

# Introducing Safari View Controller

Session 504

Ricky Mondello Safari and WebKit Engineer

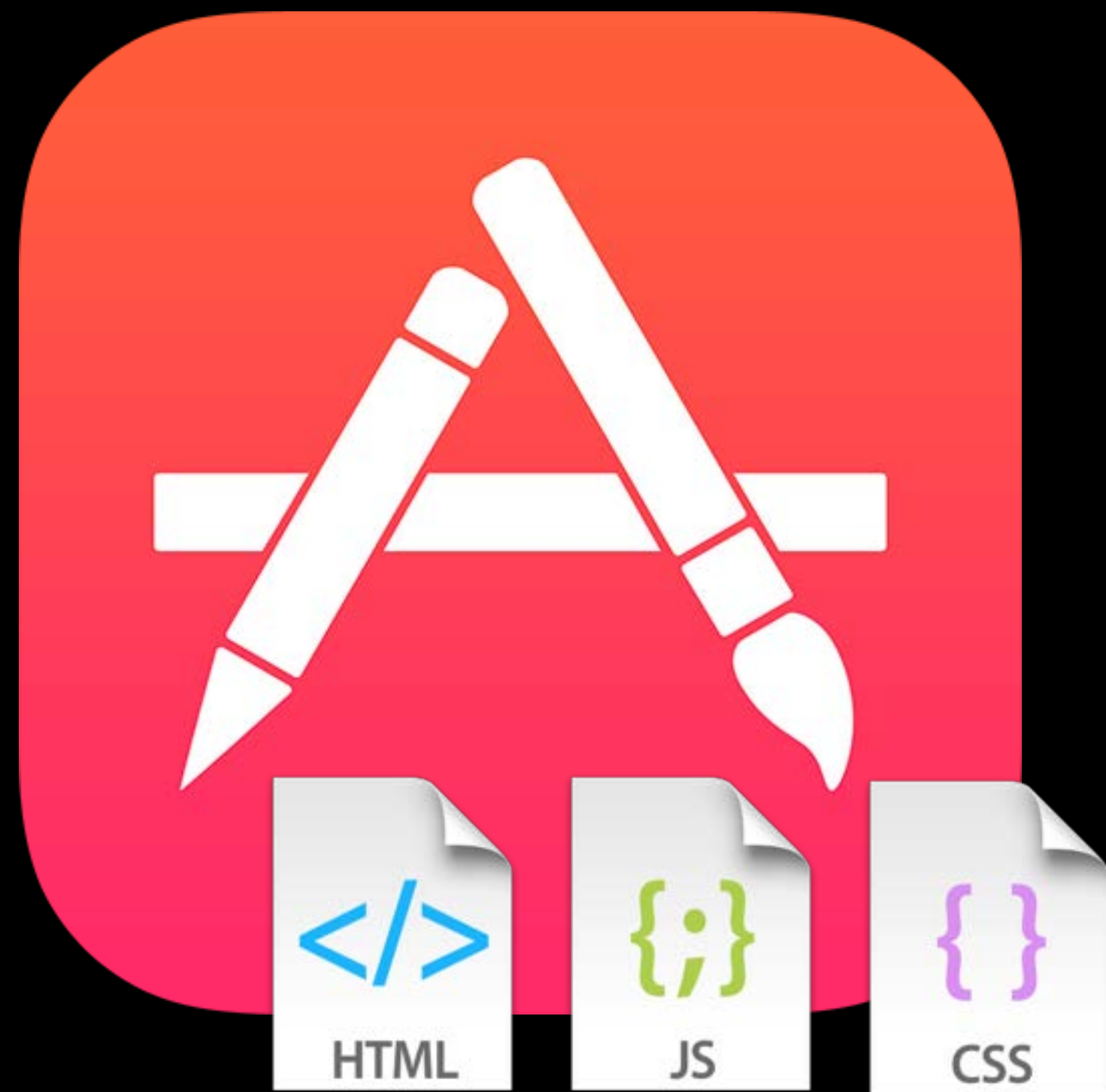
Yongjun Zhang Safari and WebKit Engineer

