

# GET STARTED WITH VOICE USER INTERFACES



**Amber Matz**

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**DrupalCon Vienna  
September 2017**



# ABOUT ME



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Trainer*

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# IN TODAY'S EPISODE



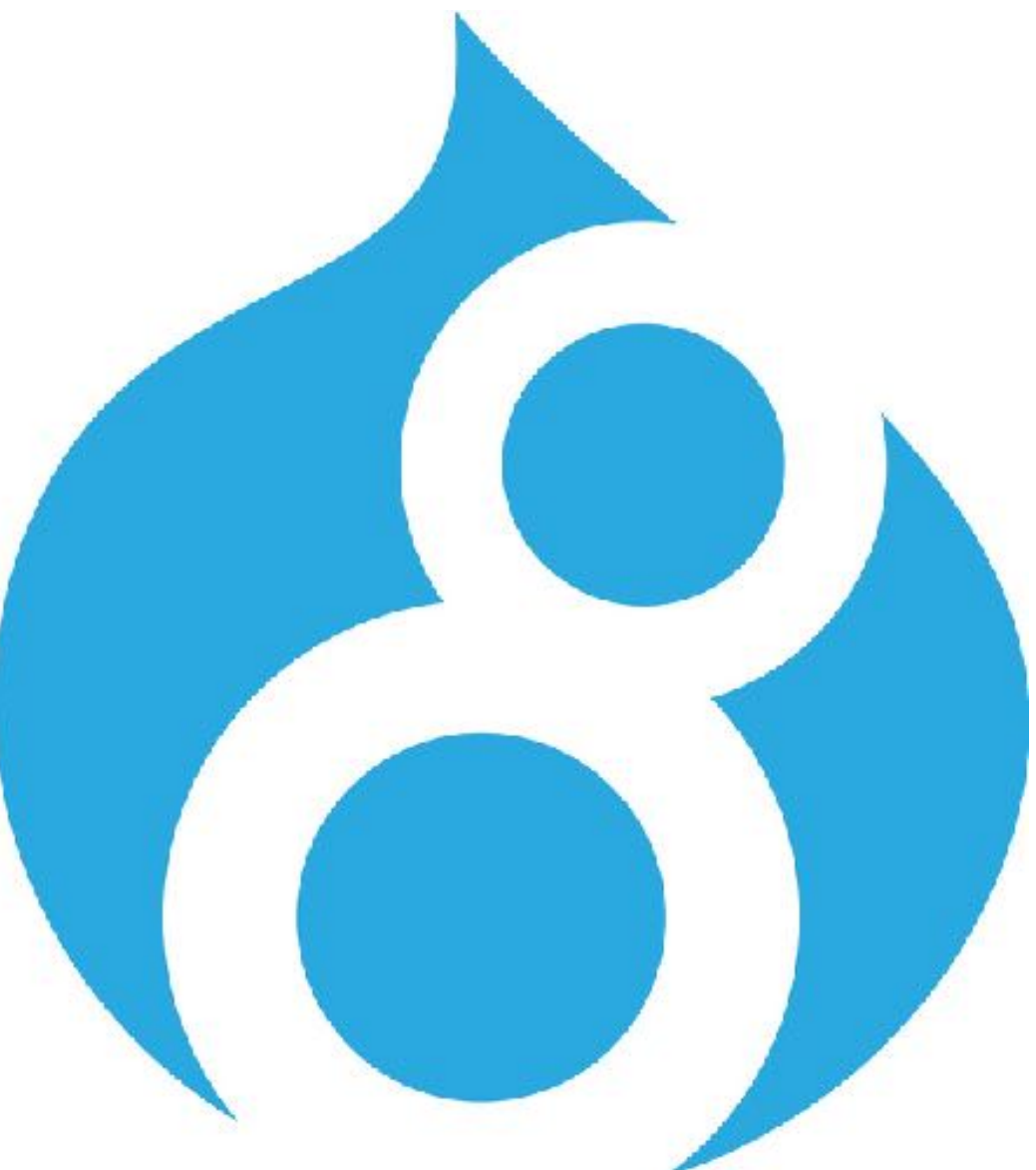
**\* OVERVIEW OF VOICE PLATFORMS & OPPORTUNITIES**

