App Frameworks #WWDC16

Extending Your Apps with SiriKit

Session 225

Vineet Khosla SiriKit Engineering
Diana Huang SiriKit Engineering
Scott Andrus SiriKit Engineering

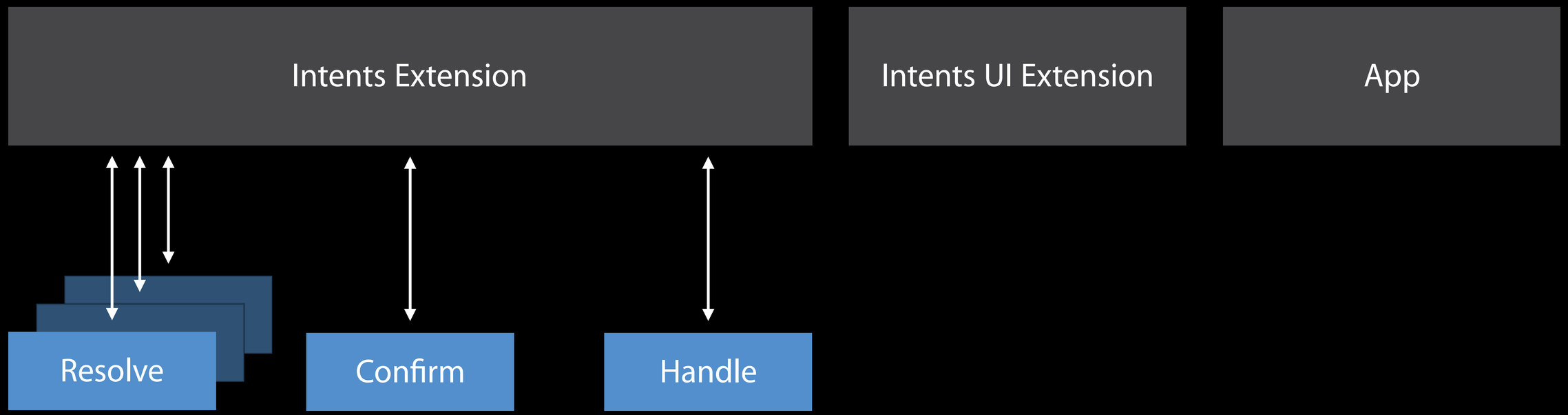
Adding SiriKit

Intents Extension

Intents UI Extension

App

Adding SiriKit



Agenda

Preparing to adopt SiriKit

Agenda

Preparing to adopt SiriKit

Adding your first Intents extension

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Preparing to adopt SiriKit

Adding your first Intents extension

Providing a user interface in Siri

UnicornChat

Preparing to Adopt SiriKit

Preparing to Adopt SiriKit

Preparing to Adopt SiriKit

Embedded frameworks

Preparing to Adopt SiriKit

Embedded frameworks

Unit tests

Preparing to Adopt SiriKit

Embedded frameworks

Unit tests

Architecting your extensions

Preparing to Adopt SiriKit

Embedded frameworks

Preparing to Adopt SiriKit

Embedded frameworks

Networking

Preparing to Adopt SiriKit

Embedded frameworks

Networking

Data model

Preparing to Adopt SiriKit

Embedded frameworks

Networking

Data model

Decision-making logic

Preparing to Adopt SiriKit

Embedded frameworks

Networking

Data model

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User interfaces

Preparing to Adopt SiriKit

Embedded frameworks

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App Extension Best Practices

Preparing to Adopt SiriKit

Unit tests

Preparing to Adopt SiriKit

Unit tests

Mock intents

Preparing to Adopt SiriKit

Unit tests

Mock intents

Make sure your app responds appropriately

Preparing to Adopt SiriKit

Architecting your extensions

SendMessageIntent

StartAudioCallIntent

StartVideoCallIntent

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SendMessageIntent

StartAudioCallIntent

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Adding Your First Intents Extension