Web Content

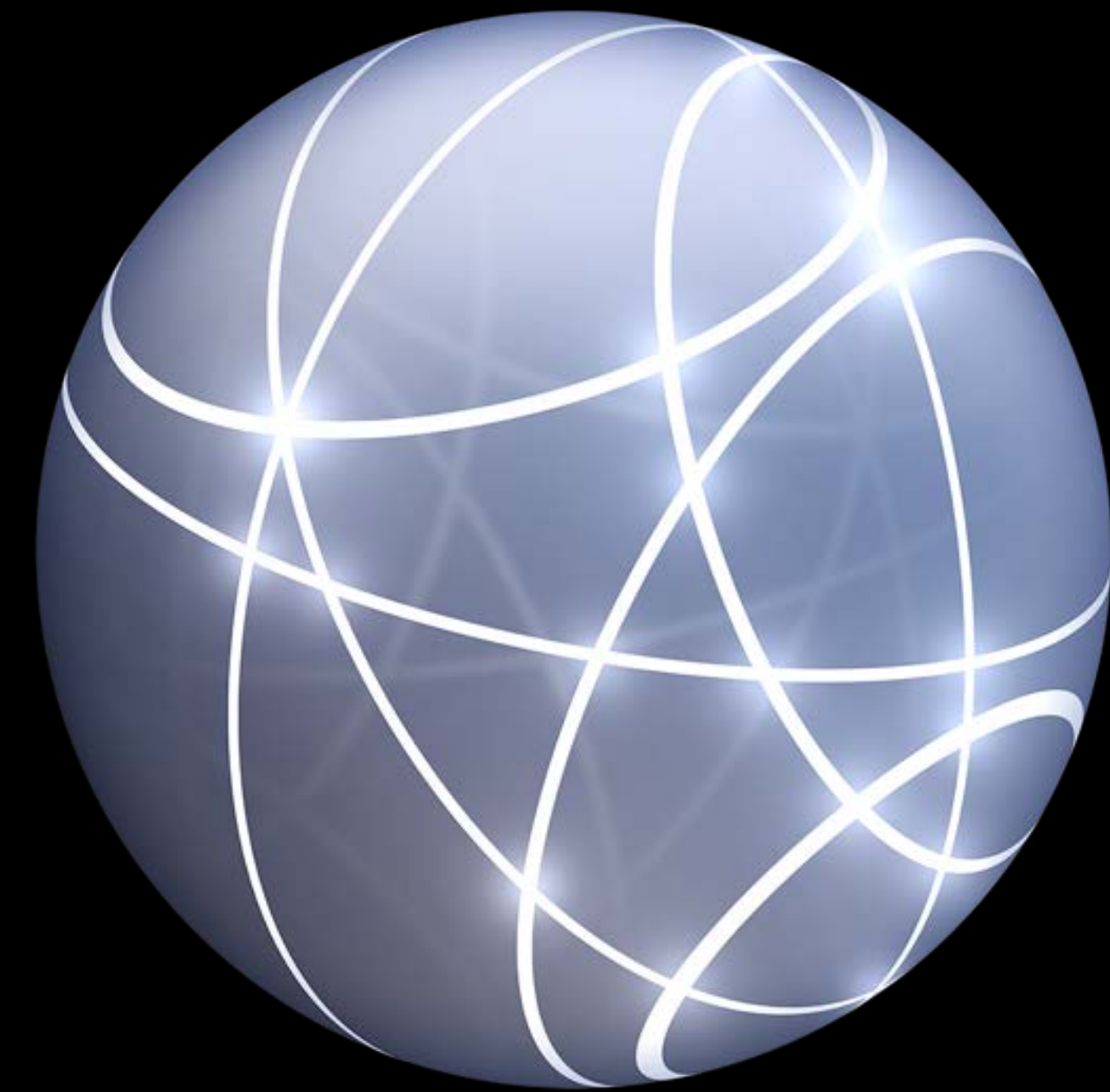
App Content

Websites

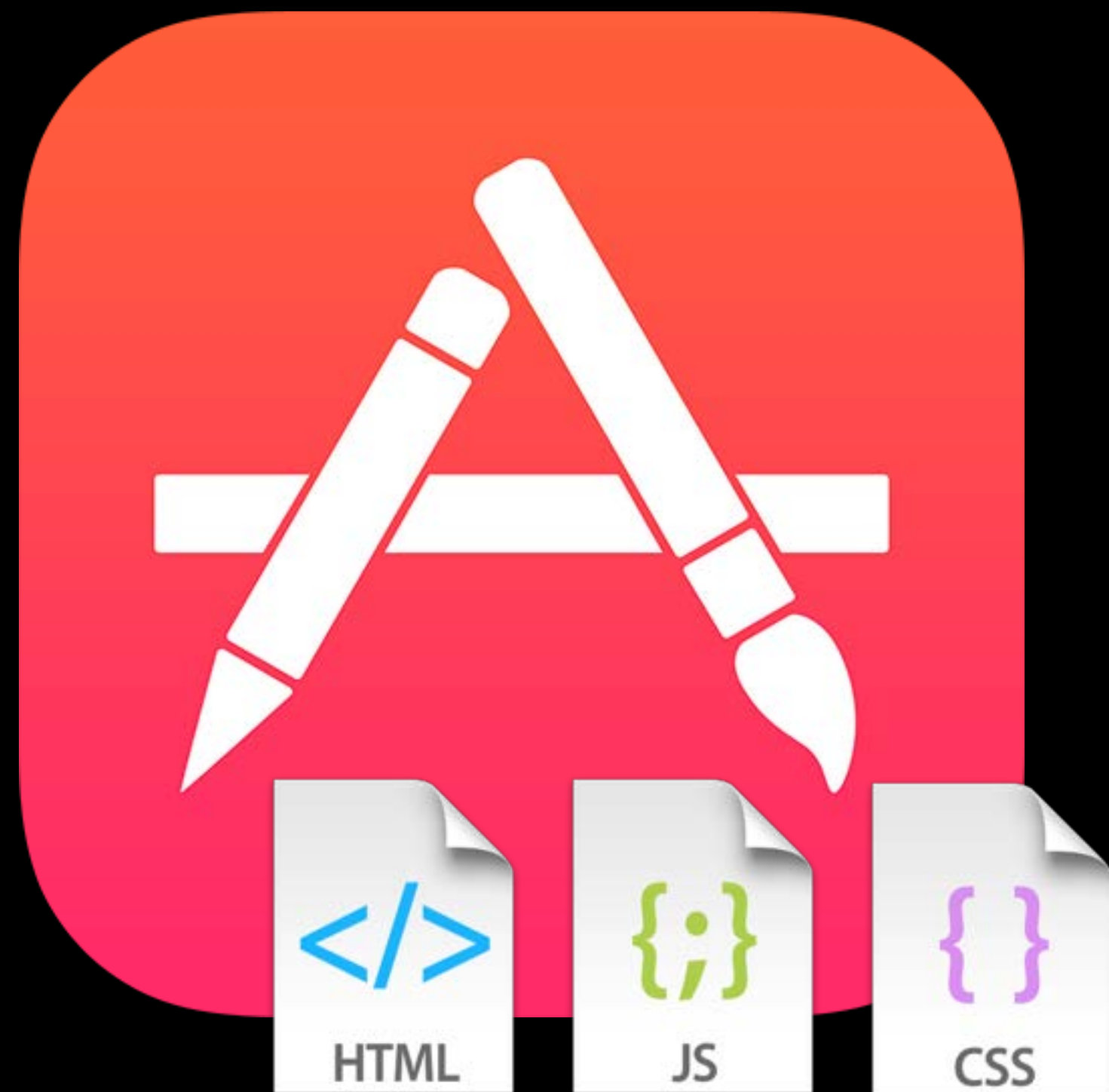
# App Content



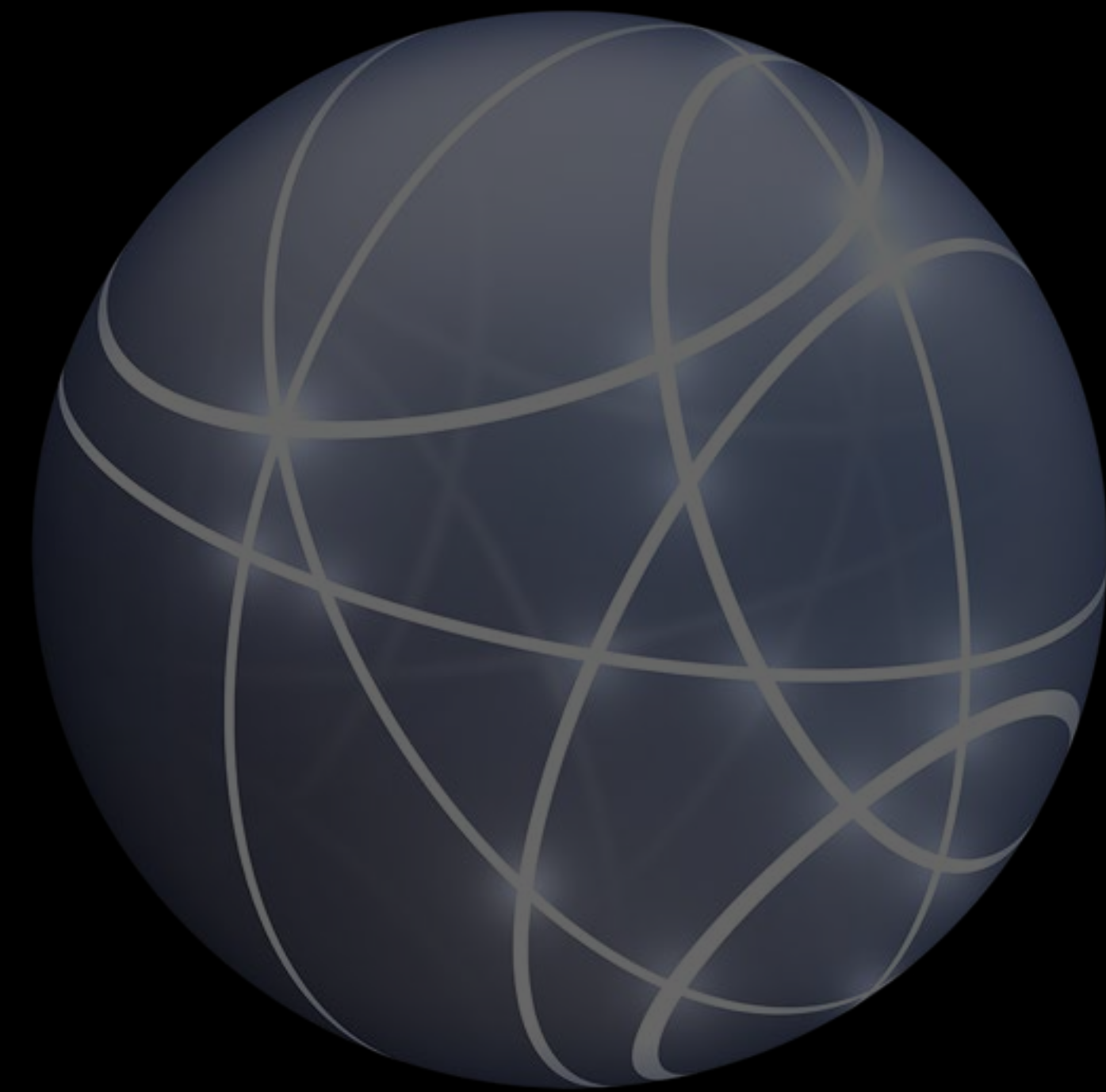
# Websites



# App Content



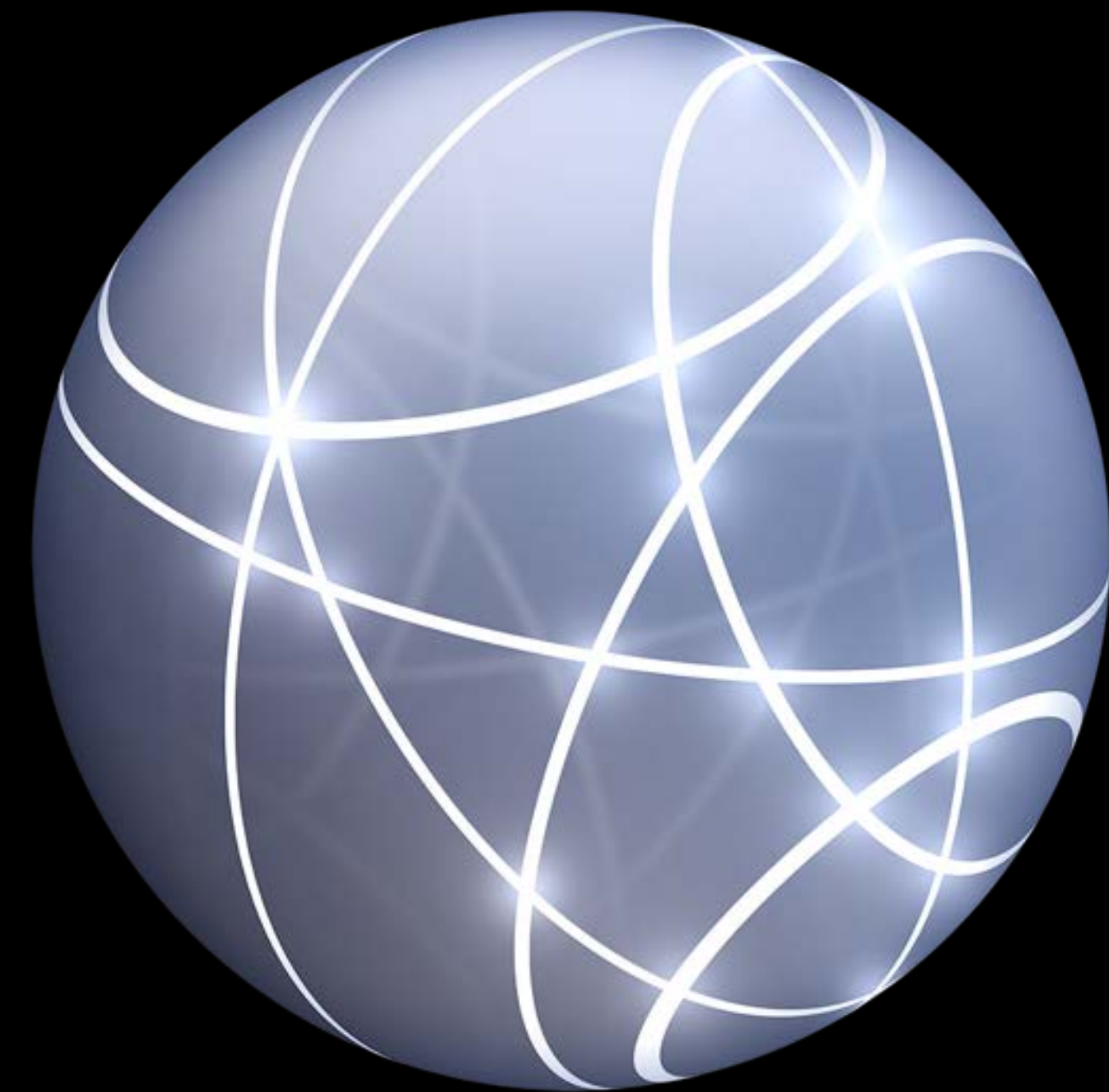
# Websites



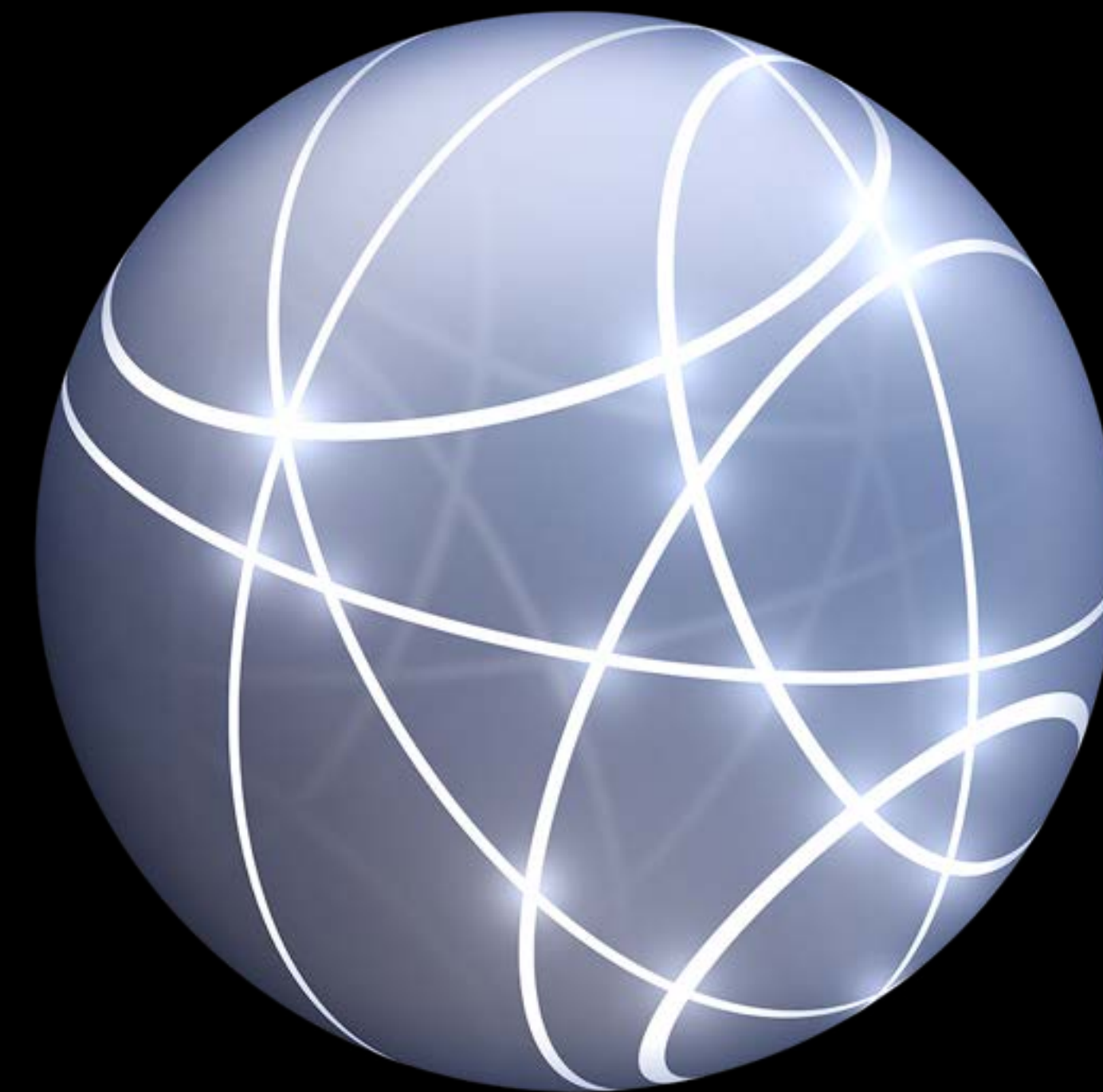
# App Content



# Websites



# Websites







# Your App's Content

## WKWebView

Introduced in iOS 8 and OS X 10.10

A view of web content that allows you to:

- Block or modify navigations
- Evaluate JavaScript and get a result

You can:

- Add your own back button, forward button, and progress indicator



# WKWebView Enhancements

NEW

Available on iOS 9 and OS X 10.11

```
func loadFileURL(  
    URL: NSURL,  
    allowingReadAccessToURL readAccessURL: NSURL) -> WKNavigation?
```

```
func loadData(  
    data: NSData,  
    MIMEType: String,  
    characterEncodingName: String,  
    baseURL: NSURL) -> WKNavigation?
```

```
var customUserAgent: String?
```

