

What's New in Apple Pay & Wallet

Session 714

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#WWDC17



The Apple Pay experience What's new with Apple Pay What's new with Wallet

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The Apple Pay experience What's new with Apple Pay What's new with Wallet

More Information

Getting started with the Apple Pay API Integrating Apple Pay with your payment processor

Apple Pay on the Web

What's New with Wallet and Apple Pay

WWDC 2016

WWDC 2016

The Apple Pay Experience





Easy. Secure. Private.

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Siri





Siri



Messages





Siri





Messages

watchOS









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charity: water

Invest in a world w here everyone has clean water

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Spring

100% brings clean water to people in need.

\$ 60



USD/MONTH

Donate with **ÉPay**

GIVE BY CREDIT CARD

LINK YOUR BANK

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"In the last year we've been able to reduce the time it takes to donate from around two minutes to ten seconds.

Apple Pay has helped us improve the user experience, further reducing any areas of friction and streamlining the giving journey."

Matt Jerwood, Head of Digital Fundraising



Accept donations for your nonprofit simply and securely

Accept donations for your nonprofit simply and securely Available within apps and on the web

Accept donations for your nonprofit simply and securely Available within apps and on the web New donation button style

Accept donations for your nonprofit simply and securely Available within apps and on the web New donation button style https://developer.apple.com/support/apple-pay-nonprofits/



Why Apple Pay?

Best way for users to pay

Best way for merchants to be paid

Pro










The Checkout Process



Product Page

Confirmation

The Checkout Process



Buy with Apple Pay Product Page Confirmation

2x to 5x increased conversions with Apple Pay

2x to 5x increased conversions with Apple Pay Higher purchase frequency

2x to 5x increased conversions with Apple Pay

Higher purchase frequency

Faster checkouts

- 2x to 5x increased conversions with Apple Pay
- Higher purchase frequency
- Faster checkouts
- Improved customer acquisition and satisfaction

Invoices with Apple Pay paid 30% faster 50% of invoices paid immediately





"We've seen a 250% increase in our conversion rate with Apple Pay"

Bill Devine, Director of Product at Indiegogo





Reduction in chargebacks

Reduction in chargebacks

No need to handle or store credit card numbers

Reduction in chargebacks

No need to handle or store credit card numbers

Trusted user experience

Reduction in chargebacks

No need to handle or store credit card numbers

Trusted user experience

Make purchasing easier

Make purchasing easier Make purchasing faster

Make purchasing easier Make purchasing faster Make purchasing clearer

- Make purchasing easier with upstreaming
- Make purchasing faster
- Make purchasing clearer

Make purchasing easier with upstreaming Make purchasing faster with defaulting Make purchasing clearer

Make purchasing easier with upstreaming Make purchasing faster with defaulting Make purchasing clearer with streamlining

Upstreaming

Accelerate single-item purchases with Apple Pay on product pages Accelerate multi-item purchases with express checkout



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Upstreaming

Twill Chill Hoodie

\$128.00 USD

WHY WE MADE THIS Skip the locker room and go from a low-intensity workout to whatever's up next in...

CARE + FABRIC: LUXTREME®

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SELECTED COLOUR: nautical navy

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ADD TO BAG



Upstreaming

Placing the Apple Pay button on product pages increases conversions

Allow purchasing without an account for best performance

Twill Chill Hoodie

\$128.00 USD

WHY WE MADE THIS

Skip the locker room and go from a low-intensity workout to whatever's up next in...

CARE + FABRIC: LUXTREME®

1 COLOUR



SELECTED COLOUR: nautical navy

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ADD TO BAG



Sometimes guest checkout isn't feasible



Sometimes guest checkout isn't feasible

Make account creation seamless with iOS and macOS



- Sometimes guest checkout isn't feasible
- Make account creation seamless with iOS and macOS
- Shared web credentials make app account setup faster



- Sometimes guest checkout isn't feasible
- Make account creation seamless with iOS and macOS
- Shared web credentials make app account setup faster
- UITextContentType helps iOS autofill your input fields

- Sometimes guest checkout isn't feasible
- Make account creation seamless with iOS and macOS
- Shared web credentials make app account setup faster
- UITextContentType helps iOS autofill your input fields
- Create account post-purchase using Apple Pay data

Defaulting

Make Apple Pay the default payment option where possible Take advantage of the new in-line setup in iOS 11

Make purchasing with Apple Pay quick and simple

Make purchasing with Apple Pay quick and simple Collect necessary information before checkout begins

- Make purchasing with Apple Pay quick and simple
- Collect necessary information before checkout begins
- Prefer customer information from Apple Pay
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| | Pay with Touch ID | |
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Only present and request essential information



Only present and request essential information Keep line items short



Only present and request essential information

Keep line items short

Use line items to explain additional charges or show discounts



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Payment Sheet Guidelines Pending items

Clearly disclose when additional costs may be incurred

For example, if a gratuity can be added post-purchase

let gratuity = PKPaymentSummaryItem(label: "Optional Gratuity", amount: NSDecimalNumber(string: "5.50"), type: .pending)