Diana Huang SiriKit Engineering

Getting Started

Getting Started

Add extension target

Getting Started

Add extension target

Configure Info.plist

Getting Started

Add extension target

Configure Info.plist

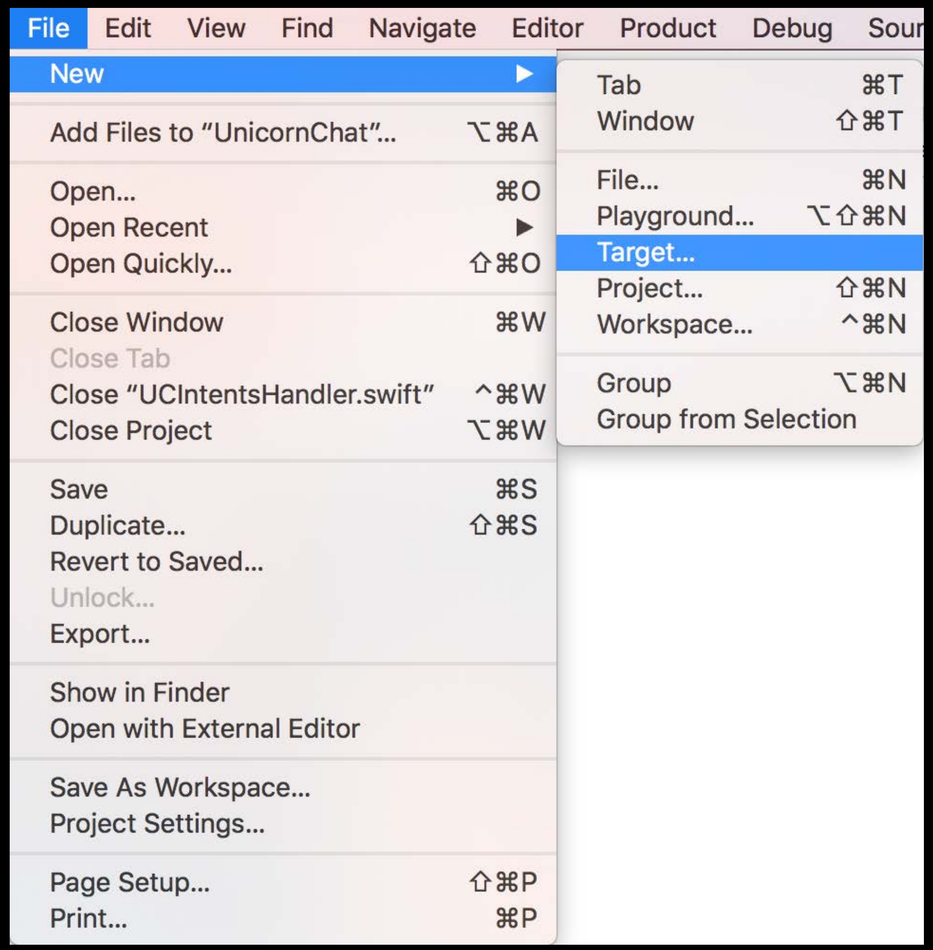
Modify principal class

Intents Extension

Adding an extension target

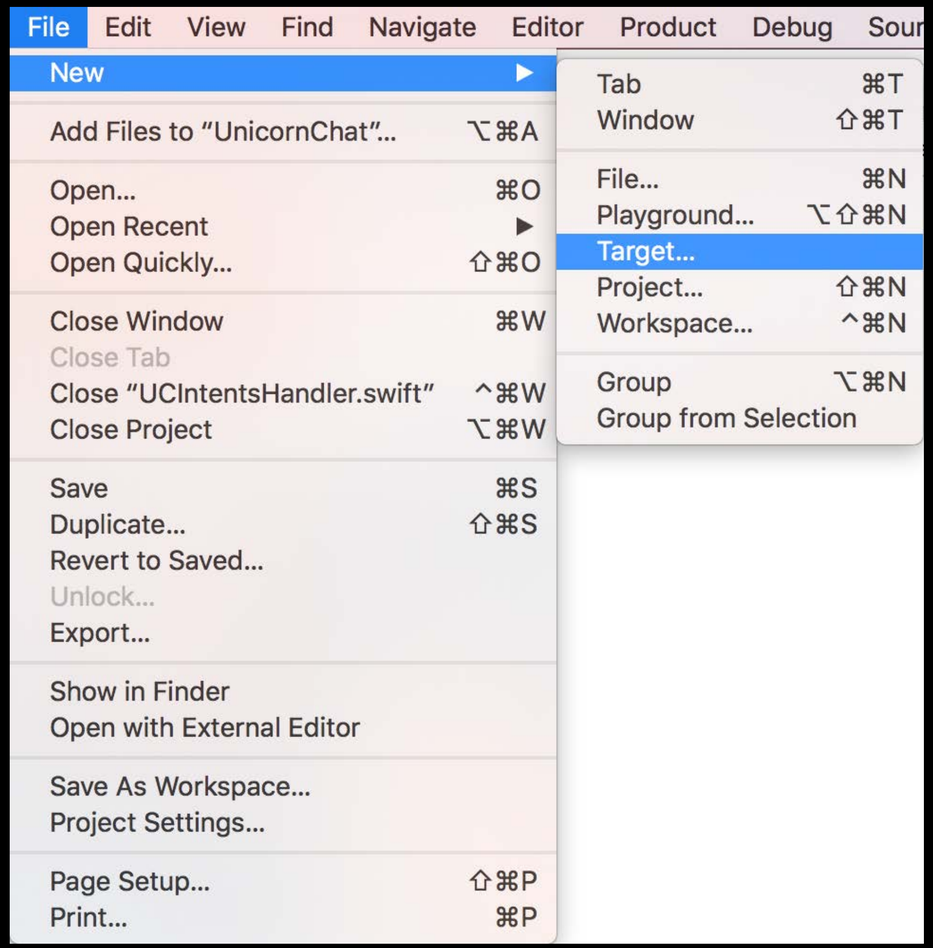
Intents Extension

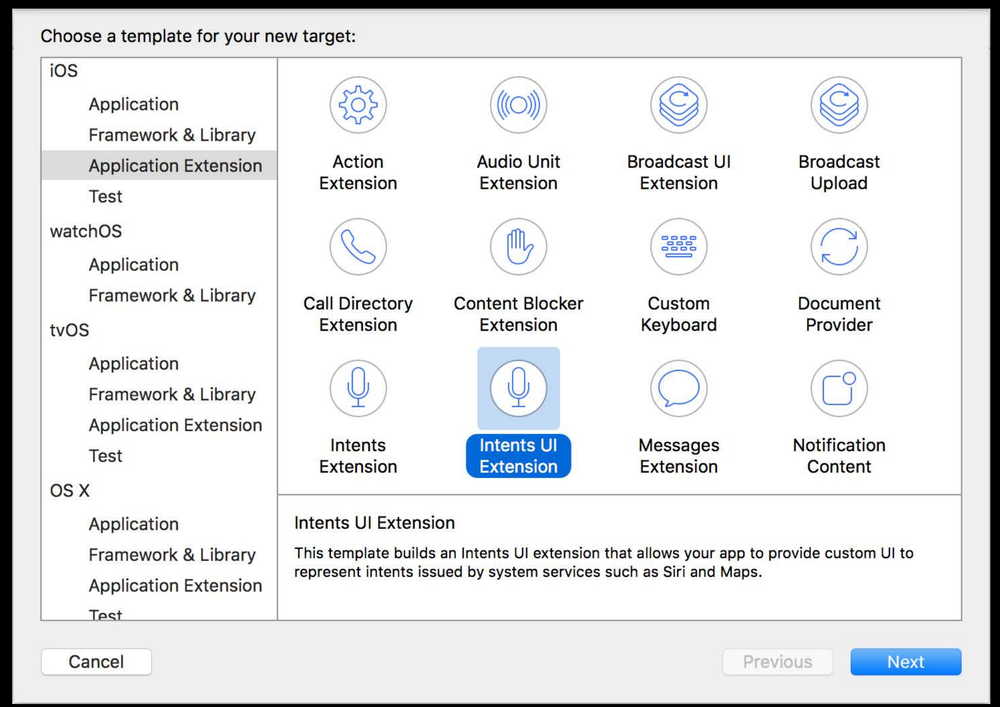
Adding an extension target



Intents Extension

Adding an extension target



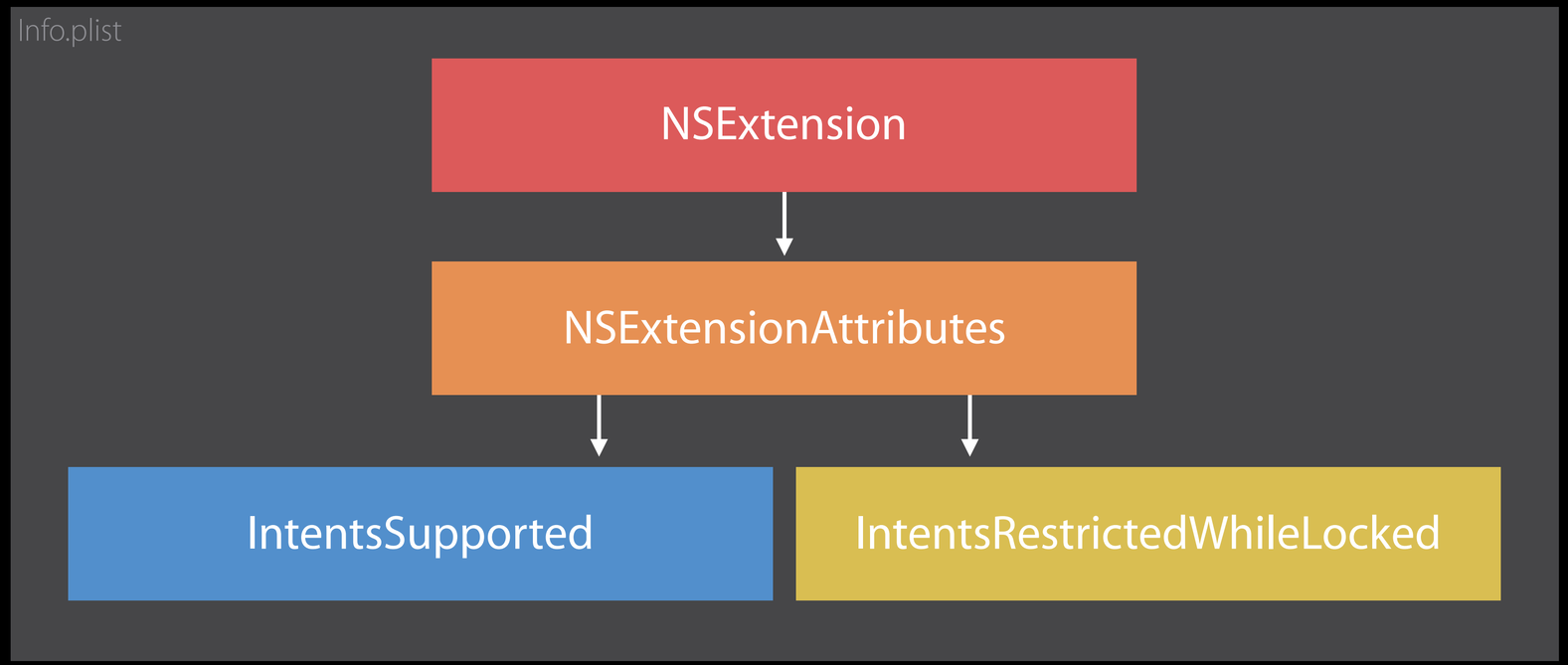


Intents Extension

Info.plist

Intents Extension

Info.plist



Intents Extension

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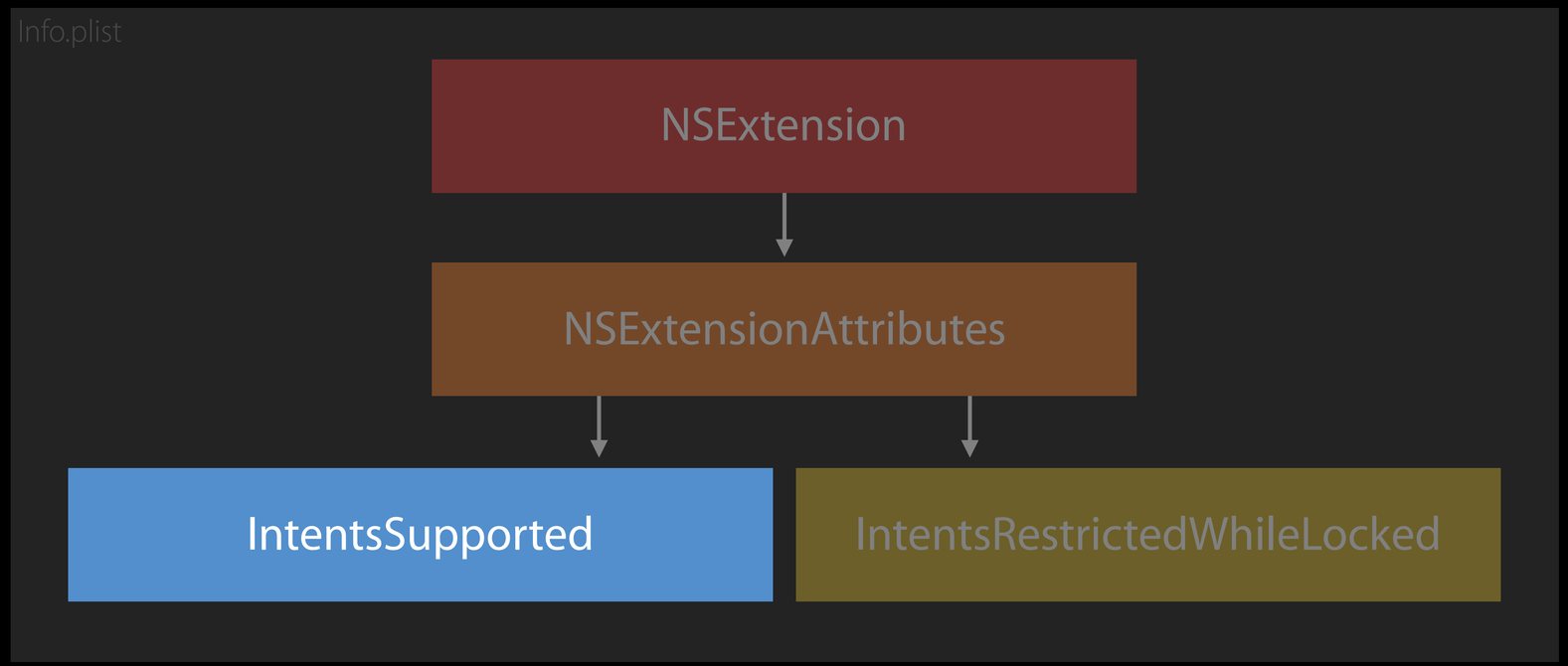
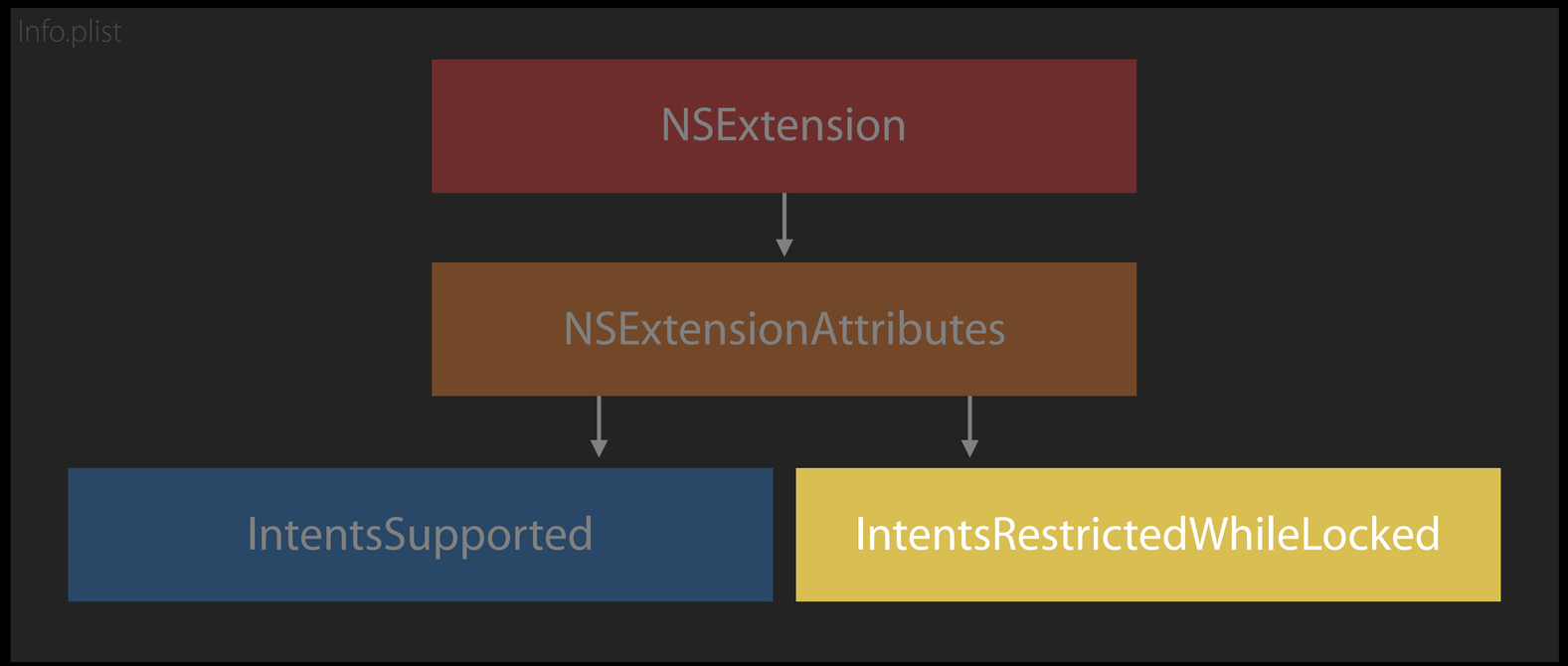


Intents Extension

Info.plist



Intents Extension

Principal class

Intents Extension

Principal class

Subclass of INExtension

Intents Extension

Principal class

Subclass of INExtension

INIntentHandlerProviding

