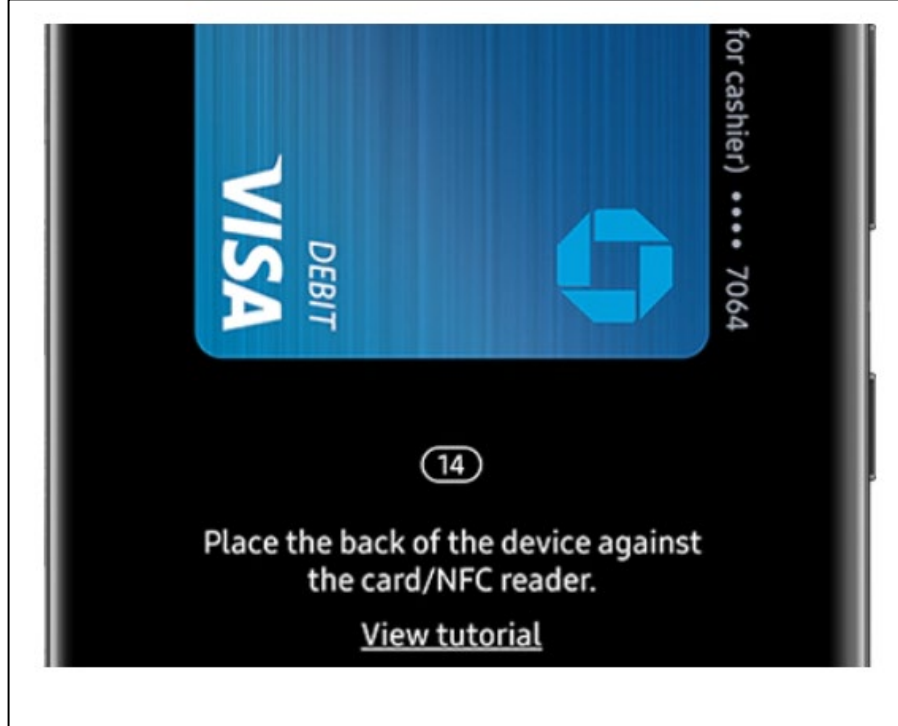
- Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen.
- Next, select the card you want to pay with.
- You can authenticate by IRIS (available on selected phones), fingerprint or pin.
- Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction.

<https://www.samsung.com/uk/samsung-pay/faq/>

Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity.

NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with [Samsung Pay](#). NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam.

<https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/>



<https://www.samsung.com/us/support/answer/ANS00045102/>

Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:



Google Pay symbol Contactless symbol

<https://support.google.com/wallet/answer/12060043?hl=en>

Pay in a store

Step 1: Wake up & unlock your phone

Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions.

Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app.

Tip: In most countries or regions, smaller transactions [don't require you to unlock your phone](#).

Step 2: Hold the back of your phone to the payment reader

When you're done paying, a blue check mark appears on the screen.

If the check mark isn't on your screen:

- Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device.
- Hold your phone closer to the payment reader.
- Hold your phone to the payment reader for a few extra seconds.

If there's a check mark but the cashier says that the payment didn't work:

- Double-check if the store accepts mobile payments.
- Contact your bank. There may be an issue with your card and your bank may have declined the transaction. If the transaction is declined, you aren't charged.

Step 3: If prompted, follow the on-screen instructions

Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen.

- **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device.
- **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box.

<https://support.google.com/wallet/answer/12060043?hl=en#>

	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap Security. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap Screen lock. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[3.e.] refraining from communicating using the first air interface absent said value of the physiological data associated with a living	The Accused Products are configured for “refraining from communicating using the first air interface absent said value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor satisfying a criterion, even though the proximity criterion is detected as being satisfied.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including refraining from communicating using NFC (the first air interface) absent the value of the physiological data (iris, facial recognition, or

organism that was sensed by the smartphone using the smartphone-based sensor satisfying a criterion, even though the proximity criterion is detected as being satisfied	fingerprint) associated with the user that was sensed by the Samsung smartphone's sensor such as a face scanner, an iris scanner, or fingerprint scanner. That is so even though the Samsung smartphone detects that the proximity criterion is satisfied. How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. Is Samsung Pay blocked by entering the PIN or fingerprint incorrectly? Samsung Pay allows you to make 5 attempts to unlock the application by authenticating with their IRIS (available on selected phones), fingerprint or PIN. After 5 attempts, the device then requests a security password (also 5 attempts). Thereafter, using an incorrect security password locks the phone for 30 seconds. The process is repeated 20 times (each block is longer) and then all data is deleted. https://www.samsung.com/uk/samsung-pay/faq/
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	Hello, Welcome to the Google Wallet community. Set up screen lock for tap to pay transactions Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment. To make contactless payments with Google Wallet, you must use a screen lock on your device for your security. You can unlock Google Wallet with several methods: • PIN • Pattern • Password • Fingerprint • Iris scan • 3D face unlock Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock. Set or change a screen lock 1. Open your phone Settings app. 2. Tap Security. ◦ If you don't find "Security," you can get help at your phone manufacturer support site. 3. Tap Screen lock. ◦ If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one. 4. Tap the option you'd like to use. Follow the on-screen instructions. https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[3.f.] selectively sending information to one or more other devices and receiving information from the one or more other	The Accused Products are configured for “selectively sending information to one or more other devices and receiving information from the one or more other devices responsive to said value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor satisfying the criterion.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including selectively sending information to one or more other devices (such as the point-of-sale terminal) and receiving information (such as a confirmation) from the point-of sale terminal responsive to the value of the physiological data (a fingerprint,