Payment Sheet Guidelines Total amount

Total amount must be non-negative (but may be pending)

Use the business name that will appear on the card statement

TOO DAVIO OTRELI HILLSBOROUGH CA 94010 METHOD FREE 2 BUSINESS DAY SHIPPING **DELIVERS: SAT JUN 3** CONTACT **KATE-BELL@MAC.COM** (555) 564-8583 \$334.00 **BAG SUBTOTAL** \$0.00 FREE SHIPPING ESTIMATED TAX \$29.61 \$363.61 PAY APPLE Pay with Touch ID



Payment Sheet Guidelines Subscriptions

Clarify subscription details prior to payment Include line items that reiterate billing frequency For variable subscriptions, use pending items



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Payment Sheet Guidelines Variable subscriptions

- Use pending amounts for variable subscriptions
- Only show a payment sheet where a change results in additional fees
- When the user decreases the cost, authorization is not necessary



Use built-in buttons—don't create your own

Use built-in buttons—don't create your own Localized and scalable in a variety of styles

Use built-in buttons—don't create your own Localized and scalable in a variety of styles Available in the SDK from iOS 8.3

Use built-in buttons—don't create your own Localized and scalable in a variety of styles Available in the SDK from iOS 8.3 Simplified CSS styles for WebKit from iOS 10.1/macOS 10.12.1

// Swift

let button = PKPaymentButton(type: .buy, style: .black)

// Swift

let button = PKPaymentButton(type: .buy, style: .black)

// HTML
<button lang="en"
 style="-webkit-appearance: -apple-pay-button;
 -apple-pay-button-type: buy;">
 </button>

// Swift let button = PKPaymentButton(type: .buy, style: .black) // HTML <button lang="en"</pre> style="-webkit-appearance: -apple-pay-button; -apple-pay-button-type: buy;"> </button>



// Swift
let button = PKPaymentButton(type: .buy, style: .black)
// HTML
<button lang="en"
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// Swift let button = PKPaymentButton(type: .buy, style: .black) // HTML <button lang="en"</pre> style="-webkit-appearance: -apple-pay-button; -apple-pay-button-type: buy;"> </button>

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// Swift

let button = PKPaymentButton(type: .buy, style: .black)



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What's New with Apple Pay

What's New with Apple Pay

- Make best-in-class conversion even better
- Help users resolve common problems
- Make getting started with Apple Pay fast and easy



Setup Apple Pay

Recommend showing the Apple Pay button for all Apple Pay capable devices Choose the Setup or Buy button style that suits your needs

Inline Setup

Apple Pay setup is now offered automatically Simply present an Apple Pay sheet to a user without cards Users are returned to your Apple Pay purchase immediately after setup Still faster than a typical manual checkout

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Apple Pay Cash

Apple Pay Cash

Money received in iMessages is kept in Apple Pay Cash Can be used in-store, within apps, and on the web If you can process credit cards, you can process Apple Pay Cash Further information coming soon

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Apple Pay Cash Sheet considerations

Apple Pay Cash Sheet considerations

Apple Pay Cash is only available when your balance exceeds the total to pay

Apple Pay Cash Sheet considerations

Apple Pay Cash is only available when your balance exceeds the total to pay Make sure your total amount reflects what you intend to charge
Apple Pay Cash Sheet considerations

Apple Pay Cash is only available when your balance exceeds the total to pay Make sure your total amount reflects what you intend to charge

Use a pending amount instead if you aren't sure of the total

What's New with Apple Pay Supported countries

Limit payment to cards from specific countries if necessary

Useful for regulatory or other compliance needs

paymentRequest.supportedCountries = ["US", "CA"]



Error Handling

Sometimes things go wrong

Problematic to communicate this to users

Payment instrument failed to process

Payment instrument failed to process Billing address didn't match

Payment instrument failed to process Billing address didn't match Email address was invalid

Payment instrument failed to process Billing address didn't match Email address was invalid Postal address had an incorrect ZIP

Payment instrument failed to process Billing address didn't match Email address was invalid Postal address had an incorrect ZIP Telephone was missing an area code

Fatal Errors

Can't be resolved by the user

Handled outside of Apple Pay

Non-preventable

Non-fatal Errors

Resolvable by the user

Handled within Apple Pay

Sometimes foreseeable and preventable

Non-Fatal Errors

Available PKPaymentAuthorizationStatus values are generic

No specificity

Unable to edit existing values

Not always clear what the problem is

Improved Error Handling

New guidelines to better handle user data New UI for users to input and edit data New API for merchants to communicate precise errors



Handling User Data

Contact information on iOS and macOS comes from many sources Don't expect this information to conform to your business logic

Street

City

State / Province

Postal Code / ZIP

Country

Phone

815 Boylston St

Boston

Massachusets

02116-2601

United States

+1 617-385-9400

Street	815 Boylston St
City	Boston
State / Province	Massachusets
Postal Code / ZIP	02116-2601
Country	United States
Phone	+1617-385-9400