Intents Extension

Principal class

Subclass of INExtension

INIntentHandlerProviding

- handlerForIntent

Intents Extension

Principal class

Subclass of INExtension

INIntentHandlerProviding

- handlerForIntent
- handler class must conform to specific intent handling protocol

Demo

Creating my first Intents extension

Resolve, Confirm, Handle

Resolve

Resolve, Confirm, Handle

Resolve

Validate and clarify parameters

Resolve, Confirm, Handle

Resolve

Validate and clarify parameters

Implement it if you might need Siri to help ask users

Resolve, Confirm, Handle

Resolve

Resolve, Confirm, Handle

Resolve

Resolve, Confirm, Handle

Resolve

Contact search

Resolve, Confirm, Handle

Resolve

Contact search

- Exactly one match

Resolve, Confirm, Handle

Resolve

Contact search

- Exactly one match
- Two or more matches

Resolve, Confirm, Handle

Resolve

Contact search

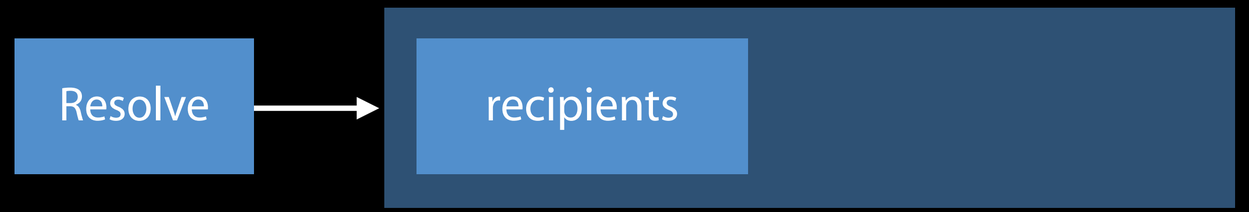
- Exactly one match
- Two or more matches
- No match