**\* DESIGNING A VOICE USER INTERFACE**

**\* VOICE APP CONCEPTS**

**\* ENDPOINT POSSIBILITIES**

**\* DEMOS**



# TAKE AWAYS



**\* BY THE END, YOU'LL  
BETTER UNDERSTAND:**

**- WHICH PLATFORM YOU  
WANT TO LEARN**

**- THE MAJOR CONCEPTS  
AND PROCESS OF VOICE  
UI IMPLEMENTATION**



# WHO IS THIS FOR?



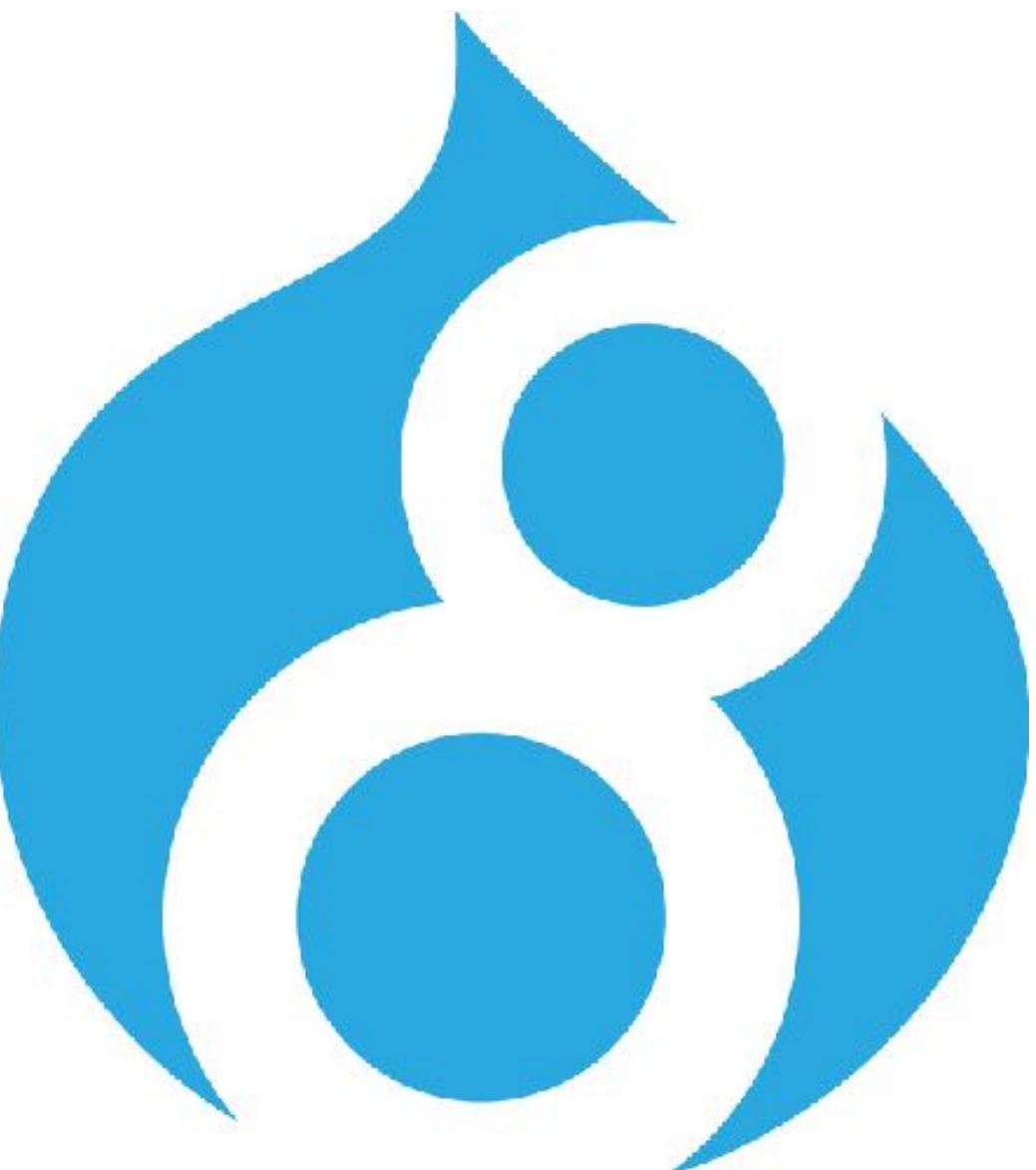
## **\* YOU ARE:**

- **INTERMEDIATE TO ADVANCED WEB OR APP DEVELOPER**



## **\* YOU CAN:**

- **COPY AND PASTE.**
- **FOLLOW INSTRUCTIONS.**



# VOICE PLATFORMS & OPPORTUNITIES

# THE EMERGING PLAYERS

\* **ALEXA**

\* **GOOGLE**

\* **API.AI**

\* **CORTANA**

\* **SIRI**



# ALEXA

**\* SERVICE NAME:**

**- ALEXA**



# ALEXA

## **\* PURPOSE:**

- LETS YOU BUILD CUSTOM VOICE "SKILLS" FOR ALEXA-ENABLED DEVICES OR INTEGRATE ALEXA INTO YOUR CONNECTED PRODUCT.**



# ALEXA

**\* COMPANY:**

**- AMAZON**



# ALEXA

## **\* HOSTING:**

**- AWS LAMBDA**

**- ANY INTERNET-  
ACCESSIBLE ENDPOINT**



# ALEXA

## **\* DEVICES:**

**- ECHO FAMILY**

**- KINDLE FIRE**

**- ANY "ALEXA-ENABLED"  
CONNECTED DEVICE**



# ALEXA

## **\* APP DISTRIBUTION:**

**- ALEXA STORE**

**- END-USER INSTALLS VIA  
ALEXA APP**



# ALEXA

## \* LOCALIZATION & LANGUAGE SUPPORT:

- US-EN

- UK-EN

- GERMANY-GERMAN



# ALEXA

## **\* STATE OF DEVELOPER SUPPORT**

**- SKILL-BUILDING UI**

**- DOCS, SAMPLES, API REFERENCE**

**- VIDEO WALKTHROUGHS & CONCEPTS**

**- VARIETY OF SDKS**

**- POSITIVE TESTING AND  
PUBLISHING EXPERIENCE**





# ALEXA

## **\* DEVELOPER HOME(S):**

**- DEVELOPER.AMAZON.COM/  
ALEXA**

**- DEVELOPER.AMAZON.COM/  
ALEXA-VOICE-SERVICE**





# Introducing the AVS Device SDK

An easy-to-use SDK for commercial device makers to integrate Alexa into connected products

[Learn more >>](#)



## Alexa Skills Kit

A free SDK that lets you easily build voice experiences



## Alexa Voice Service

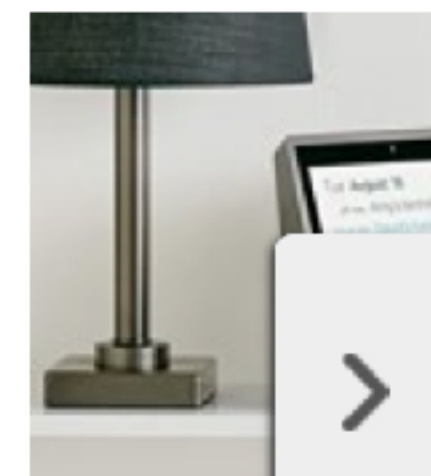
Bring voice capabilities to your connected device



## Alexa Fund

\$100 million in investment to fuel voice technology innovation

## Learn to build with Alexa



## Get started

[Create an Alexa skill now](#)

[Learn how to build your first skill](#)

[Integrate Alexa into your device](#)

# GOOGLE

**\* SERVICE NAME:**

**- GOOGLE ASSISTANT**

**- ACTIONS ON GOOGLE**



# GOOGLE

## \* **PURPOSE:**

- **GOOGLE ACTIONS LET YOU BUILD APPS FOR THE GOOGLE ASSISTANT**



# GOOGLE

**\* COMPANY:**

**- GOOGLE**



# GOOGLE

## \* HOSTING:

- CLOUD FUNCTIONS FOR FIREBASE
- GOOGLE CLOUD
- ANY INTERNET-ACCESSIBLE ENDPOINT



# GOOGLE

## **\* DEVICES:**

**- GOOGLE HOME**

**- ANY GOOGLE ASSISTANT-  
ENABLED DEVICE**



# GOOGLE

## **\* APP DISTRIBUTION:**

**- AUTOMATIC DISTRIBUTION  
TO GOOGLE-ASSISTANT  
ENABLED DEVICES**

**- USER DOES NOT ENABLE  
OR INSTALL CUSTOM APPS**





# GOOGLE

## \* LOCALIZATION & LANGUAGE SUPPORT:

- DEPENDENT ON USER'S REGIONAL SETTINGS
- 15 LANGUAGES SUPPORTED IF **API.AI** USED TO CREATE AGENT



# API.AI AGENT LANGUAGES

- BRAZILIAN PORTUGUESE
- CHINESE (CANTONESE)
- CHINESE (SIMPLIFIED)
- CHINESE (TRADITIONAL)
- ENGLISH
- DUTCH
- FRENCH

- GERMAN
- ITALIAN
- JAPANESE
- KOREAN
- PORTUGUESE
- RUSSIAN
- SPANISH
- UKRAINIAN



# GOOGLE

## \* STATE OF DEVELOPER SUPPORT:

- AGENT-BUILDING UI  
(VIA API.AI CONSOLE)
- DOCS, SAMPLES, LINKS TO API REFERENCES AND SDKS
- VIDEO WALKTHROUGHS & CONCEPTS
- VARIETY OF SDKS, TOOLS, HOSTING
- IN-APP AND ENDPOINT TESTING (VIA API.AI CONSOLE)