Street abbreviated



Street	815 Boylston St
City	Boston
State / Province	Massachusets
Postal Code / ZIP	02116-2601
Country	United States
Phone	+1 617-385-9400

Street abbreviated

State misspelled



Street	815 Boylston St
City	Boston
State / Province	Massachusets
Doctal Code / 7ID	02116_2601
FUSIAI COUE / ZIF	02110-2001
Country	United States
Phone	+1617-385-9400

Street abbreviated

State misspelled

ZIP+4



Street	815 Boylston St
City	Boston
State / Province	Massachusets
Postal Code / ZIP	02116-2601
Country	United States
Phone	+1617-385-9400

Street abbreviated

State misspelled

ZIP+4

Localized country name



Street	815 Boylston St
City	Boston
State / Province	Massachusets
Postal Code / ZIP	02116-2601
Country	États-Unis
Phone	+1 617-385-9400

Street abbreviated

State misspelled

ZIP+4

Localized country name



Street	815 Boylston St
City	Boston
State / Province	Massachusets
Postal Code / ZIP	02116-2601
Country	États-Unis
Phone	+1 617-385-9400

Street abbreviated

State misspelled

ZIP+4

Localized country name

Dashes



Handling User Data Successfully

Be prepared for fuzzy input

Don't force the user to comply with your business logic

Global Addresses

New API to support worldwide addresses Request phonetic in addition to regular name

Native Contacts support for supplementary sub-localities (China)





Missing phone-number digits





Missing phone-number digits

Postal code and address don't match





Missing phone-number digits

Postal code and address don't match

Misspelled email address





Missing phone-number digits

Postal code and address don't match

Misspelled email address

Otherwise unusable







Gracefully handle invalid or incorrect data directly in Apple Pay



Gracefully handle invalid or incorrect data directly in Apple Pay Display custom error messages



Gracefully handle invalid or incorrect data directly in Apple Pay Display custom error messages

Direct users to the specific fields that need correction



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Error Handling

Deprecated enum-based callback

New callback


Error Handling

Deprecated enum-based callback

New callback





PKPaymentAuthorizationResult

Contains a status and an array of errors Errors are standard NSErrors describing what went wrong

open class PKPaymentAuthorizationResult : NSObject { public init(status: PKPaymentAuthorizationStatus, errors: [Error])

open var status: PKPaymentAuthorizationStatus open var errors: [Error]





PKPaymentAuthorizationResult Errors

Each error represents an individual problem with the payment Use NSError codes to indicate the issue Use User Info Keys to provide specific resolution steps and information

open class PKPaymentAuthorizationResult : NSObject { public init(status: PKPaymentAuthorizationStatus, errors: [Error])

open var status: PKPaymentAuthorizationStatus open var errors: [Error]





// Swift

let countryError = NSError.paymentShippingAddressInvalidError(withKey: CNPostalAddressCountryKey, localizedDescription: "Only US delivery supported")

// ES6

const countryError = new ApplePayError("shippingContactInvalid",

"country",

"Only US delivery supported");

Error Handling New callbacks

New callbacks for most existing delegate methods

New objects allow for extensible messaging

func paymentAuthorizationController(_ controller:PKPaymentAuthorizationController, didSelectShippingContact contact:PKContact, handler completion:(PKPaymentRequestShippingContactUpdate) -> Void)







Error Handling On the web

Like-for-like API is available in Safari 11 Existing completion functions have been overloaded

Old API session.completePaymentMethodSelection(update['newTotal'], update['newLineItems']); session.completePayment(update['status']);







Error Handling On the web

Like-for-like API is available in Safari 11 Existing completion functions have been overloaded

Old API session.completePaymentMethodSelection(update['newTotal'], update['newLineItems']); session.completePayment(update['status']);

// New API

session.completePaymentMethodSelection(update); session.completePayment(update);







Jon Nguy, Software Engineer

What's New with Wallet

What's New with Wallet A lick of paint

New mass deletion and management interface

Lighter color scheme

Good time to revisit your pass designs

What's New with Wallet NFC passes

NFC passes let you send customer information over NFC

Only encrypted NFC passes supported from iOS 11

Register for NFC passes at developer.apple.com/apple-pay

What's New with Wallet Sharing

Passes can now be opted out of sharing

Useful for single use items like loyalty cards or tickets

What's New with Wallet Sharing

sharingProhibited top-level JSON key

Sharing disablement is a convenience (not a security) feature







Summary

Guidelines for building best-in-brand Apple Pay experiences New API for handling complex errors New ways to share and interact with passes and NFC

More Information

https://developer.apple.com/wwdc17/714

Related Sessions

Apple Pay on the Web

What's New with Wallet and Apple Pay

Introducing Core NFC

WWDC 2016
WWDC 2016
WWDC 2017 Video



Apple Pay and Wallet Lab

Technology Lab J

Fri 9:00AM-12:00PM