# WKWebView Enhancements

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```
var customUserAgent: String?
```

# WKWebsiteDataStore

NEW

New API available on iOS 9 and OS X 10.11

Represents the cookies and other data stored by websites

A read-write property on your web view's `WKWebViewConfiguration`

Can remove data by its type, like cookies and cache, or by the date modified

Can change configuration to use a non-persistent data store



# WKWebsiteDataStore

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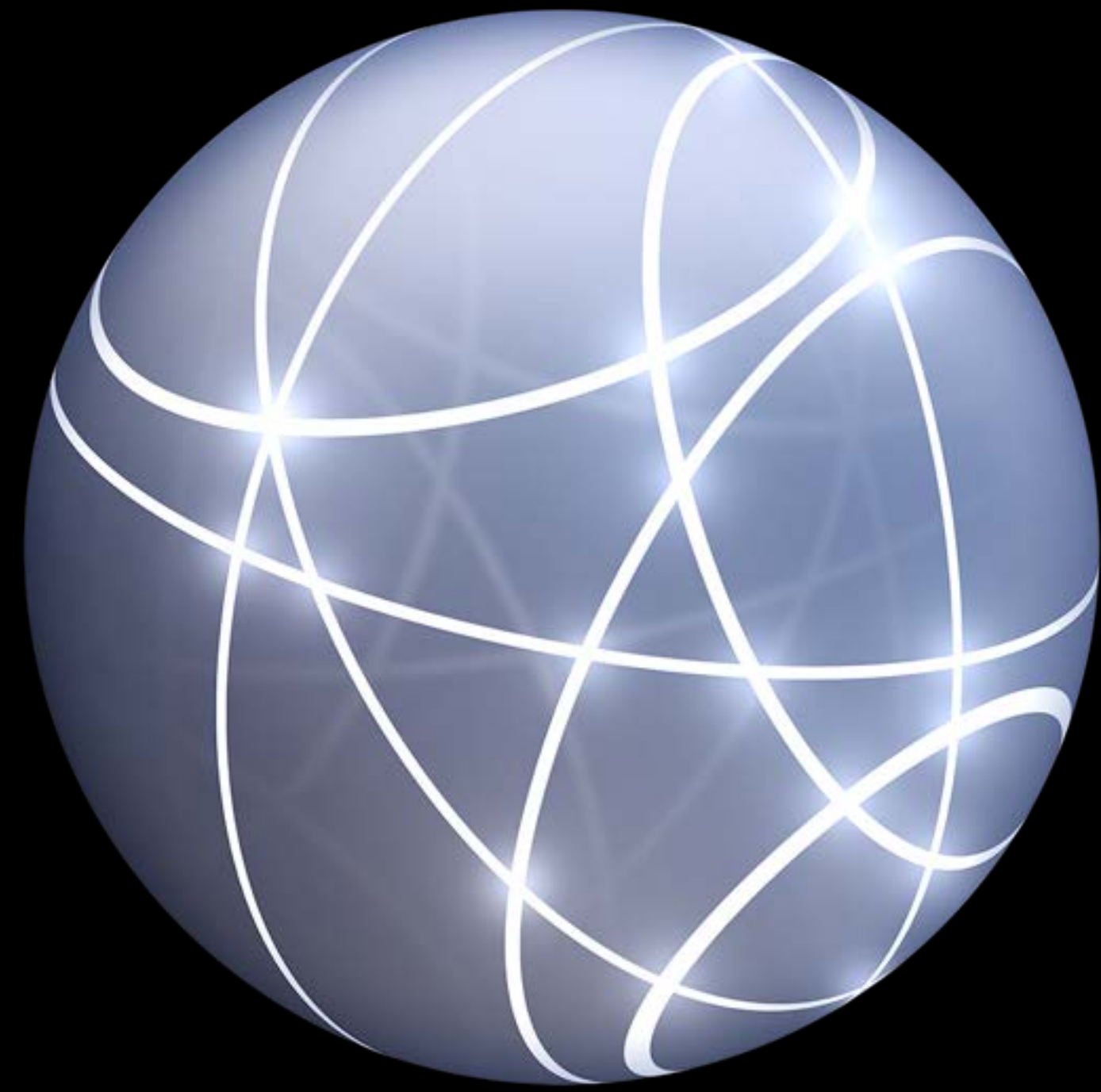
Can remove data by its type, like cookies and cache, or by the date modified

Can change configuration to use a non-persistent data store















MacBook

Design

Wireless

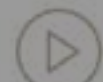
OS X

Built-

# MacBook

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NEW

# Safari View Controller



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Done



MacBook Design Wireless OS X Built

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# Safari View Controller

Features for your users

iPad

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example.com



# shiny.

Welcome back, rmondello!



[Change Password](#)

[Log out](#)

# shiny.

Please log in.

Username

rmondello

Password

●●●●●●●●●●

Log in

If you don't have an account, please sign up.

Safe

## 2 Shipping Address

### Shipping Address

Jane

Appleseed

Company Name (optional)

888

5555512

3494 Kuhl Avenue

Apt, Suite, Bldg. (optional)

30303

Atlanta, GA

United States

 This is a business address ?

### Shipping Notifications ?

Shipment notification emails are sent to the Billing Contact. Another recipient email address may be added below.

Jane-Appleseed@mac.com

For shipment updates via text messages, enter a mobile number below.

888

5555512

### Apple Shipping Policy | [Learn more](#)

- Signature may be required for delivery
- We do not ship to P.O. boxes
- Delivery estimates below include item preparation
- We do not ship directly to [APO/FPO](#) addresses.

### 3 Payment

- Debit/Credit Card
- Monthly Payments
- Financing
- Apple Store Gift Card

#### Billing Contact

Same as shipping information

Jane Appleseed

888 5555512

Area Code Alternate Phone (optional)

Jane-Appleseed@mac.com

#### Billing Address

Company Name (optional)

3494 Kuhl Avenue

Apt, Suite, Bldg. (optional)

30303 Atlanta, GA

#### Payment Method

VISA

4111111111111111 123


Expires 02 2017

[Pay with two debit/credit cards](#)

#### PayPal

Special financing options available

[Learn more >](#)



[Chat Now](#)

Continue

### 4 Account

[Enter Promo Code](#)

Cart subtotal	\$399.00
Free Shipping	\$0.00
Estimated Tax	\$31.92



### Lorem Ipsum



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean placerat tellus eget orci convallis aliquam:

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Mauris at felis ac nunc imperdiet condimentum in vitae quam. Duis sagittis tempus efficitur. Donec scelerisque nisi consectetur mi porta, eget ornare leo suscipit. Phasellus vestibulum blandit leo, a pretium massa consequat non. Nam justo lorem, tristique a finibus at, porta vitae orci. Proin convallis accumsan libero non sollicitudin. Cras condimentum nisi sit amet dapibus hendrerit. Duis mattis suscipit dolor, sit amet dictum felis facilisis ac. Praesent et volutpat diam. Vivamus laoreet suscipit nunc sit amet convallis. Phasellus ullamcorper risus arcu, et finibus odio iaculis et. Suspendisse imperdiet aliquet dolor mollis vestibulum. Cras in felis imperdiet, pulvinar ex in, dictum nisi. Donec lectus arcu, vestibulum non lectus aliquet, mollis sodales nisl. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nulla tincidunt aliquet tincidunt.