# GOOGLE

## \* DEVELOPER HOME(S):

- [DEVELOPERS.GOOGLE.COM/  
ACTiONS/](https://developers.google.com/actions/)

- [DEVELOPERS.GOOGLE.COM/  
ASSiSTANT/SDK](https://developers.google.com/assistant/sdk)





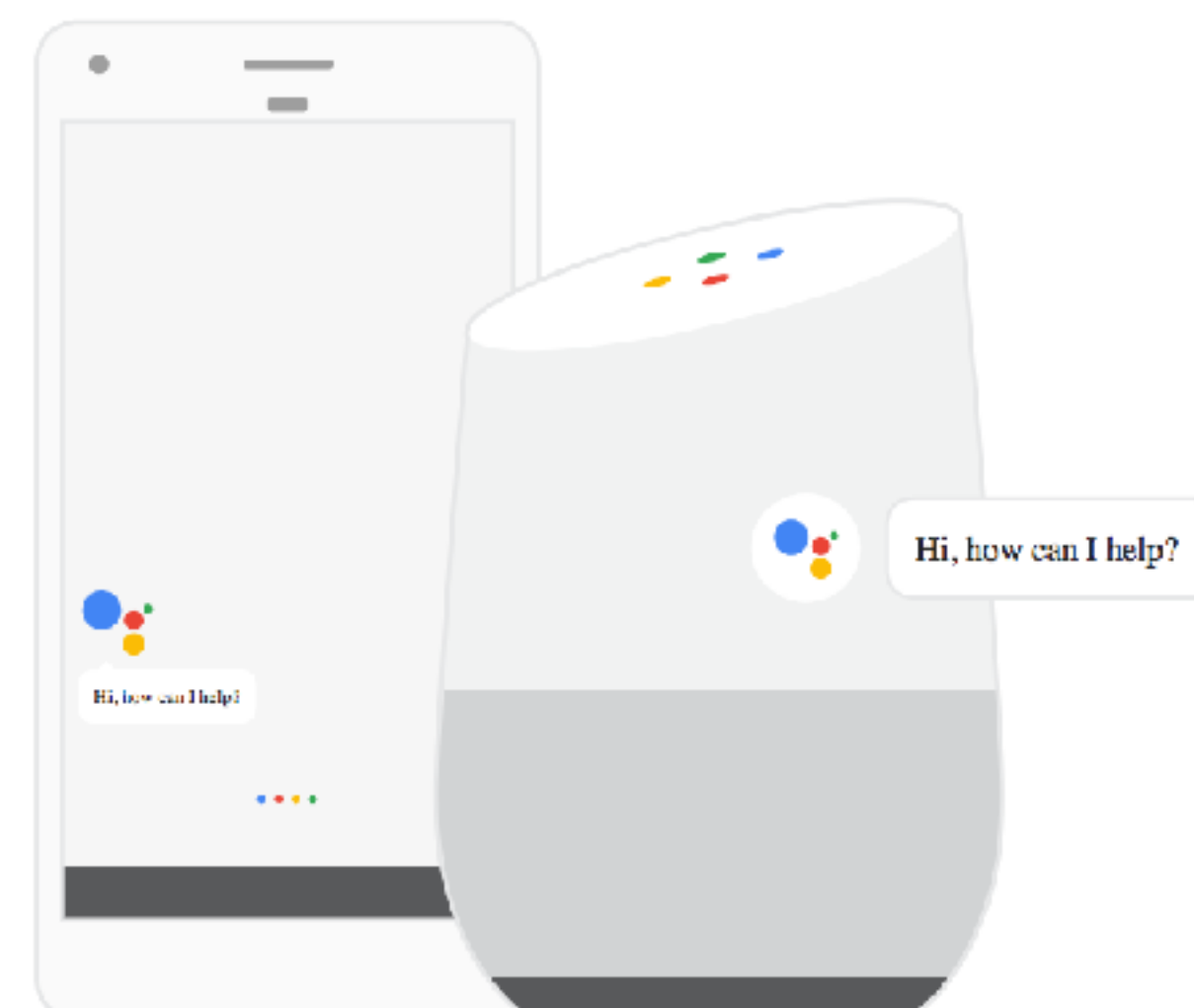
## Engage users through the Google Assistant

Actions on Google lets you build apps for the Google Assistant. Your apps can help you engage users through Google Home, eligible Android phones, iPhones, and in the future, through every experience where the Google Assistant is available.

[BUILD AN APP IN 30 MINUTES](#)[GO TO THE ACTIONS CONSOLE](#)

## Reach users right when they need you

Users don't need to install anything to interact with your apps. When they ask for you by name, we'll connect them with your app immediately. And if you tell us what types of actions your app can handle, we can offer it as a recommendation to relevant user questions.

[LEARN MORE](#)

# API.AI

**\* SERVICE NAME:**

**- API.AI**



# API.AI

## \* PURPOSE:

- USE A UNIFIED API + UI TO BUILD CONVERSATIONAL VOICE OR CHATBOT APPS AND DEPLOY TO ONE OR MANY PLATFORMS



# API.AI

**\* COMPANY:**

**- GOOGLE**

**- (ACQUIRED IN 2016)**

[blog.api.ai/post/joining-google/](http://blog.api.ai/post/joining-google/)





# API.AI

**\* HOSTING & APP  
DISTRIBUTION:**

**- DEPENDS ON INTEGRATION**



# API.AI

## \* INTEGRATIONS

**-ACTIONS ON GOOGLE,  
FACEBOOK MESSENGER, KIK,  
LINE, SKYPE, SLACK, CISCO  
SPARK, TELEGRAM, CISCO  
TROPO, TWILIO, TWILIO IP,  
TWITTER, VIBER**

[api.ai/docs/integrations/](https://api.ai/docs/integrations/)



# API.AI

## \* **CROSS-PLATFORM SUPPORT**

**- "VOICE INTERFACE IS CROSS-PLATFORM. YOUR AGENT WILL UNDERSTAND YOUR USERS NO MATTER WHAT DEVICE YOU'RE USING. YOU DESIGN THE INTERACTION SCENARIOS JUST ONCE. CURRENTLY, WE HAVE SDK'S FOR ALL MOST POPULAR PLATFORMS AND MORE TO COME."**

[api.ai/docs/sdks](https://api.ai/docs/sdks)



# API.AI

## **\* LOCALIZATION & LANGUAGE SUPPORT:**

- DEPENDENT ON INTEGRATION**
- 15 LANGUAGES SUPPORTED IF API.AI USED TO CREATE AGENT**

[api.ai/docs/reference/language](https://api.ai/docs/reference/language)



# API.AI AGENT LANGUAGES

- BRAZILIAN PORTUGUESE
- CHINESE (CANTONESE)
- CHINESE (SIMPLIFIED)
- CHINESE (TRADITIONAL)
- ENGLISH
- DUTCH
- FRENCH

- GERMAN
- ITALIAN
- JAPANESE
- KOREAN
- PORTUGUESE
- RUSSIAN
- SPANISH
- UKRAINIAN



# API.AI

- \* STATE OF DEVELOPER SUPPORT:**
  - AGENT-BUILDING UI**
  - DOCS, SAMPLES, API REFERENCE**
  - VIDEOS (VIA GOOGLE)**
  - VARIETY OF SDKS**
  - IN-APP AND ENDPOINT TESTING**



# API.AI

**\* DEVELOPER HOME(S):**

**- API.AI**

**- API.AI/DOCS/SDKS**

**- SEE ALSO:**

**DEVELOPERS.GOOGLE.COM/  
ACTIONS/**



# Build delightful and natural conversational experiences

Give users new ways to interact with your product by building engaging voice and text-based conversational apps with API.AI.