Resolve, Confirm, Handle

Resolve

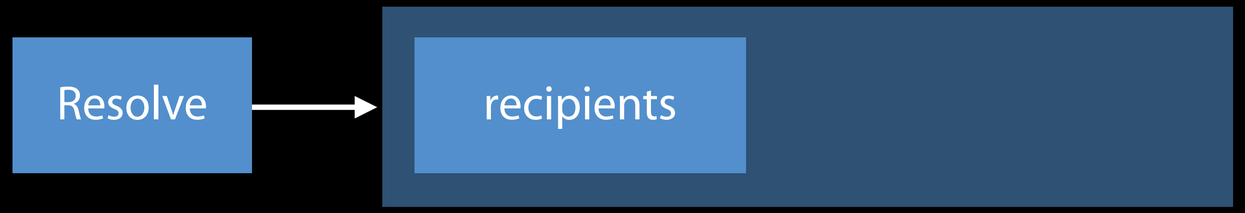
Contact search

- Exactly one match
- Two or more matches
- No match



Resolve, Confirm, Handle

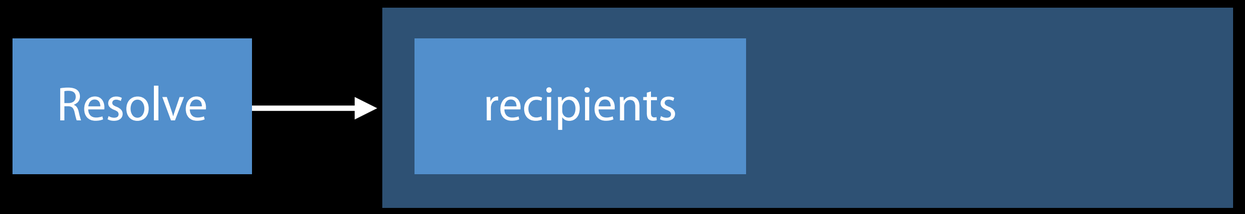
Resolve



Resolve, Confirm, Handle

Resolve

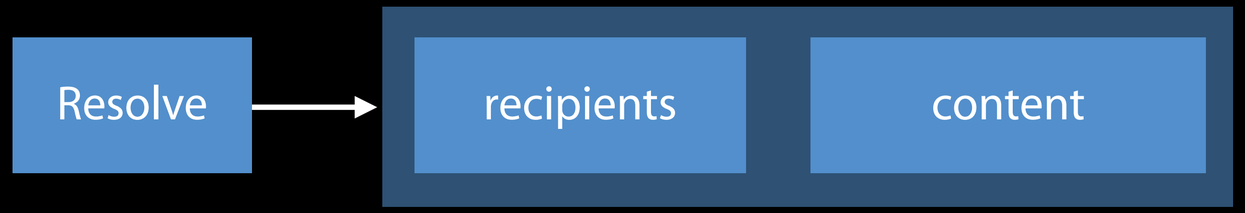
Contact search



Resolve, Confirm, Handle

Resolve

Contact search

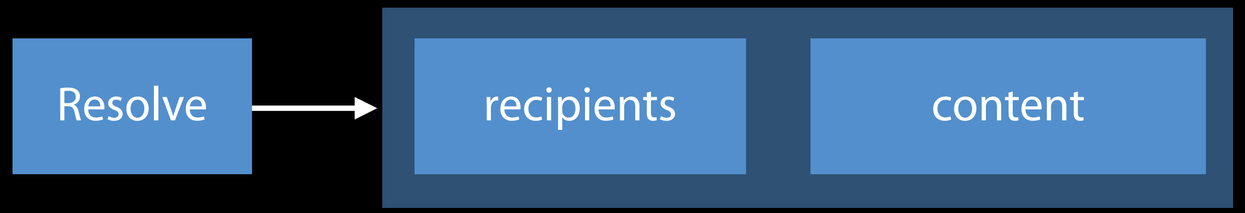


Resolve, Confirm, Handle

Resolve

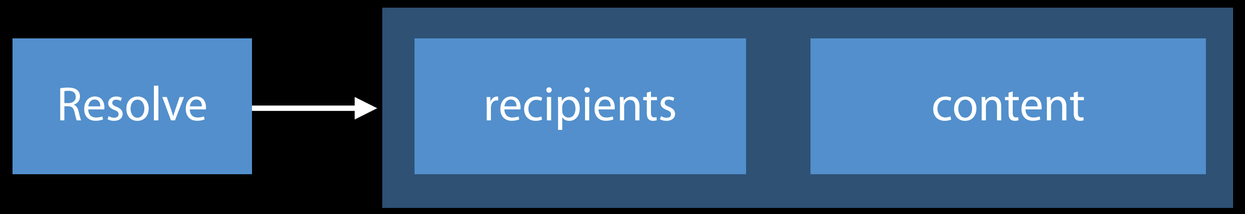
Contact search

Need a value to proceed



Resolve, Confirm, Handle

Confirm



Resolve, Confirm, Handle

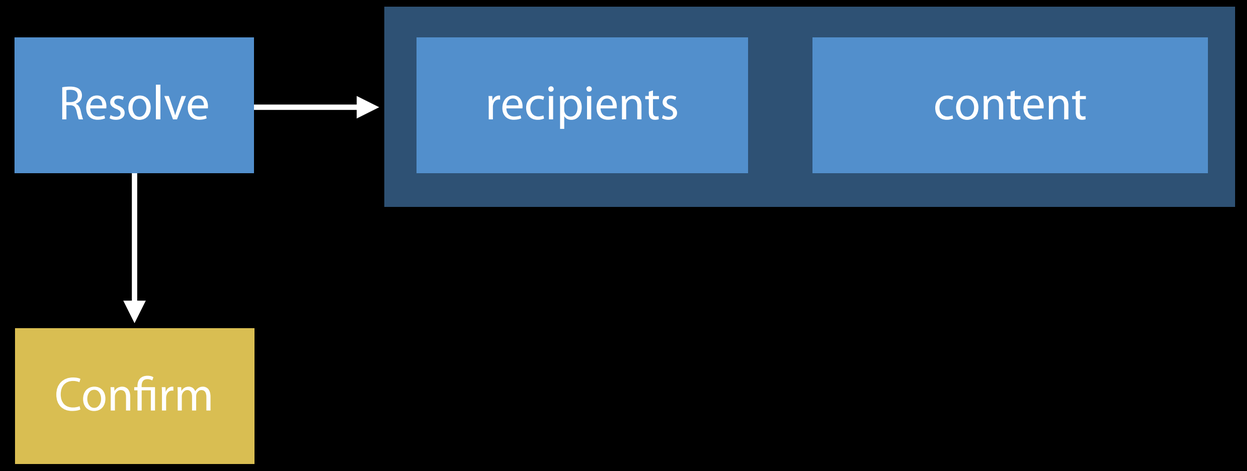
Confirm

Resolve, Confirm, Handle

Confirm

Dry run

- Tell Siri how it went

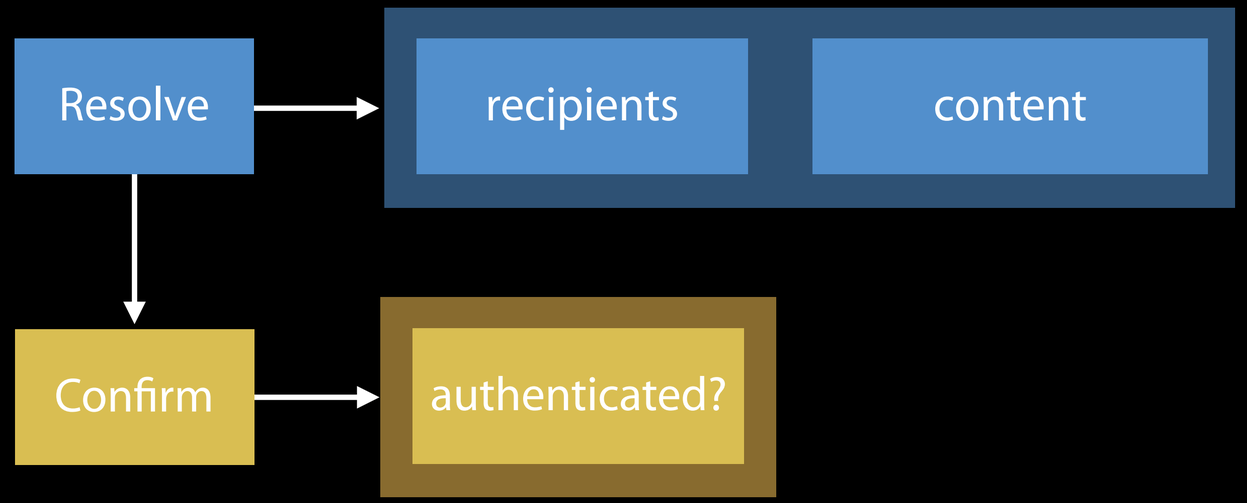


Resolve, Confirm, Handle

Confirm

Dry run

- Tell Siri how it went

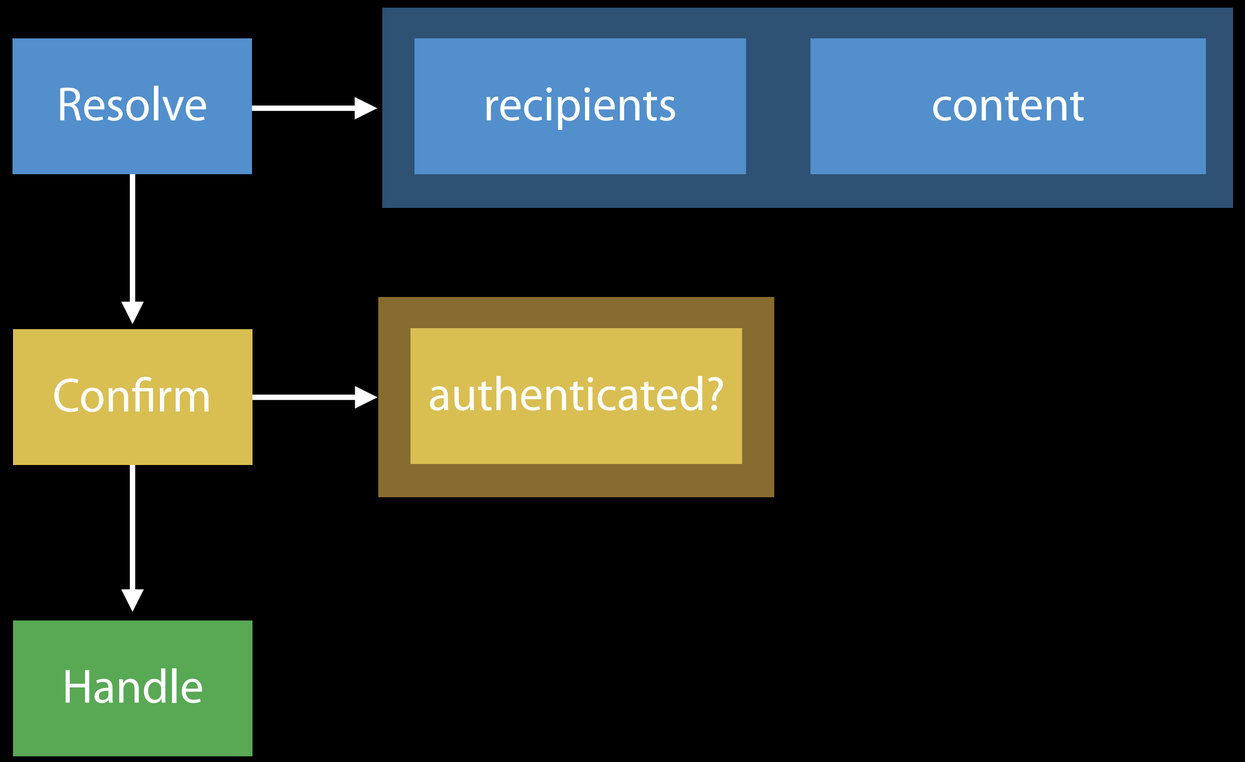


Resolve, Confirm, Handle

Handle

Just handle it!