### Lorem Ipsum



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Mauris at felis ac nunc imperdiet condimentum in vitae quam. Duis sagittis tempus efficitur. Donec scelerisque nisi consectetur mi porta, eget ornare leo suscipit. Phasellus vestibulum blandit leo, a pretium massa consequat non. Nam justo lorem, tristique a finibus at, porta vitae orci. Proin convallis accumsan libero non sollicitudin. Cras condimentum nisi sit amet dapibus hendrerit. Duis mattis suscipit dolor, sit amet dictum felis facilisis ac. Praesent et volutpat diam. Vivamus laoreet suscipit nunc sit amet convallis. Phasellus ullamcorper risus arcu, et finibus odio iaculis et. Suspendisse imperdiet aliquet dolor mollis vestibulum. Cras in felis imperdiet, pulvinar ex in, dictum nisi. Donec lectus arcu, vestibulum non lectus aliquet, mollis sodales nisl. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nulla tincidunt aliquet tincidunt.







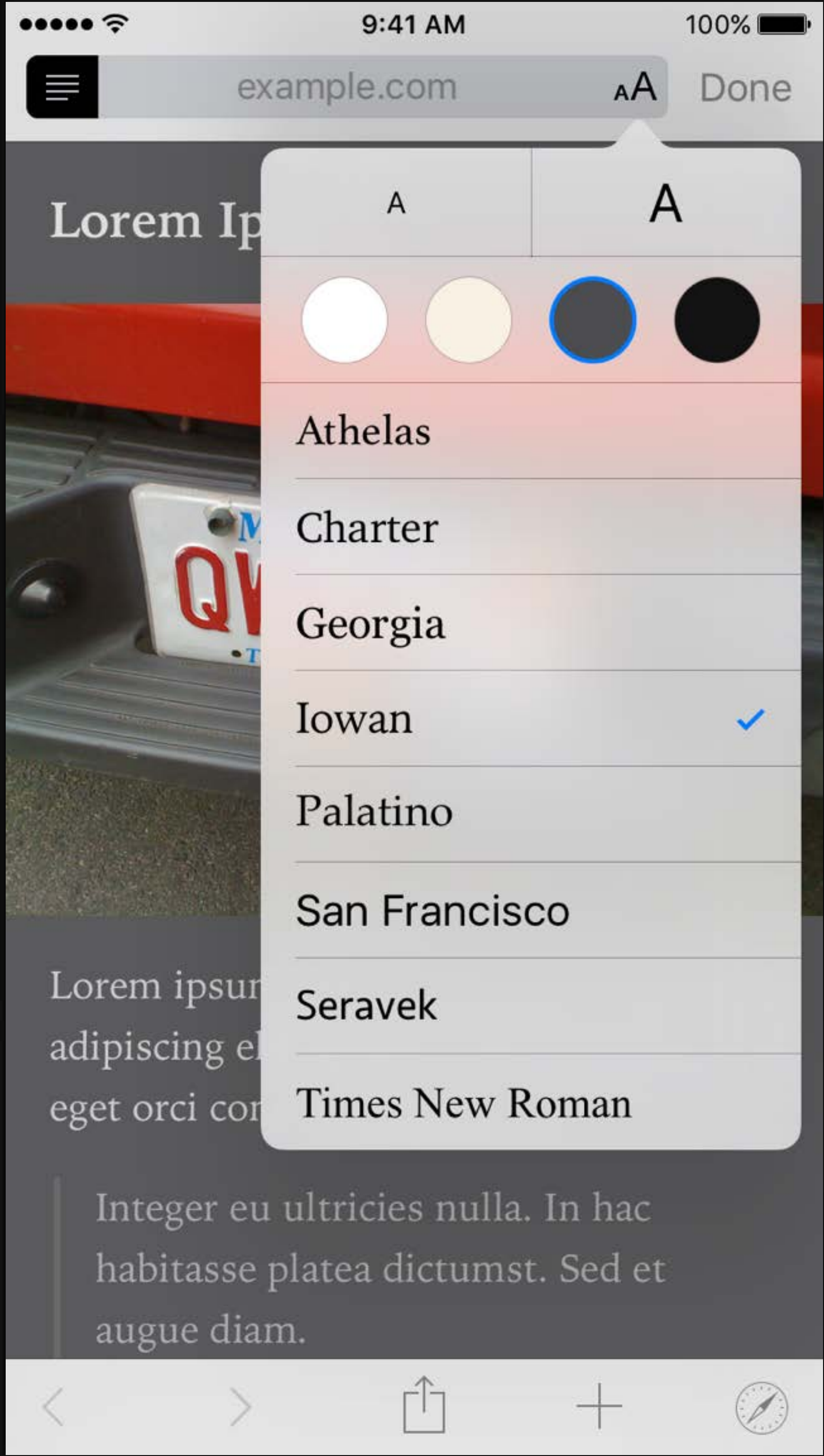
# Lorem Ipsum



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean placerat tellus eget orci convallis aliquam:

Integer eu ultricies nulla. In hac habitasse platea dictumst. Sed et augue diam.





9:41 AM



example.com

A A

Done

Lorem Ip

A

A



Athelas

Charter

Georgia

Iowan



Palatino

San Francisco

Seravek

Times New Roman

Lorem ipsum  
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augue diam.





9:41 AM

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apple.com Done



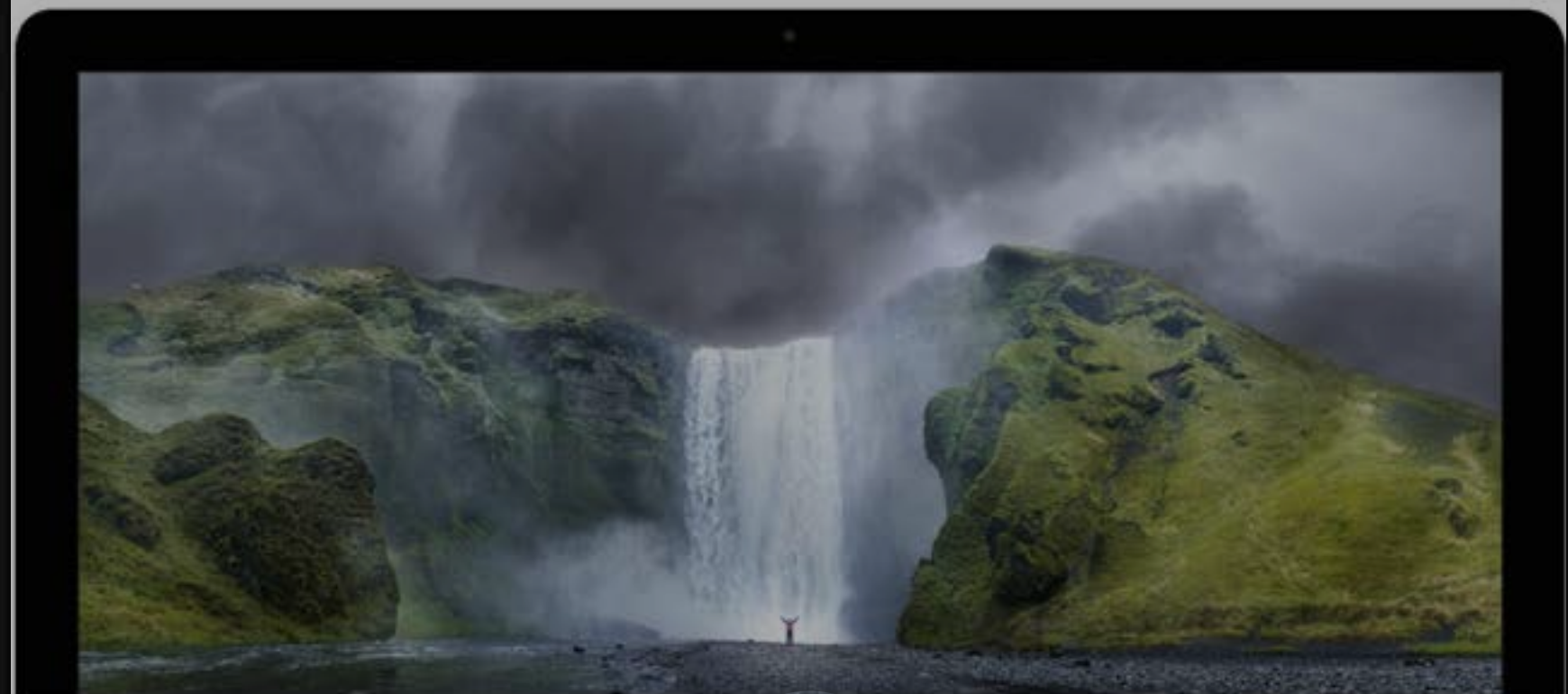
iMac with Retina 5K Display    Features    Design

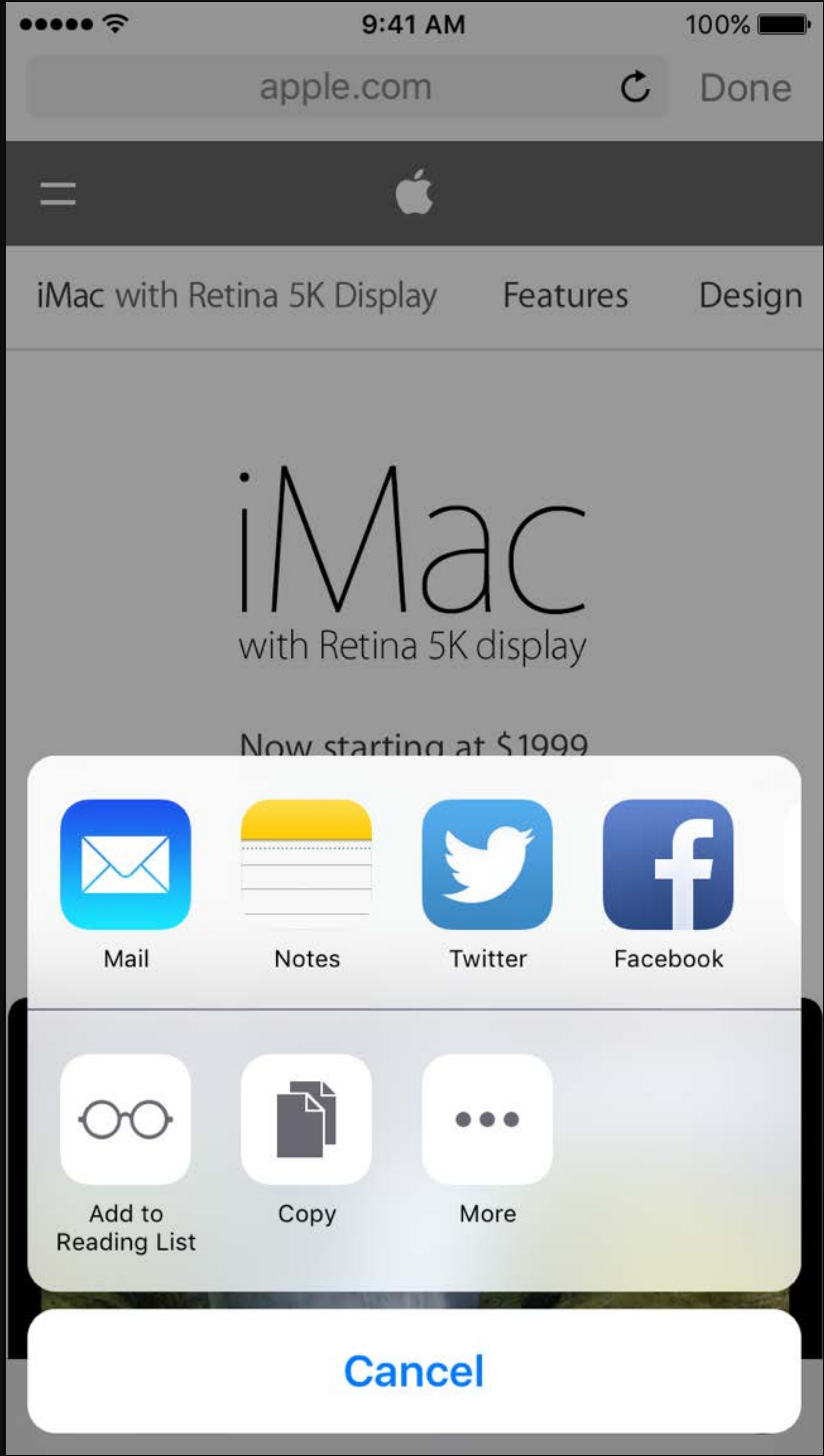
# iMac

with Retina 5K display

Now starting at \$1999

- [Watch the film](#)
- [Watch the keynote](#)





apple.com Done

iMac with Retina 5K Display Features Design

# iMac

with Retina 5K display

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Mail Notes Twitter Facebook

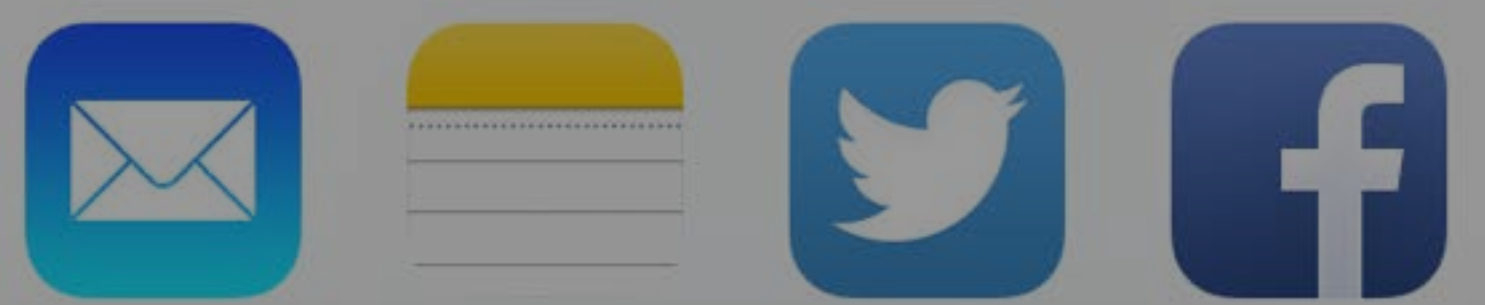
Add to Reading List Copy More

Cancel

# iMac

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Mail Notes Twitter Facebook



Add to Reading List Copy Send to Friend More

Cancel



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apple.com

Done



iMac with Retina 5K Display

Features

Design

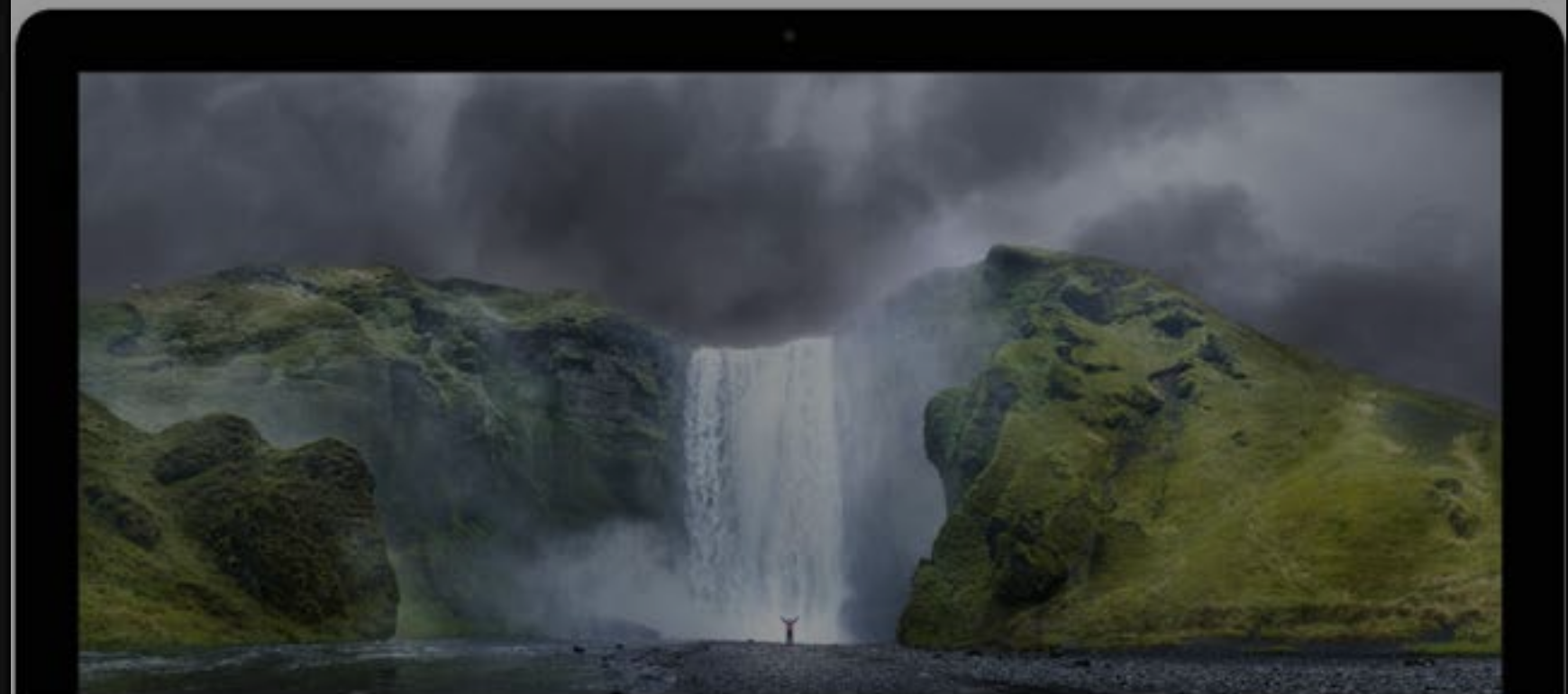
# iMac

with Retina 5K display

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# Content Blocking



### From the Web

[10 ways to write a content blocker! You'll never believe #7!](#)

[I'm tired. The reason why will shock you!](#)

[Twenty foods to NEVER think about.](#)

[Which year were you born? Learn one quick trick to guess your age!](#)

## Big Bear's Golf Blog

### My Day at San Juan Oaks

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean placerat tellus eget orci convallis aliquam. Integer eu ultricies nulla. In hac habitasse platea dictumst. Sed et augue diam. Praesent laoreet facilisis lectus eu sollicitudin. Fusce viverra vel metus ut bibendum. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nam vulputate mi ut dui pellentesque, id aliquam nibh aliquam. Pellentesque mattis velit ut hendrerit dapibus.





# Big Bear's Golf Blog

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# Content Blocking

# Safari View Controller

Safety for your users



9:41 AM

100%



example.com



Done

# Example Domain

This domain is established to be used for illustrative examples in documents. You may use this domain in examples without prior coordination or asking for permission.

[More information...](#)





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example.com



Done

## Suspected Phishing Site

The website you are visiting has been reported as a "phishing" website. These websites are designed to trick you into disclosing personal or financial information, usually by creating a copy of a legitimate website, such as a bank.

[Learn more about phishing scams](#)

[Report an error](#)

[Go Back](#)

[Ignore this Warning](#)



# Features of Safari View Controller

A familiar user interface

Cookies shared with Safari

Password AutoFill

Credit Card AutoFill

Contact Card AutoFill

Safari Reader

Content Blocking

And more!

# Safari View Controller

API

# SFSafariViewController

API