devices responsive to said value of the physiological data associated with a living organism that was sensed by the smartphone using the smartphone-based sensor satisfying the criterion; and

facial recognition, or iris) associated with the user of the Samsung smartphone using the smartphone-based sensor satisfying the criterion.

How does Samsung Pay work?

Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments.

How do I make in-store purchases with Samsung Pay?

- Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen.
- Next, select the card you want to pay with.
- You can authenticate by IRIS (available on selected phones), fingerprint or pin.
- Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction.

<https://www.samsung.com/uk/samsung-pay/faq/>

When you make a payment

When you make a payment, you will need to authenticate your identity by using your fingerprint or Samsung Pay PIN before the information can be sent to the payment terminal. The merchant will only receive a token, and your payment information will be kept secure. The token will be sent to the payment network, where it will be decrypted and verified against the information stored in a secure vault on internal networks. Once authenticated, the payment will be approved and sent back to the merchant. Only the payment network and your bank will have information about the transaction.

<https://www.samsung.com/us/support/answer/ANS00043932/>

What is Tokenization?

Samsung Pay uses network tokenization technology that replaces your real card details with a dynamic digital token that is transmitted instead of your physical card's number. So your transactions remain secure, and your shopping stays safe.

Will I receive a receipt after making a purchase with Samsung Pay?

When paying with Samsung Pay you will receive a receipt for your purchases just as you would with a physical card. You will receive a notification confirmation about your transaction, but you will not receive a separate physical or digital receipt from Samsung Pay.

<https://www.samsung.com/uk/samsung-pay/faq/>

Hello,

Welcome to the Google Wallet community.

Set up screen lock for tap to pay transactions

Important: Coming soon, your credit and debit card won't be charged for retail payments unless you've recently used a verification method, like your fingerprint or PIN. Some users may already need to verify to make a payment. If you're asked to verify it's you, complete verification steps on your device to make a payment.

To make contactless payments with Google Wallet, you must use a screen lock on your device for your security.

You can unlock Google Wallet with several methods:

- PIN
- Pattern
- Password
- Fingerprint
- Iris scan
- 3D face unlock

Tip: Google Wallet doesn't work with 2D face unlock or screen locks like Smart Unlock or Knock to Unlock.

Set or change a screen lock

1. Open your phone Settings app.
2. Tap **Security**.
 - If you don't find "Security," you can get help at your [phone manufacturer support site](#).
3. Tap **Screen lock**.
 - If you already set a lock, you must enter your PIN, pattern, or password before you can choose a different one.
4. Tap the option you'd like to use. Follow the on-screen instructions.

<https://support.google.com/wallet/thread/267917558/how-to-add-biometric-security-in-order-to-pay?hl=en>

Pay in a store

Step 1: Wake up & unlock your phone

Important: For users with a Pixel 7 or Pixel 7 Pro, Face Unlock is currently not supported for tap to pay transactions.

Turn on your screen, then unlock your phone. You don't need to open the Google Wallet app.

Tip: In most countries or regions, smaller transactions [don't require you to unlock your phone](#).

Step 2: Hold the back of your phone to the payment reader

When you're done paying, a blue check mark appears on the screen.

If the check mark isn't on your screen:

- Try to hold your phone in a different way. Your NFC antenna could be near the top or bottom of your device.
- Hold your phone closer to the payment reader.
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- Double-check if the store accepts mobile payments.
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Step 3: If prompted, follow the on-screen instructions

Some stores ask for a PIN or signature. If you're asked, follow the steps on the screen.

- **Debit cards:** Enter the PIN that you set up with your bank. This PIN is different from the one you use to unlock your device.
- **Credit cards:** For larger transactions, sign the receipt or the on-screen signature box.