[SIGN UP FOR FREE](#)



```
"id": "4f932df9-5601-430b-8821-a9f2-9c88f0557caa",  
"id": "4f932df9-5601-430b-8821-a9f2-9c88f0557caa",  
"timestamp": "2017-05-26T14:15:00.882Z",  
"lang": "en",  
"result": {  
  "source": "agent".
```

Book a flight  
from Los Angeles  
to Hawaii for less  
than \$300

You got it!

## Use machine learning to understand what users are saying

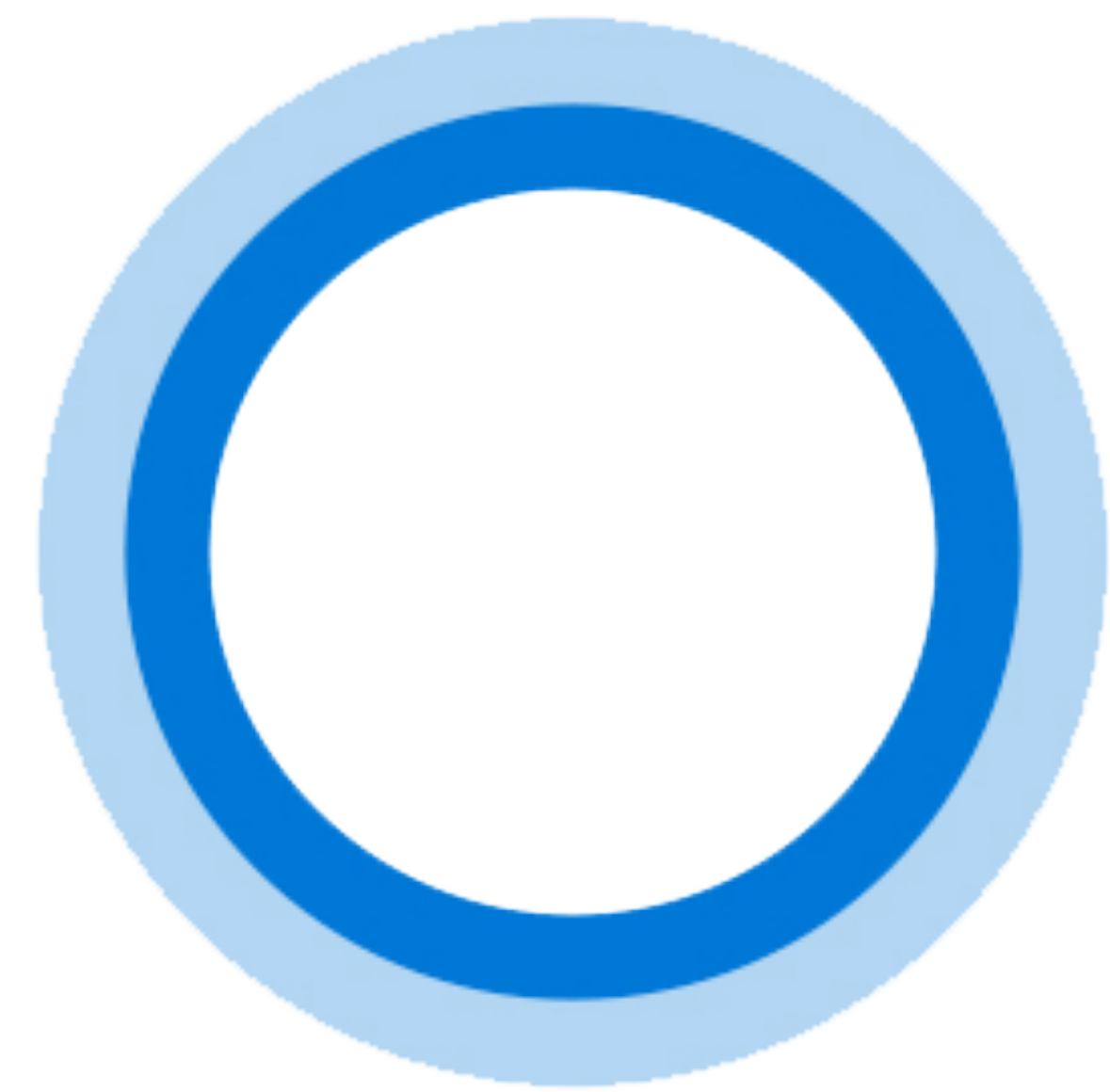
Provide us with examples of what a user might say when interacting