```
class SFSafariViewController : UIViewController {  
    weak var delegate: SFSafariViewControllerDelegate?  
  
    init(URL: NSURL)  
}
```



# SFSafariViewController

API

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API

```
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    init(URL: NSURL)  
}
```

# SFSafariViewController

## API

```
protocol SFSafariViewControllerDelegate : NSObjectProtocol {  
    optional func safariViewController(controller: SFSafariViewController,  
activityItemsForURL URL: NSURL, title: String?) -> [UIActivity]  
  
    optional func safariViewControllerDidFinish(controller:  
SFSafariViewController)  
}
```

# SFSafariViewController

## API

```
protocol SFSafariViewControllerDelegate : NSObjectProtocol {  
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# SFSafariViewController

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class SFSafariViewController : UIViewController {  
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```

# *Demo*

Replacing a custom web view with `SFSafariViewController`

Yongjun Zhang

Safari and WebKit Engineer

**Welcome to Hidden Gem Pizza!**

9837 Hiddengem Ave., Sunnyvale CA 98032, United States

- [About Us](#)
- [Our Menu](#)
- [Location](#)
- [Order Online!](#)

**Today's Special**

Nick's Pizza -



Total nutrition facts Buffalo mozzarella margherita 1 Serving, Cal 770, Fat 35g, Carbs 92g, Sugar 6g, Protein 35g, Fiber 14g  
 Margherita\$6 Tomato sauce, fresh mozzarella, and finished with basil. Total nutrition facts 1 Serving, Cal 736, Fat 32g, Carbs 92g, Sugar 6g, Protein 32g, Fiber 14g  
 Pepperoni and sausage\$6 Tomato sauce, mozzarella, Italian pork sausage or all natural turkey sausage, and pepperoni. Total nutrition facts Buffalo mozzarella margherita 1 Serving, Cal 770, Fat 35g, Carbs 92g, Sugar 6g, Protein 35g, Fiber 14g  
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 Pepperoni and sausage\$6 Tomato sauce, mozzarella, Italian pork sausage or all natural turkey sausage, and pepperoni.

**Five cheezeess**

**Vegetariana pizza** - Tomato sauce, mozzarella, zucchini, eggplant, olives, bell peppers, and sautÃ©ed mushrooms. Total nutrition facts 1 Serving, Cal 705, Fat 26g, Carbs 98g, Sugar 9g, Protein 30g, Fiber 15g  
 Buffalo mozzarella margherita \$10 Tomato sauce, buffalo milk mozzarella, and fresh basil. Total nutrition facts Buffalo mozzarella margherita 1 Serving, Cal 770, Fat 35g, Carbs 92g, Sugar 6g, Protein 35g, Fiber 14g  
 Margherita\$6 Tomato sauce, fresh mozzarella, and finished with basil. Total nutrition facts 1 Serving, Cal 736, Fat 32g, Carbs 92g, Sugar 6g, Protein 32g, Fiber 14g  
 Pepperoni and sausage\$6 Tomato sauce, mozzarella, Italian pork sausage or all natural turkey sausage, and pepperoni. Total nutrition facts 1 Serving, Cal 1043, Fat 58g, Carbs 94g, Sugar 7g, Protein 45g, Fiber 14g  
 Hawaiian\$6 Tomato sauce, mozzarella, shaved ham, and pineapple. Total nutrition facts 1 Serving, Cal 803, Fat 31g, Carbs 101g, Sugar 11g, Protein 39g, Fiber 15g  
 Il Capo\$10 Buffalo mozzarella cheese, red onions, and tomato sauce. Total nutrition facts 1 Serving, Cal 726, Fat 30g, Carbs 97g, Sugar 9g, Protein 26g, Fiber 15g  
 Tomato sauce contains: extra-virgin olive oil, tomatoes, dried oregano, sea salt, and black pepper.