- Again, tell Siri how it went



Demo

Filling in my app logic

NSUserActivity

Resume state in your app

NSUserActivity

Resume state in your app

Siri creates one by default

NSUserActivity

Resume state in your app

Siri creates one by default

- ActivityType is intent class name

NSUserActivity

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You can provide one to pass custom data

NSUserActivity

Resume state in your app

Siri creates one by default

- ActivityType is intent class name

You can provide one to pass custom data

INInteraction

Demo

Providing my own NSUserActivity

User-Specific Vocabulary

User-Specific Vocabulary

Phrases unique to your app and user

User-Specific Vocabulary

Phrases unique to your app and user

- e.g. contact names

User-Specific Vocabulary

Phrases unique to your app and user

- e.g. contact names

Help Siri understand what users mean

User-Specific Vocabulary

Phrases unique to your app and user

- e.g. contact names

Help Siri understand what users mean

INVocabulary API call from main app

User-Specific Vocabulary

Phrases unique to your app and user

- e.g. contact names

Help Siri understand what users mean

INVocabulary API call from main app

- NOT your extension

```
// User-Specific Vocabulary - UnicornChat

class UCAddressBookManager {
   // This method is called whenever there is a contact change
   func updateSiriKnowledgeOfContacts() {
      // provide the updated list of favorites' unicorn names to Siri
      var unicornNames = OrderedSet(array: self.sortedFavoriteUnicornNames)
      INVocabulary.shared().setVocabularyStrings(unicornNames, of:
         INVocabularyStringType.contactName)
   }

...
}
```

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class UCAddressBookManager {
   // This method is called whenever there is a contact change
   func updateSiriKnowledgeOfContacts() {
      // provide the updated list of favorites' unicorn names to Siri
      DispatchQueue(label: "UCSiriVocabulary").asynchronously(execute: { () -> Void in
         var unicornNames = OrderedSet(array: self.sortedFavoriteUnicornNames)
         INVocabulary.shared().setVocabularyStrings(unicornNames, of:
            INVocabularyStringType.contactName)
      })
   }


…
}
```

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            INVocabularyStringType.contactName)
      })
   }


…
}
```

```
// User-Specific Vocabulary - UnicornChat
    AddressBook

c  This method is ca {
func updateSiriKnowle whenever there is a contact change
    // provide the upda Contacts() {
                        list of favorites' unicorn names to Siri
    DispatchQueue(labe JCSiriVocabulary").asynchronously(execute: { () -> Void in
        var unicornNam  OrderedSet(array: self.sortedFavoriteUnicornNames)
                        red().setVocabularyStrings(unicornNames, of:
        INVocabular     aryStringType.contactName)
        })
    }


...
}
```

9:41 AM 100%

It's sent.

UNICORNCHAT

To: Scott

Are you ready for your presentation

Providing a User Interface with SiriKit

Scott Andrus SiriKit Engineering

UI Extensions Increase Your App's Impact

UI Extensions Increase Your App's Impact

Your view alongside Siri

UI Extensions Increase Your App's Impact

Your view alongside Siri

Experiences unique to your application

UI Extensions Increase Your App's Impact

Your view alongside Siri

Experiences unique to your application

User-specific customization

UI Extensions Increase Your App's Impact

Your view alongside Siri

Experiences unique to your application

User-specific customization

Information Siri might not otherwise show

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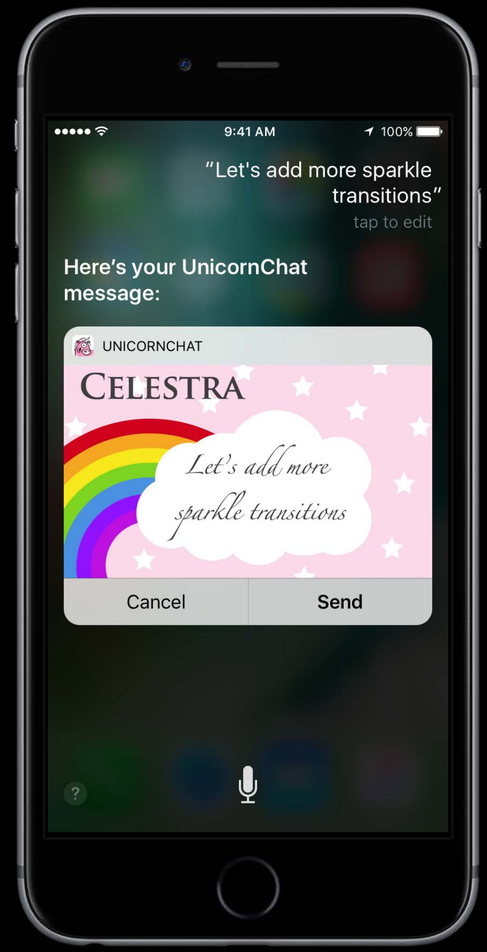
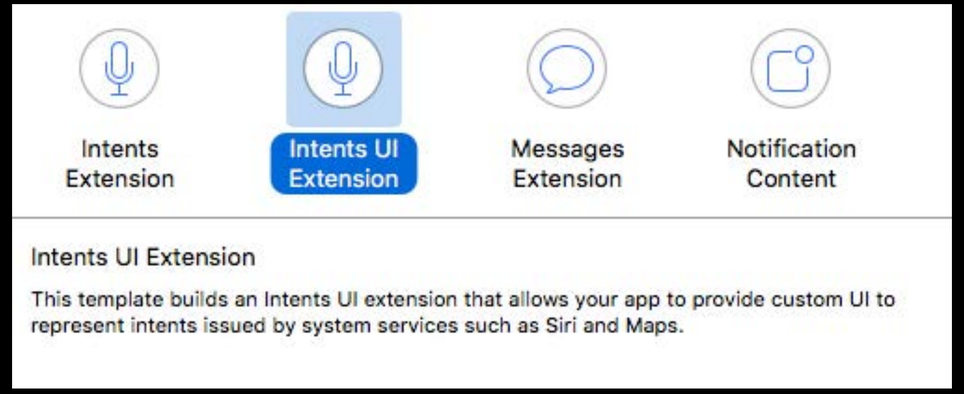