# CORTANA

**\* SERVICE NAME:**

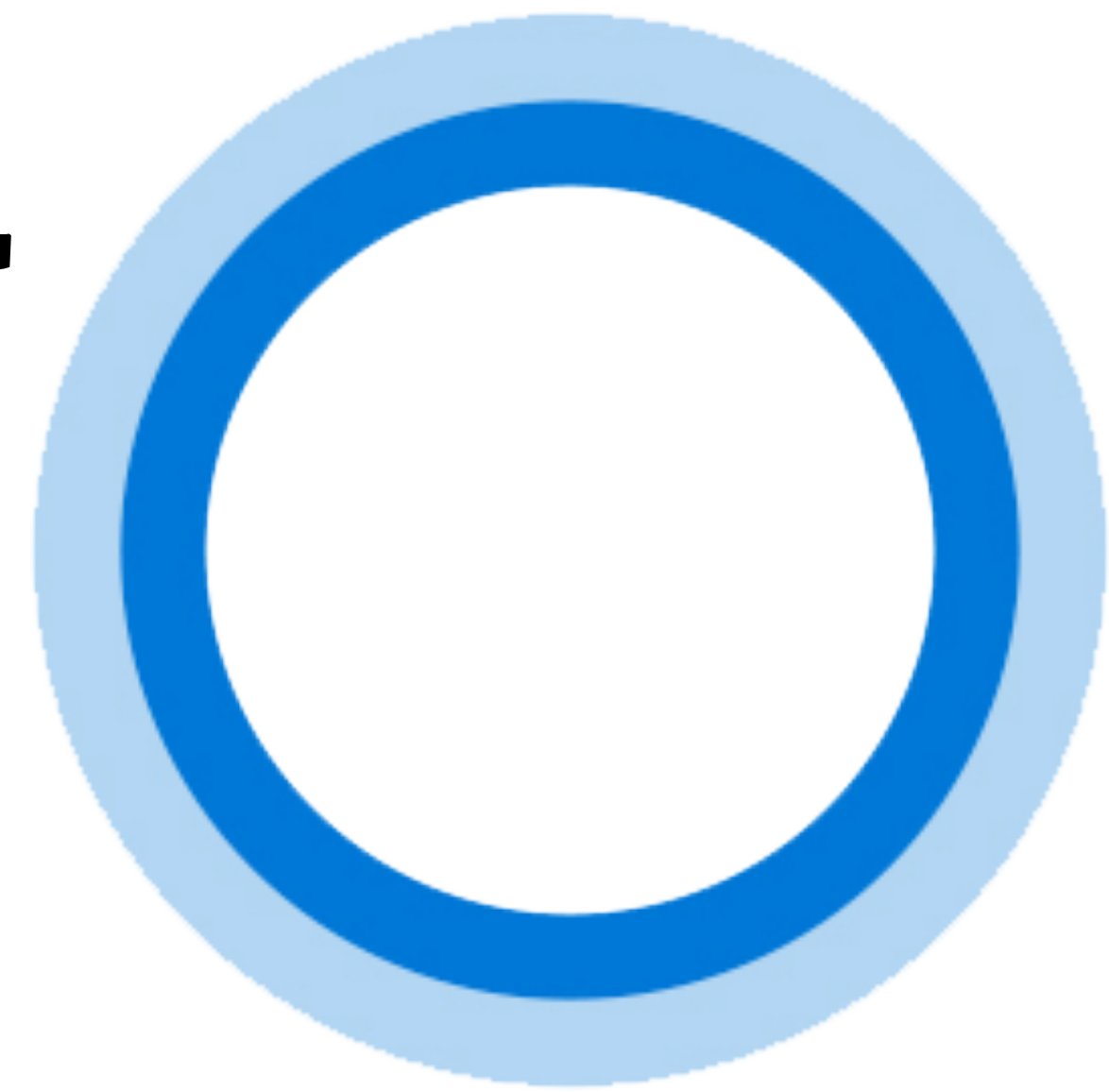
**- CORTANA**



# CORTANA

## **\* PURPOSE:**

- ADD VOICE (CORTANA) AND "COGNITIVE INTELLIGENCE" TO AN EXISTING BOT BUILT ON THE MICROSOFT BOT FRAMEWORK.**

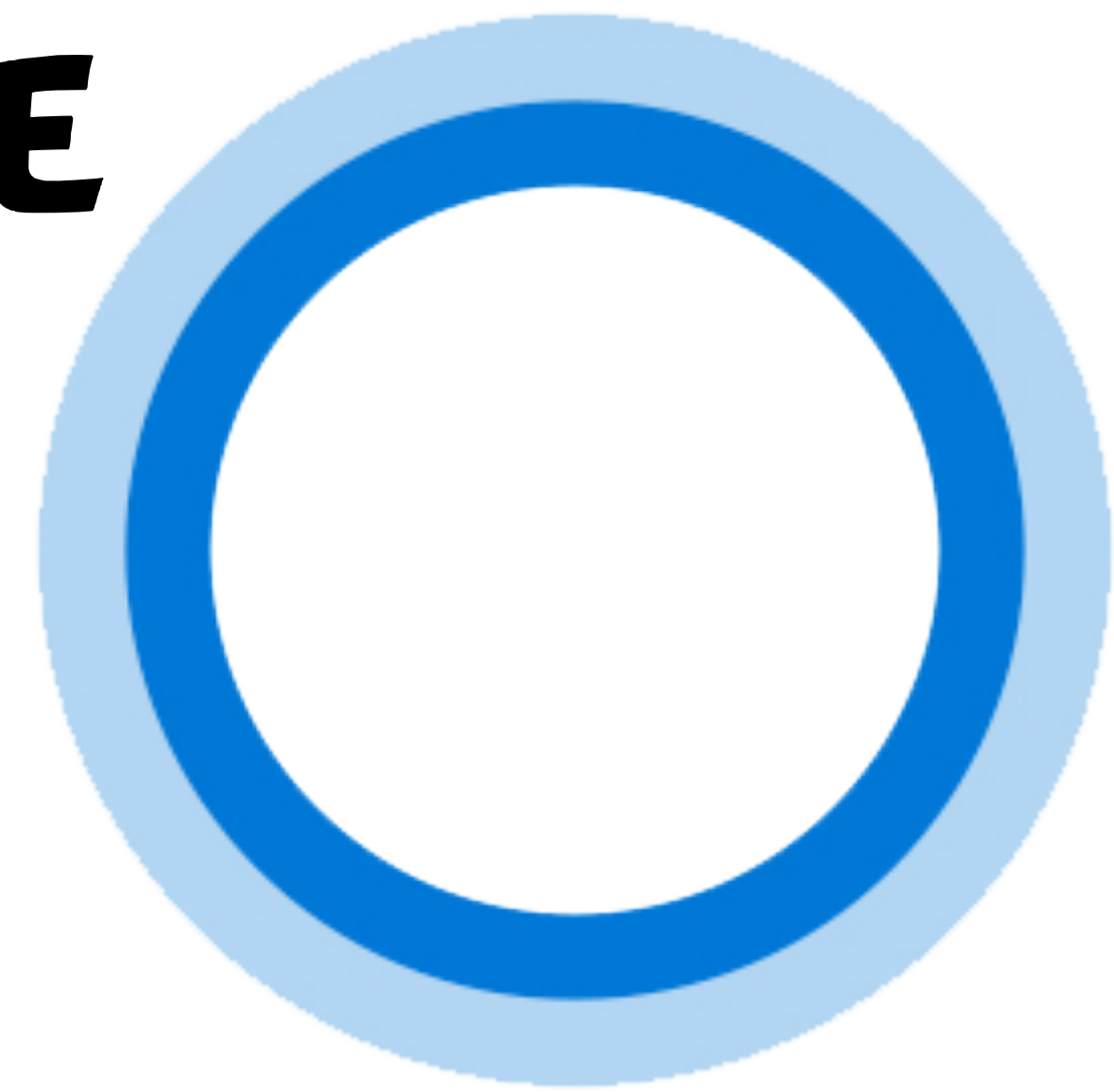


# CORTANA

## **\* HOSTING:**

**- AZURE**

**- ANY INTERNET-ACCESSIBLE  
ENDPOINT**



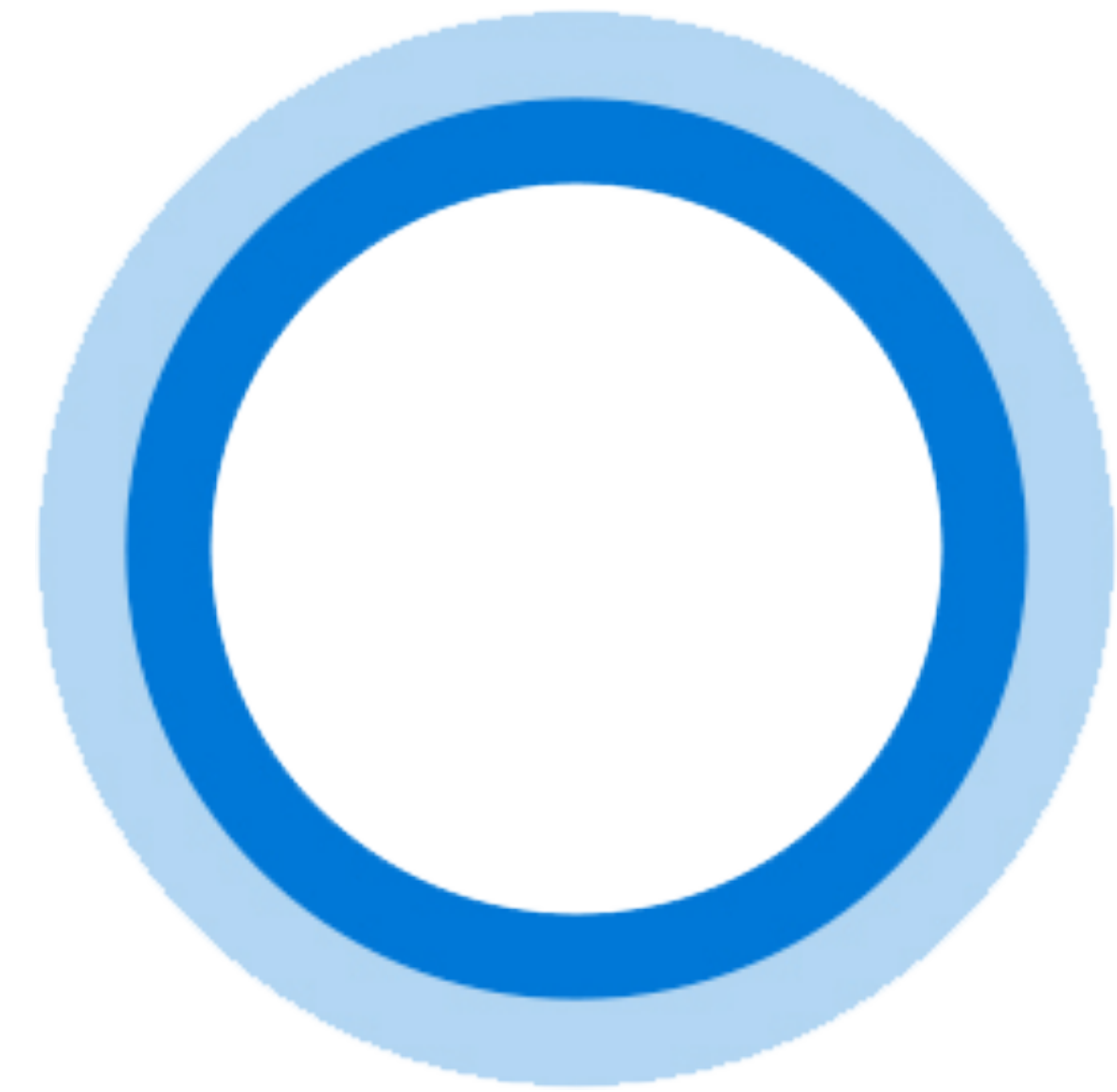