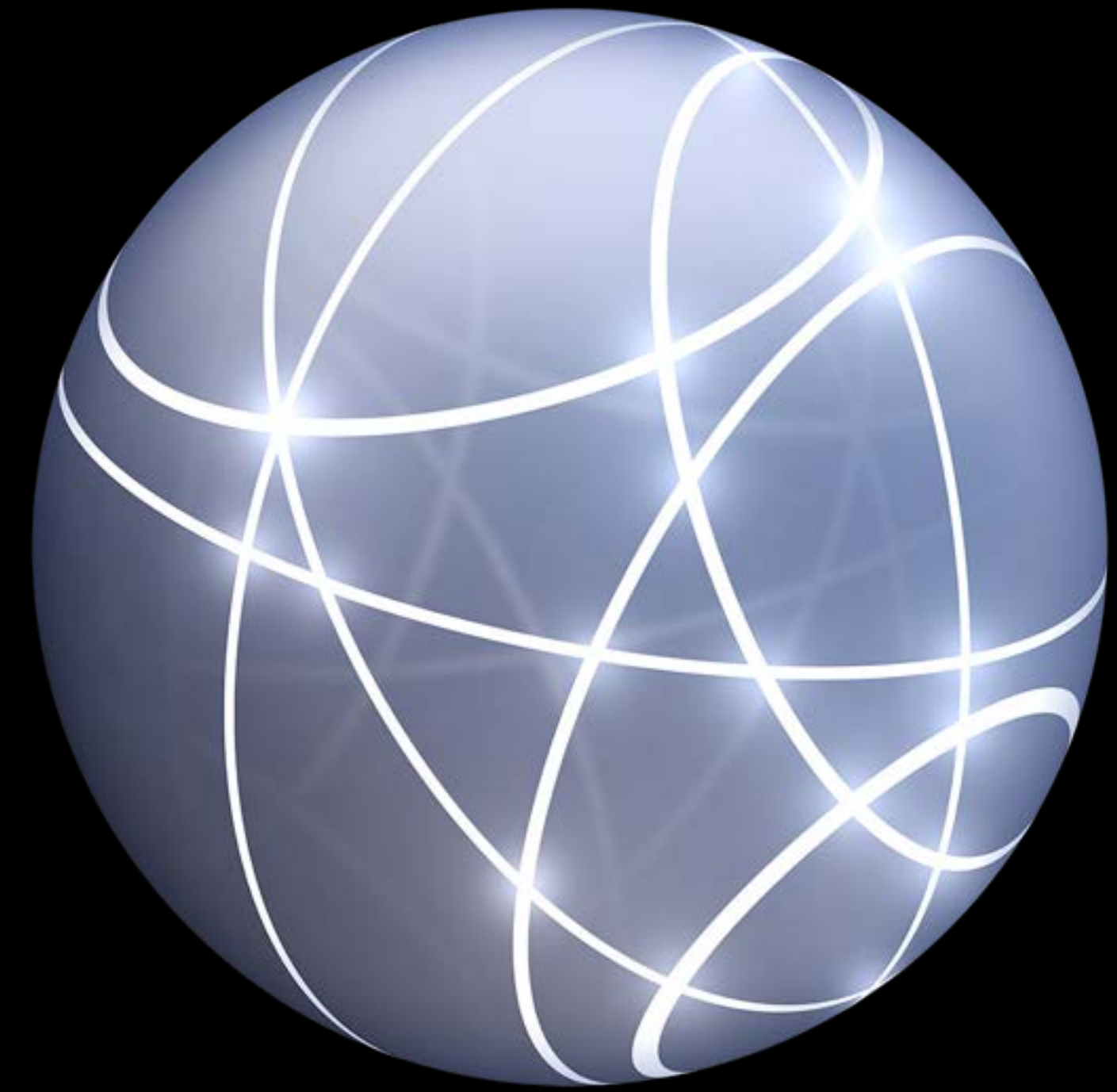
# Today's Special

Nick's Pizza -



Total nutrition facts Buffalo mozzarella  
 margherita 1 Serving, Cal 770, Fat 35g,  
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 14g Margherita\$6 Tomato sauce, fresh  
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# Web-Based Authentication



















Token



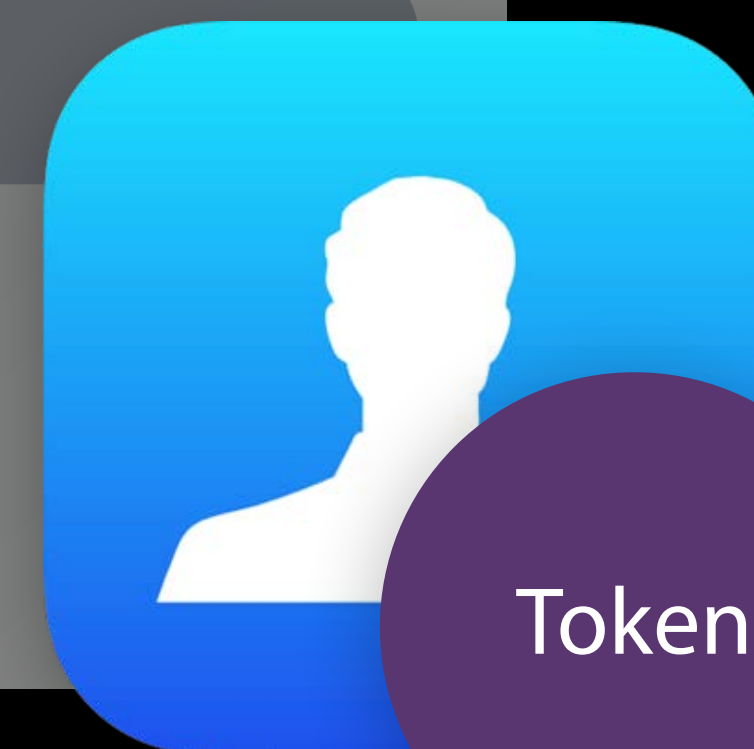
provider.example.com

Allow App to access  
your account?

username

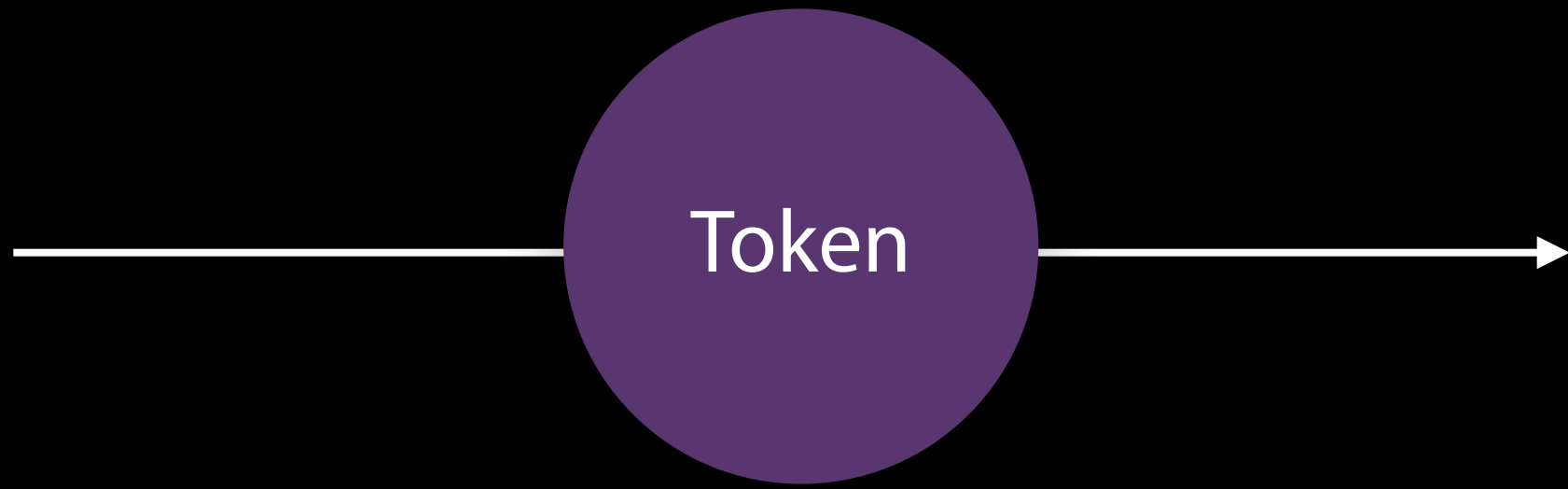
password

sign in



Token





# Safari View Controller

Great for web-based authentication







9:41 AM

100%

example.com

Done

# shiny.

Allow "Pizza Finder" to use your Shiny account?

Username

rmondello

Password

.....