Add UI Extension Target to Xcode

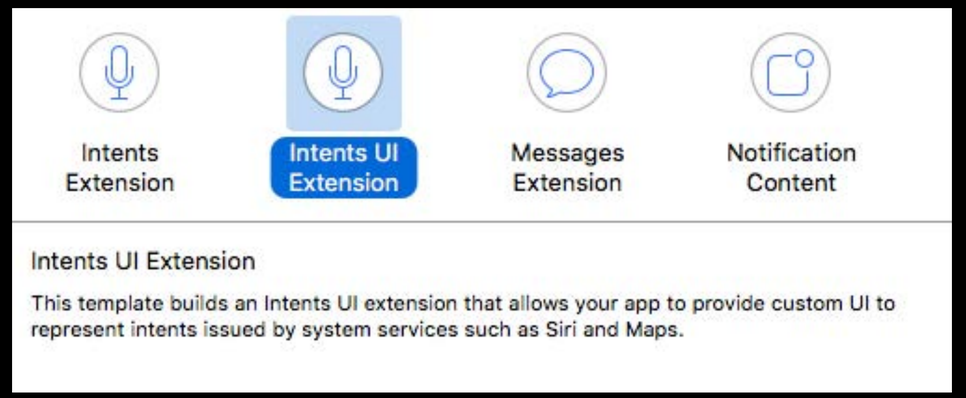
How to get started



Add UI Extension Target to Xcode

How to get started

Add Intents UI Extension target

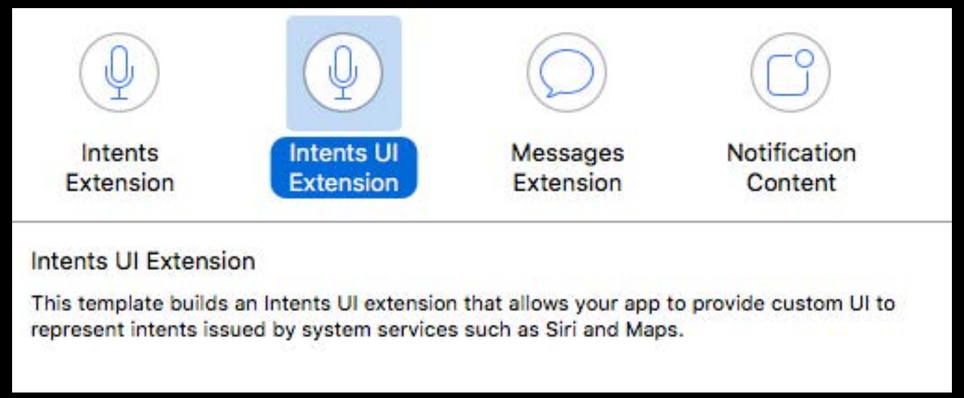


Add UI Extension Target to Xcode

How to get started

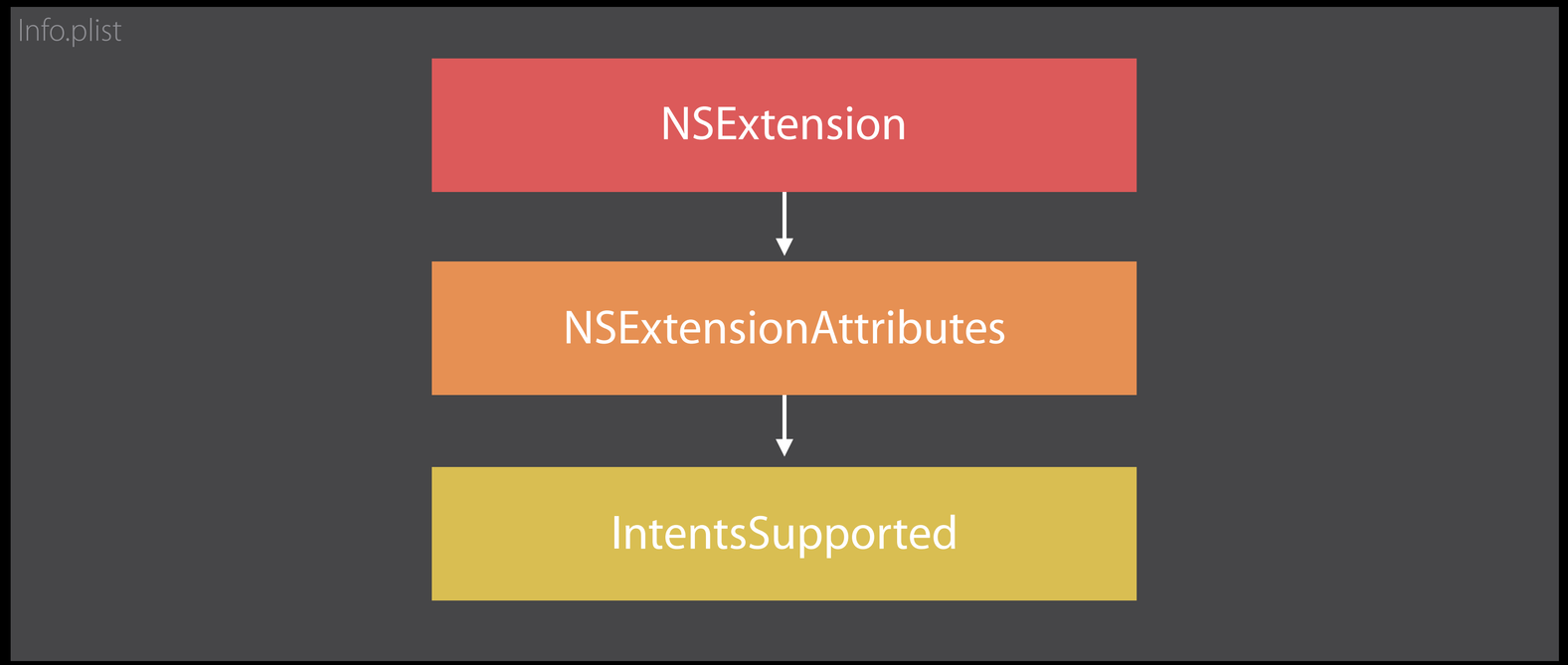
Add Intents UI Extension target

Embed in application



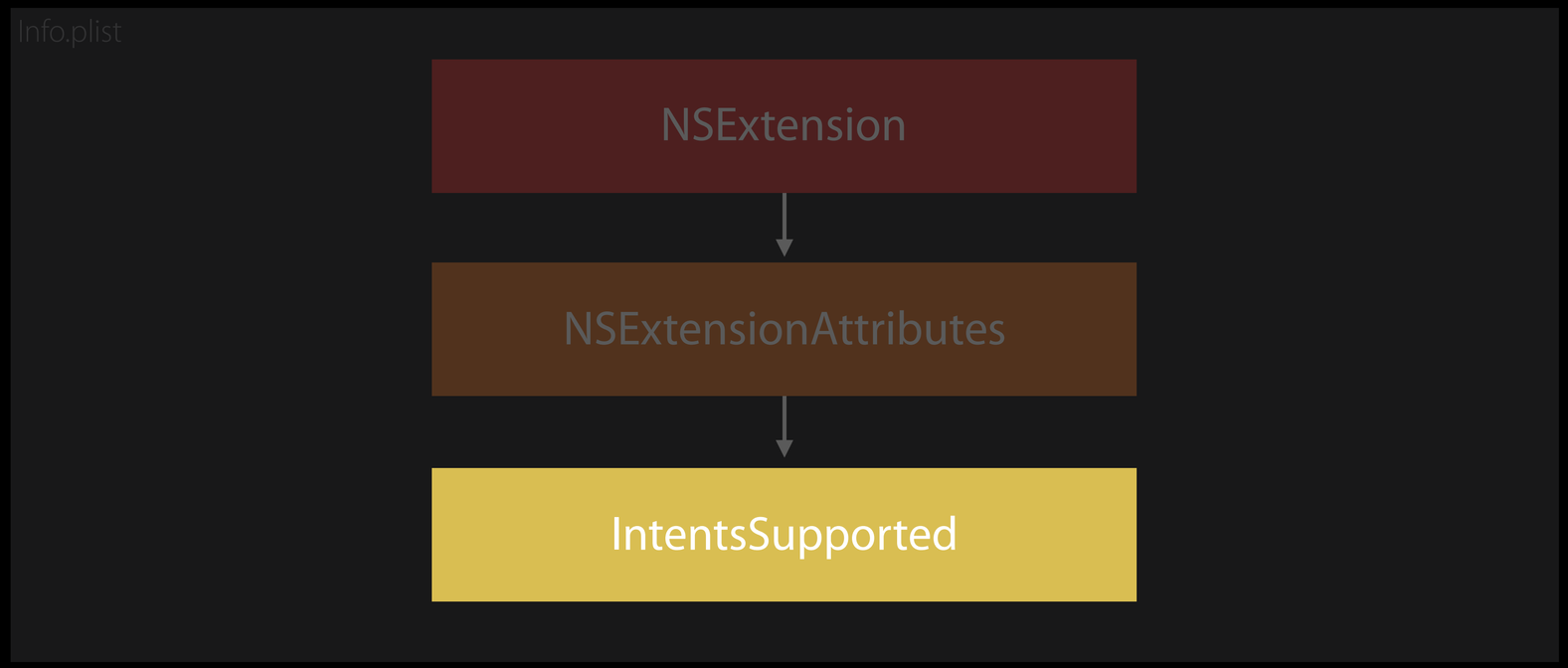
Intents UI Extension

Info.plist



Intents UI Extension

Info.plist



Siri

Siri

configure(with interaction:...)

Siri

configure(with interaction:...)

UI extension

Siri

configure(with interaction:...)

UI extension

UIViewController :
INUIHostedViewControlling

Siri

INInteraction

configure(with interaction:...)