<https://support.google.com/wallet/answer/12060043?hl=en#>

	What device tokens are When you pay for something with a physical card — credit, debit or prepaid — the merchant usually charges you through the printed number on the front of your card, known as the Funding Primary Account Number (FPAN). Every time this happens, you provide that number to the merchant, and that number is then sent along to a handful of other parties like the merchant’s bank, the card network (an organization that facilitates transactions between banks and merchants), the payment service provider and more. In contrast, Google Wallet creates a device-specific virtual account number, or device token, for each payment method you add, so your real card number isn’t stored on your device or shared with merchants. Thanks to this tokenization, the only parties who have your actual FPAN when you make a purchase are the bank that issued the card and the card network. What’s more, your device token functions independently from your physical card. It’s linked to your bank account or line of credit, not the card itself. So you can think of a device token as a super-safe messenger between your bank account or line of credit and whoever you’re buying something from. https://blog.google/products/google-pay/device-tokens-google-wallet/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.	
[3.g.] communicating using a second air interface of the plurality of air interfaces with which the smartphone is capable of communicating	The Accused Products are configured for “communicating using a second air interface of the plurality of air interfaces with which the smartphone is capable of communicating that differs from the first air interface.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone conducting financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including communicating using a second air interface (a cellular data network or WiFi) of the plurality of air interfaces with which the Samsung smartphone is capable of communicating. The second air interface (a cellular data network or WiFi) differs from the first air interface (NFC).	

that differs from the first air interface.	What is mobile data & how do I turn it on or off Mobile data is the internet connectivity provided by your mobile network provider. While your phone will automatically switch to Wi-Fi if a network is available, you can manually control your mobile data use by enabling and disabling it. You can also enable Data saver to prevent mobile data usage by apps that are running in the background. If you have disabled mobile data and would like to activate Wifi calling, you can find out more here. https://www.samsung.com/uk/support/mobile-devices/how-do-i-enable-or-disable-mobile-data/ How to enable or disable Mobile data on your Galaxy phone Last Update date : Nov 17, 2021 Mobile data is an internet connection provided by a mobile network provider. You can https://www.samsung.com/latin_en/support/mobile-devices/how-to-enable-or-disable-mobile-data-on-your-galaxy-phone/ Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.
[4.] The smartphone according to claim 3, wherein said detecting that a proximity	The Accused Products are configured for “wherein said detecting that a proximity criterion is satisfied between the Smartphone and an entity comprises: detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity.” On information and belief, the Accused Products include software configured to execute this claim limitation. Plaintiff reserves its right to supplement these contentions with the corresponding source code. For example, a Samsung smartphone

criterion is satisfied between the Smartphone and an entity comprises: detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity.	conducts financial transactions via Samsung Pay and/or Google Pay is configured to perform operations including detecting that a proximity criterion of less than 10 meters in distance is satisfied between the smartphone and the entity (the point-of-sale terminal). How does Samsung Pay work? Samsung Pay uses Near Field Communication (NFC) to make contactless mobile payments. How do I make in-store purchases with Samsung Pay? - Start by either swiping-up from the home button or opening the Samsung Pay app from your home screen. - Next, select the card you want to pay with. - You can authenticate by IRIS (available on selected phones), fingerprint or pin. - Hover your phone about 2-4 cm over the card reader where you'd usually tap your physical card to complete the transaction. https://www.samsung.com/uk/samsung-pay/faq/ Near Field Communication (NFC) technology allows users to make secure transactions, exchange digital content, and connect electronic devices with a touch. NFC transmissions are short range (from a touch to a few centimetres) and require the devices to be in close proximity. NFC is the technology in contactless cards, and the most common use of NFC technology in your smartphone is making easy payments with Samsung Pay. NFC can also be used to quickly connect with wireless devices and transfer data with Android Beam. https://www.samsung.com/uk/support/mobile-devices/what-is-nfc-and-how-do-i-use-it/
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Where you can use Google Wallet

Important: To make contactless payments, Near Field Communication (NFC) must be on. To turn on NFC, check your phone settings app.

To use tap to pay on Pixel Fold or another foldable device, fold your device.

You can pay with Google Wallet wherever you find the contactless or Google Pay symbols. They're located on the payment terminal screen or cash register at checkout.

You can buy items with your phone or pay for transit on trains and buses on contactless terminals with either of these logos:



Google Pay symbol Contactless symbol

<https://support.google.com/wallet/answer/12060043?hl=en>

NFC is limited to short-range communication, which has important implications for physical access security. A user must be within 3.5 inches (10 cm) of an NFC terminal to process a payment or open a door. Another important aspect is that no power is required for the basic

<https://www.techtarget.com/searchmobilecomputing/definition/Near-Field-Communication>

Investigation of both the patent and the Accused Products (and other potentially infringing products) is ongoing. This chart is based on evidence and analysis reasonably accessible at this time. Telcom reserves the right to update and amend the above as the litigation progresses, including in view of discovery provided by the Defendants.