Don't Allow

Allow



# Web-Based Authentication

## Safari View Controller

1. Where you would have used a web view, use `SFSafariViewController`
2. When your `AppDelegate` is messaged with `application(_:handleOpenURL:)` and you have inspected the response, dismiss the `SFSafariViewController` instance



Web Content

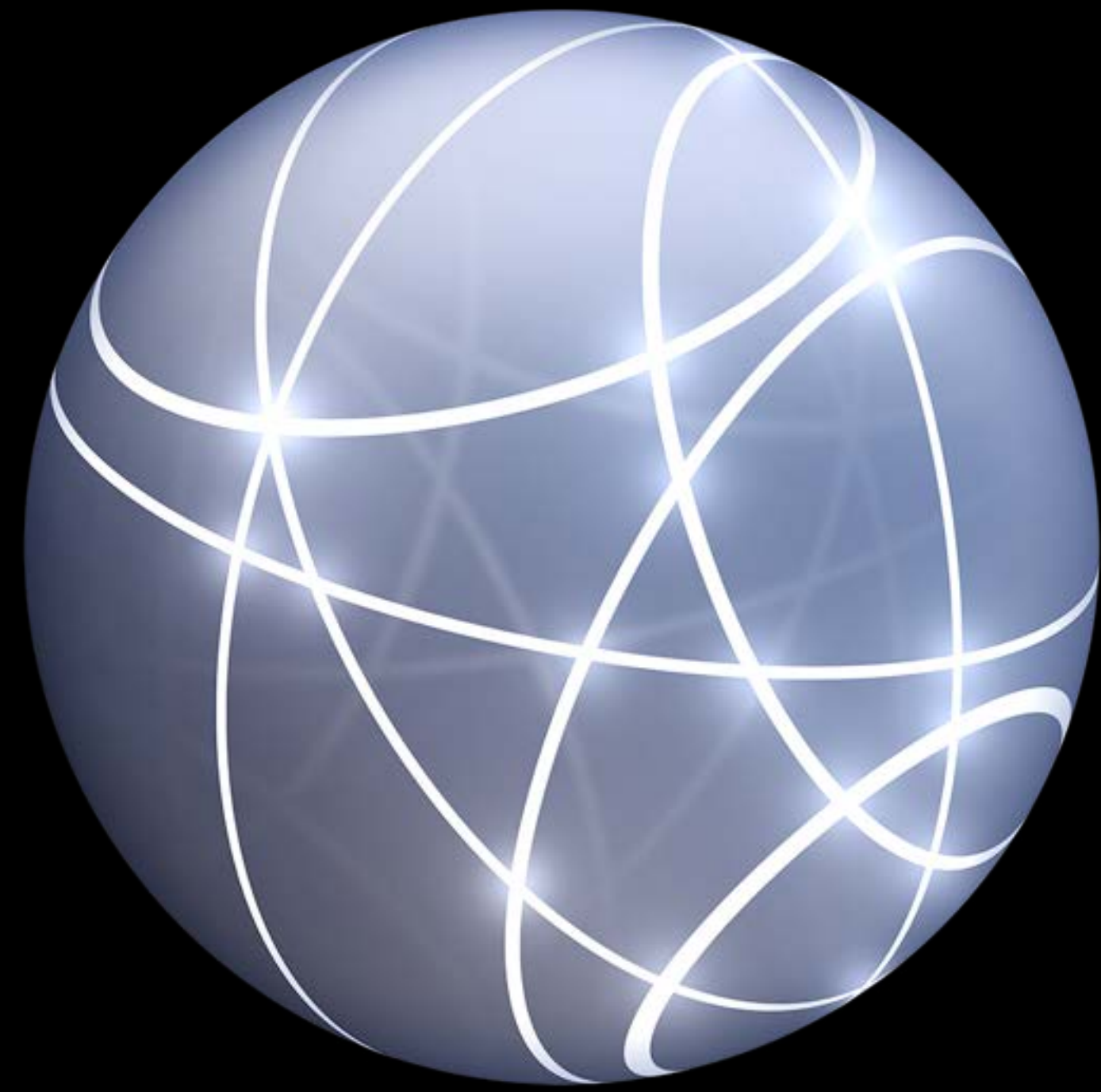




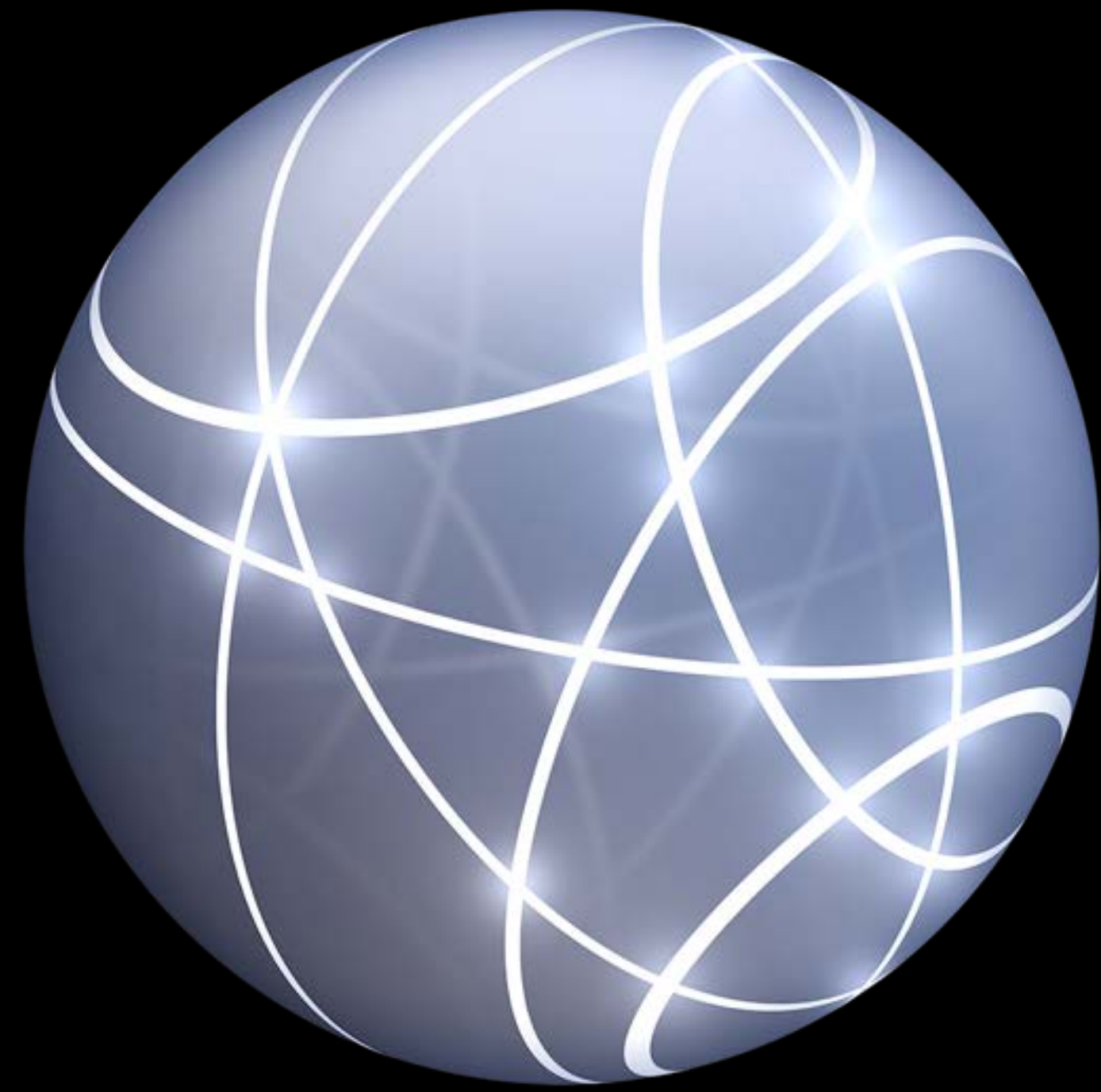
WKWebView

# WKWebView











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# Safari View Controller



# More Information

## Technical Support

Apple Developer Forums

<http://developer.apple.com/forums>

Developer Technical Support

<http://developer.apple.com/support/technical>

## General Inquiries

Jon Davis, Safari and WebKit Evangelist

[web-evangelist@apple.com](mailto:web-evangelist@apple.com)

# Related Sessions

---

What's New in Web Development with  
WebKit and Safari

Mission

Tuesday 9:00AM

---

Using Safari to Deliver and Debug a Responsive  
Web Design

Mission

Wednesday 9:00AM

---

Seamless Linking to Your App

Nob Hill

Thursday 3:30PM

---

Safari Extensibility: Content Blocking and Shared Links

Nob Hill

Friday 11:00AM

---

# Labs

---

Safari and WebKit Lab

Media Lab A

Tuesday 2:30PM

---

Safari and WebKit Lab

Media Lab A

Wednesday 10:00AM

---

Safari and WebKit Lab

Media Lab A

Friday 12:00PM

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 WWDC 15