# CORTANA

## **\* DEVICES SUPPORTED:**

**- WINDOWS 10**

**- ANDROID, iOS**

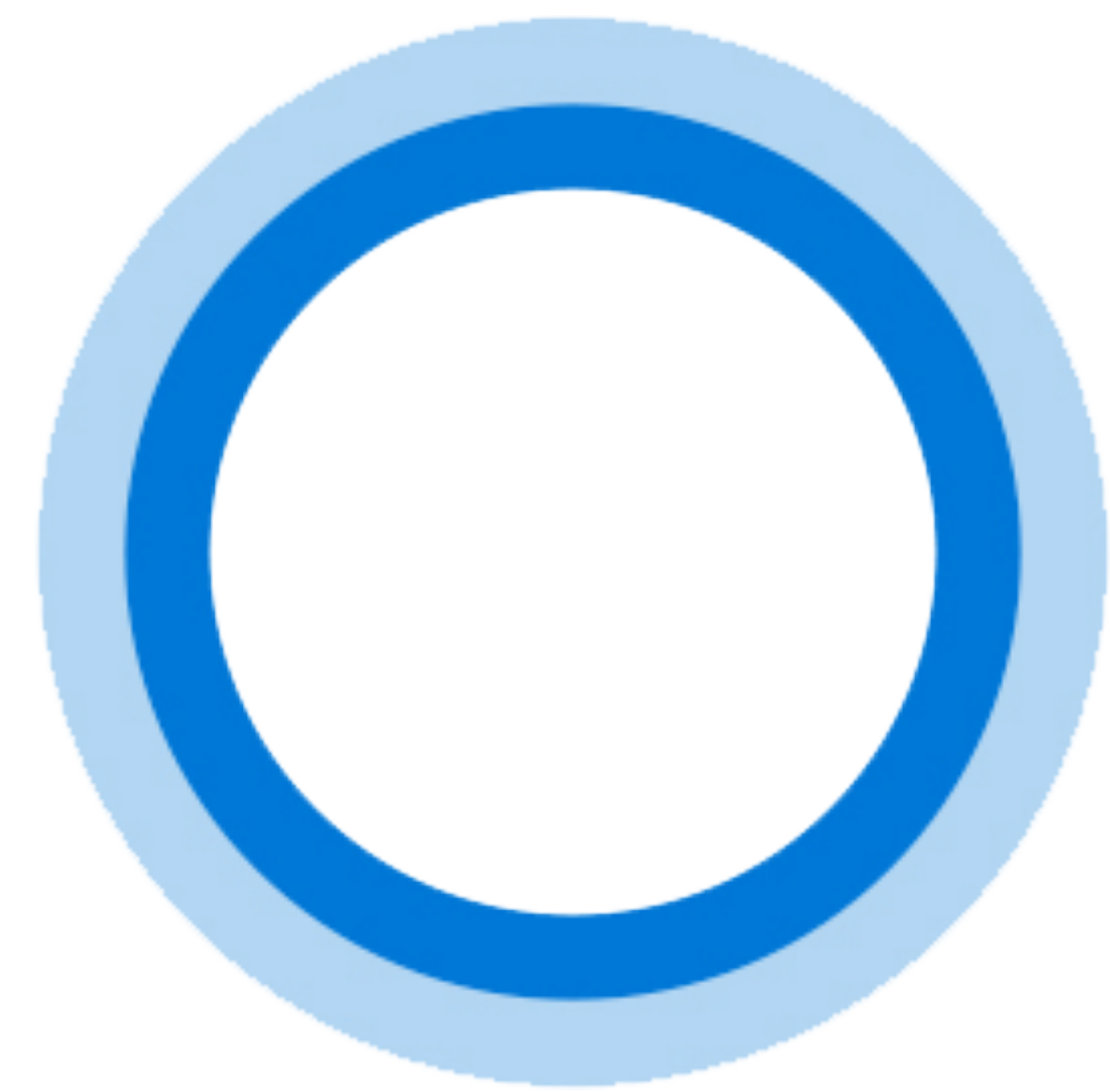
**- HARMAN KARDON INVOKE**



# CORTANA

**\* APP DiSTRiBUTiON:**

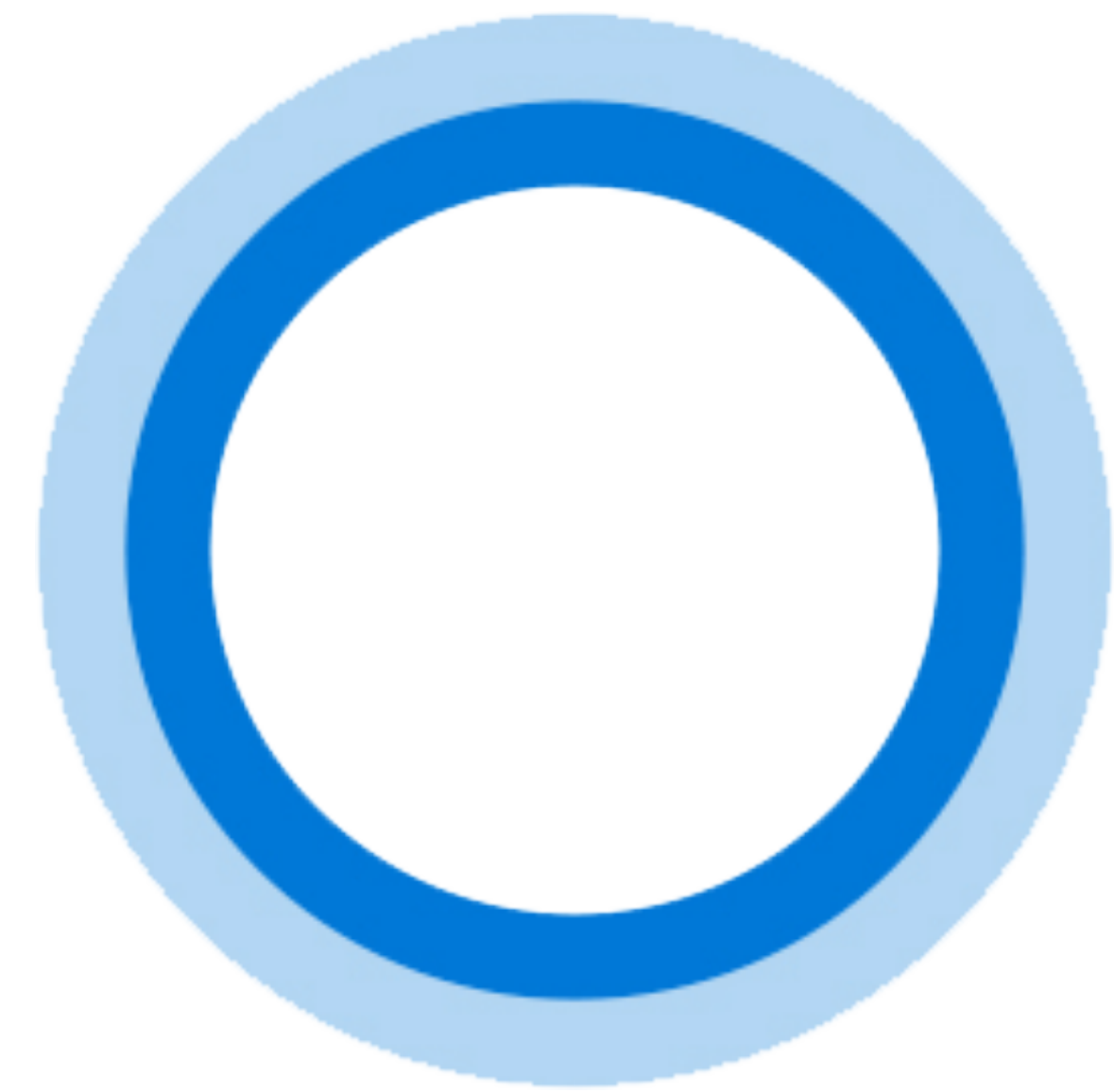
**- BiNG**



# CORTANA

## **\* LOCALIZATION & LANGUAGE SUPPORT:**

- CORTANA IS OPTIMIZED FOR SPECIFIC LANGUAGE AND MARKET PAIRINGS.**
- SHE WORKS BEST WHEN YOUR REGION AND LANGUAGE SETTINGS ARE ALIGNED.**



# CORTANA REGIONS/LANGUAGES

- **AUSTRALIA: ENGLISH**
- **BRAZIL: PORTUGUESE**
- **CANADA: ENGLISH/FRENCH**
- **CHINA: CHINESE  
(SIMPLIFIED)**
- **FRANCE: FRENCH**
- **GERMANY: GERMAN**
- **INDIA: ENGLISH**
- **ITALY: ITALIAN**
- **JAPAN: JAPANESE**
- **MEXICO: SPANISH**
- **SPAIN: SPANISH**
- **UNITED KINGDOM:  
ENGLISH**
- **UNITED STATES:  
ENGLISH**