UI extension

UIViewController :
INUIHostedViewControlling

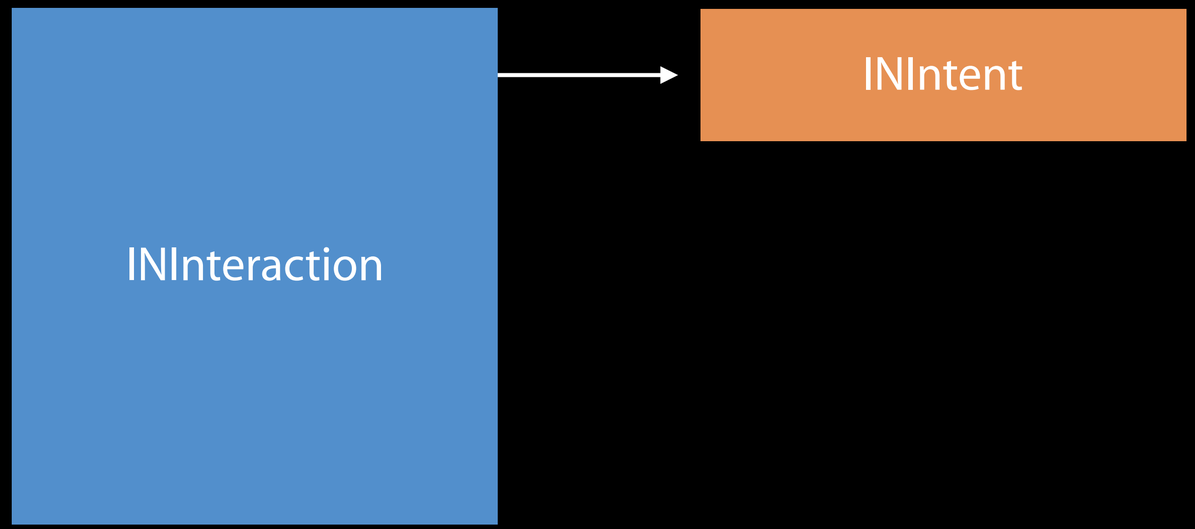
INInteraction

Breaking it down

INInteraction

Breaking it down

The handled (or to-be-handled) INIntent

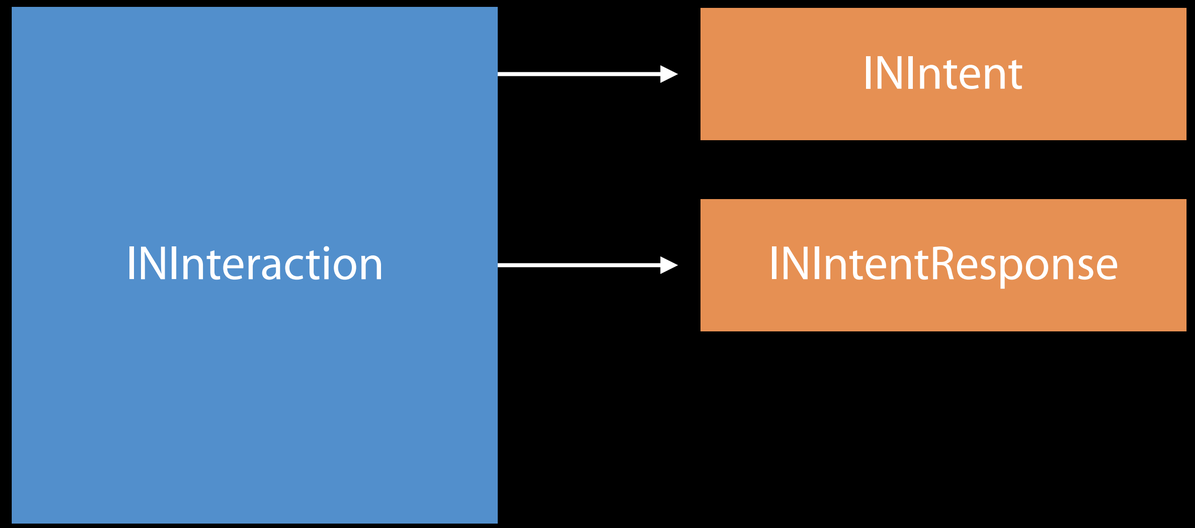


INInteraction

Breaking it down

The handled (or to-be-handled) INIntent

The provided INIntentResponse



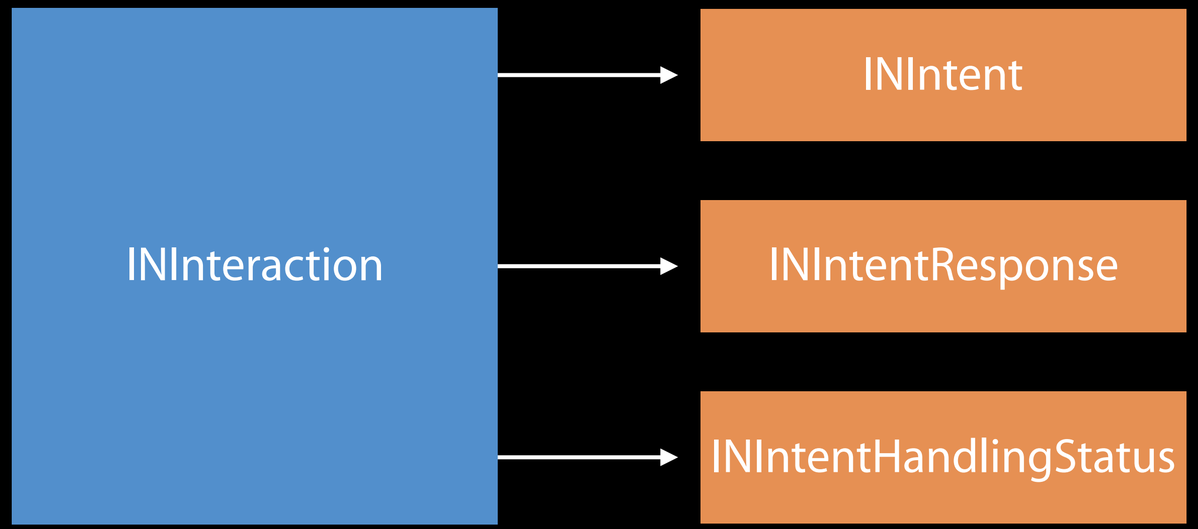
INInteraction

Breaking it down

The handled (or to-be-handled) INIntent

The provided INIntentResponse

INIntentHandlingStatus



Implementing Your View Controller

Implementing Your View Controller

Principal class

Implementing Your View Controller

Principal class

Subclass of UIViewController

Implementing Your View Controller

Principal class

Subclass of UIViewController

Configure with interaction

Implementing Your View Controller

Principal class

Subclass of UIViewController

Configure with interaction

Provided view context

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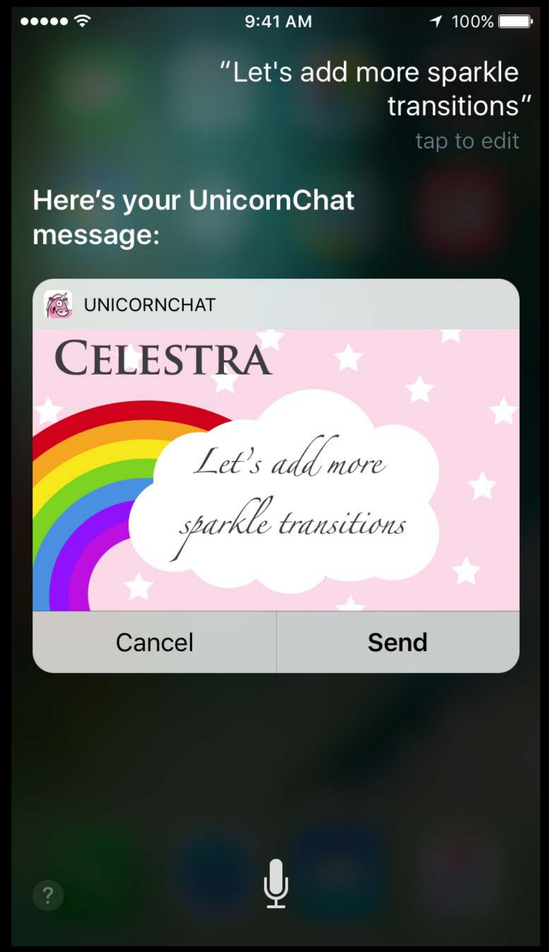
Subclass of UIViewController

Configure with interaction

Provided view context



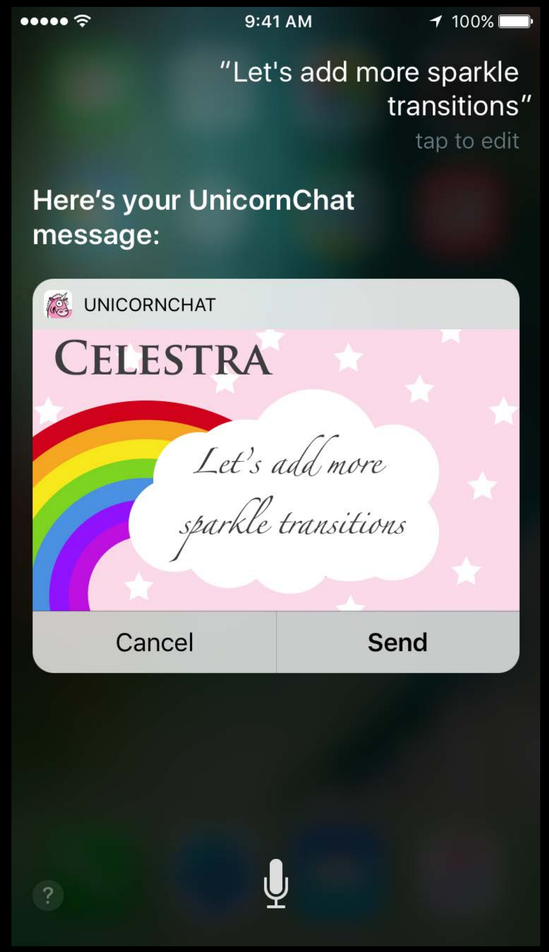
Implementing Your View Controller

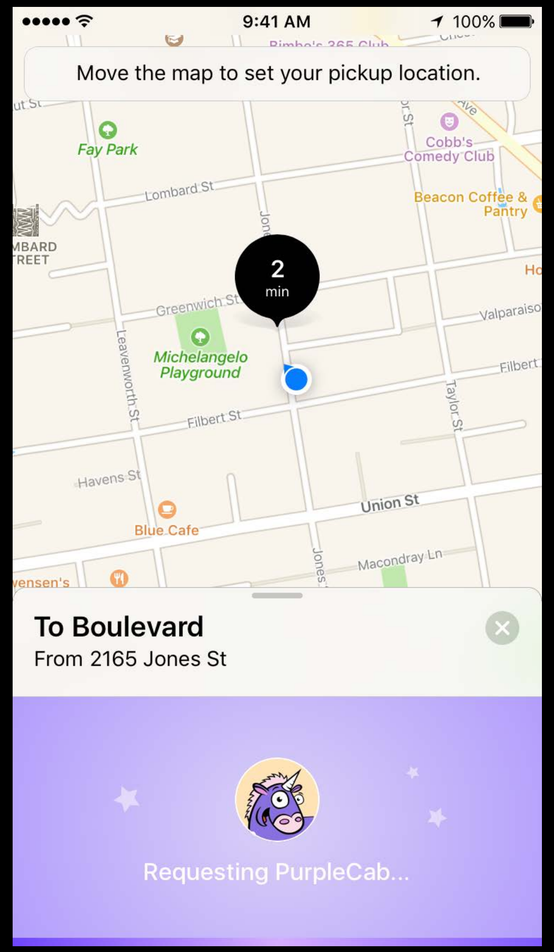
Principal class

Subclass of UIViewController

Configure with interaction

Provided view context





Implementing Your View Controller

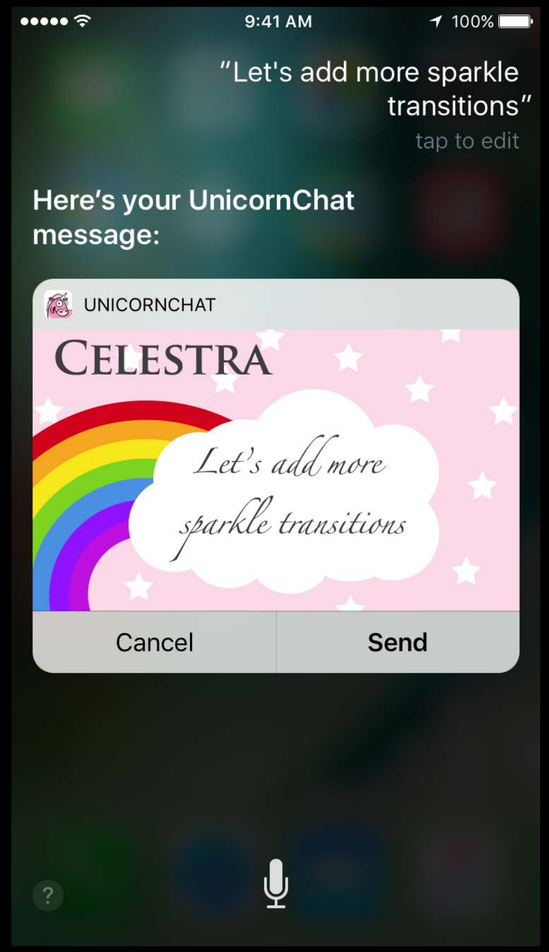
Principal class

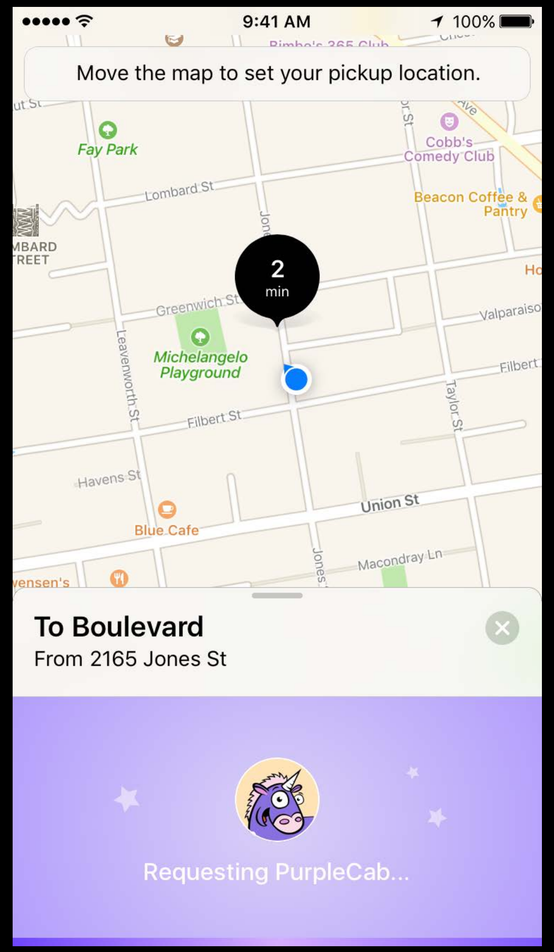
Subclass of UIViewController

Configure with interaction

Provided view context

Desired size in the completion





Demo

Building a SiriKit UI extension

9:41 AM 100%

Here's your UnicornChat message:

UNICORNCHAT

Diana

Great job on your presentation today

To: Diana

Great job on your presentation today

Cancel **Send**

Siri Gives You Override Control

Siri Gives You Override Control

Implement INUIHostedViewSiriProviding

Siri Gives You Override Control

Implement INUIHostedViewSiriProviding

Properties for displaying messages and maps

Siri Gives You Override Control

Implement INUIHostedViewSiriProviding

Properties for displaying messages and maps

Opt-in to displaying a particular interface

Siri Gives You Override Control

Implement INUIHostedViewSiriProviding

Properties for displaying messages and maps

Opt-in to displaying a particular interface

Siri will accommodate your view's content

```
class IntentViewController: UIViewController, INUIHostedViewControlling,
   func configure(with interaction: INInteraction!, context: INUIHostedViewContext,
completion: ((CGSize) -> Void)!) {
      // Configure your view
      completion(self.extensionContext!.hostedViewMaximumAllowedSize)
   }
}
```

```
class IntentViewController: UIViewController, INUIHostedViewControlling,
INUIHostedViewSiriProviding {
    func configure(with interaction: INInteraction!, context: INUIHostedViewContext,
completion: ((CGSize) -> Void)!) {
        // Configure your view
        completion(self.extensionContext!.hostedViewMaximumAllowedSize)
    }
    var displaysMessage: Bool {
        return true
    }
}
```

```swift
class IntentViewController: UIViewController, INUIHostedViewControlling,
INUIHostedViewSiriProviding {
    func configure(with interaction: INInteraction!, context: INUIHostedViewContext,
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        return true
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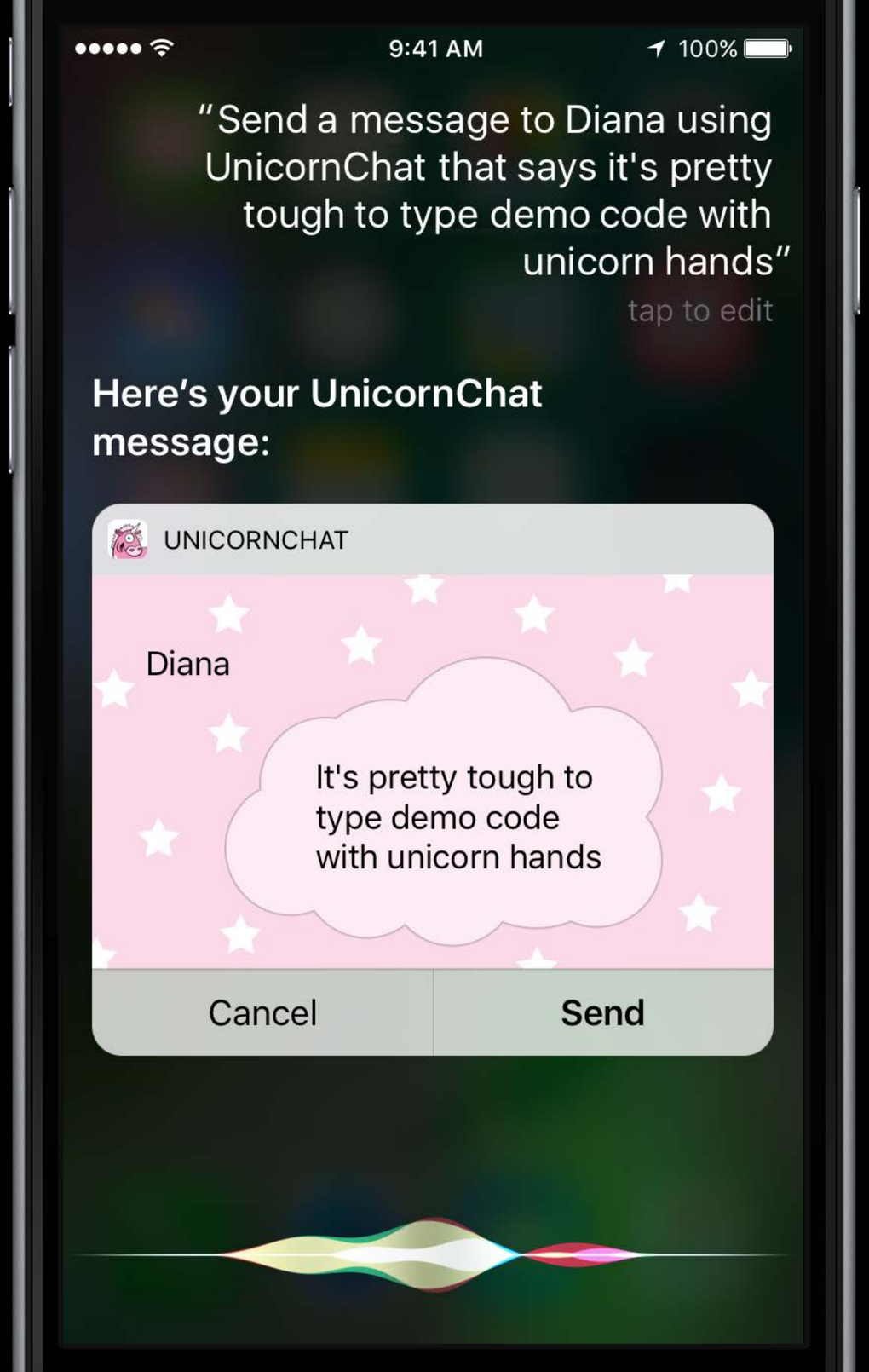
Demo

Telling Siri about our interface


9:41 AM
100%
“Send a message to Diana using UnicornChat that says it's pretty tough to type demo code with unicorn hands”
tap to edit
Here’s your UnicornChat message:
UNICORNCHAT
Diana
It's pretty tough to type demo code with unicorn hands
Cancel
Send


9:41 AM
100%
"Yeah"
tap to edit
It's sent.
UNICORNCHAT
Diana
It's pretty tough to type demo code with unicorn hands

Considerations

Considerations

Be memory conscious

Considerations

Be memory conscious

Minimum and maximum view sizes

Considerations

Be memory conscious

Minimum and maximum view sizes

Flexible and adaptive layout patterns

Summary

Summary

Prepare to adopt SiriKit

Summary

Prepare to adopt SiriKit

Add your first Intents extension

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Add your first Intents extension

Provide a user interface in Siri

More Information

https://developer.apple.com/wwdc16/225

Related Sessions

Introducing SiriKit	Presidio	Wednesday 5:00PM
App Extension Best Practices		WWDC 2015

Labs

SiriKit Lab	Frameworks Lab C	Thursday 3:00PM
SiriKit Lab	Frameworks Lab B	Friday 9:00AM

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