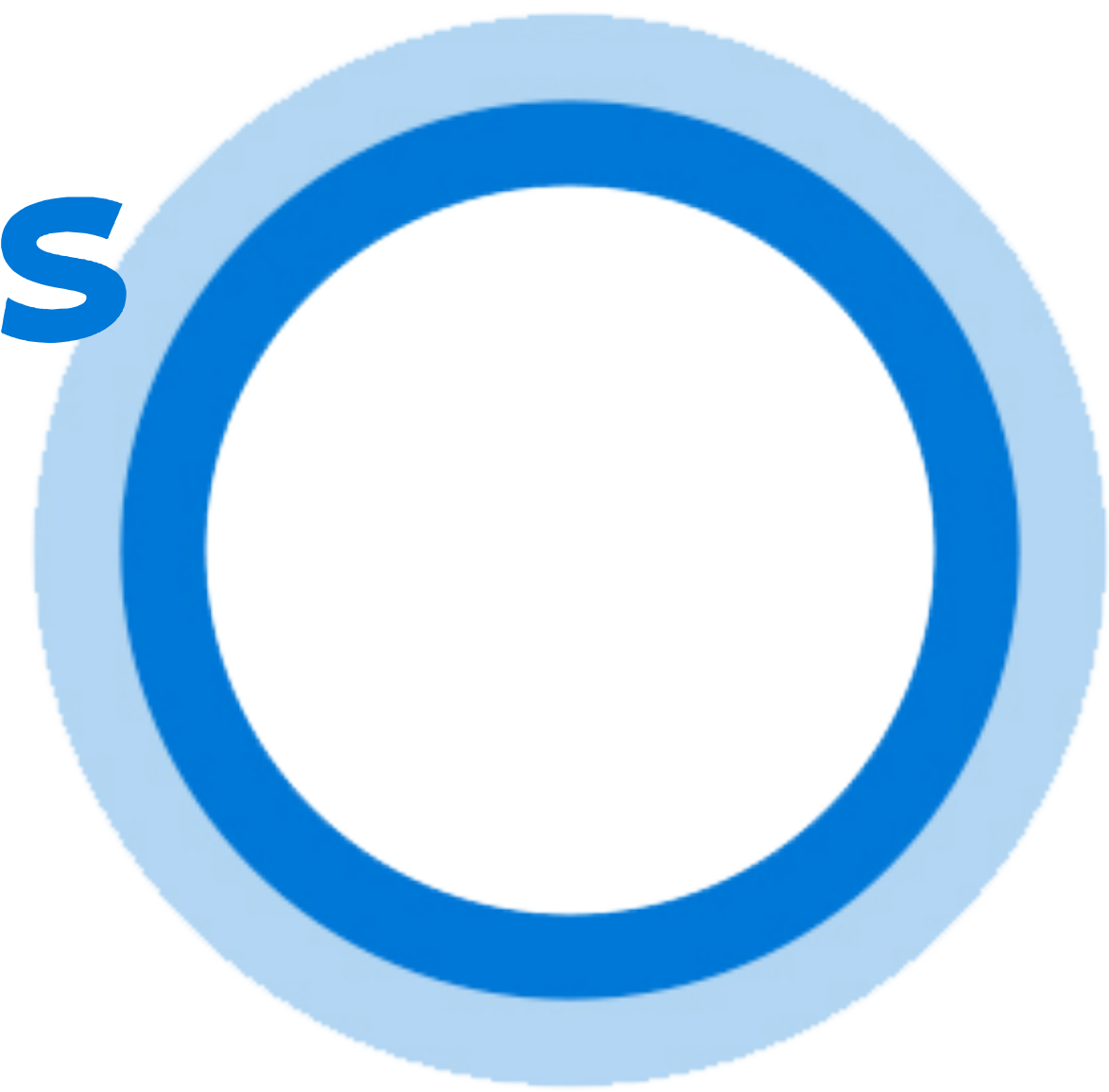
# CORTANA

## \* STATE OF DEVELOPER SUPPORT:

- PUBLIC PREVIEW

- DOCS

- ONLY INTEGRATES WITH BOTS BUILT WITH MICROSOFT'S BOT FRAMEWORK





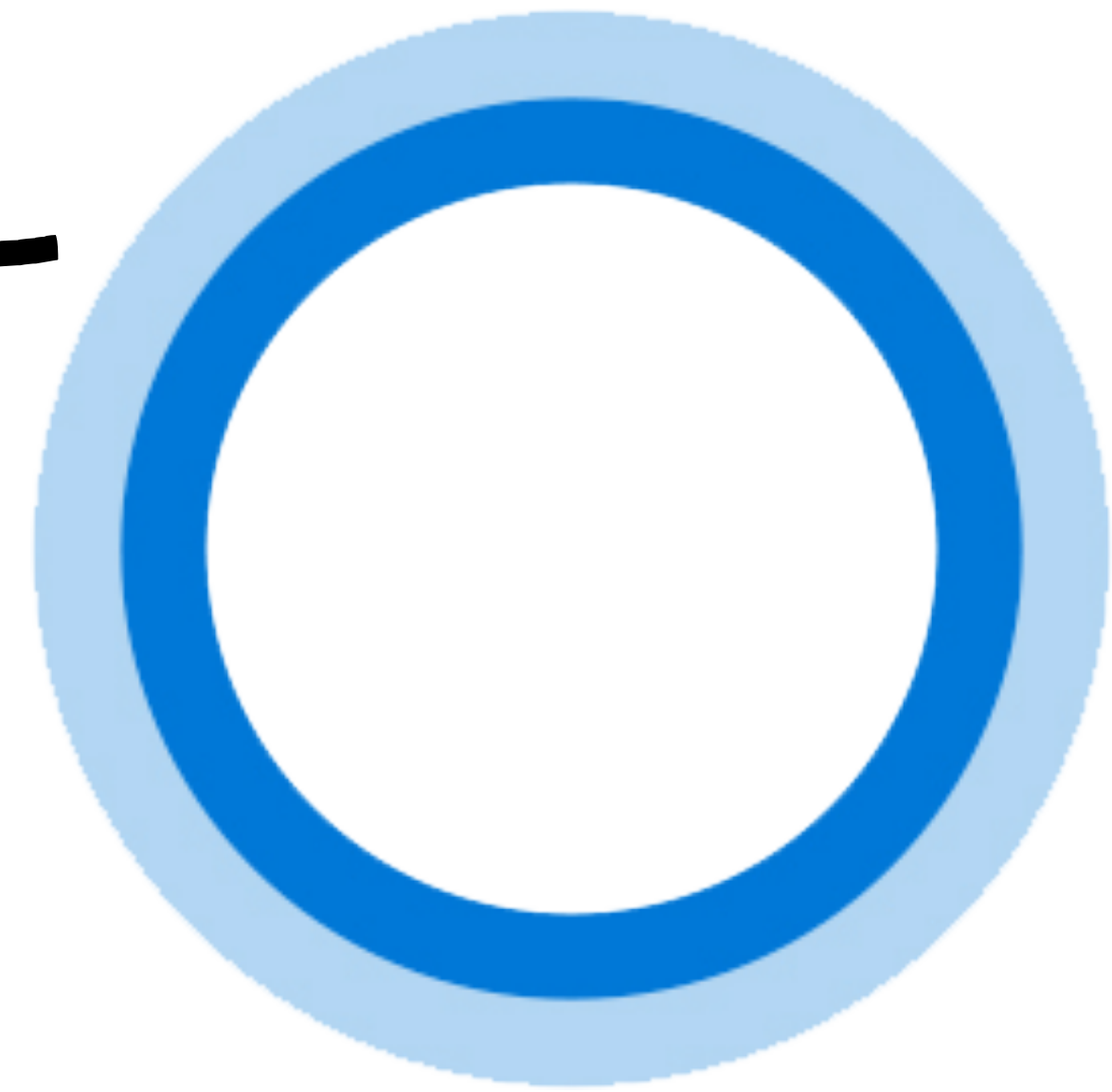
# CORTANA

## \* DEVELOPER HOME(S):

- [DEVELOPER.MICROSOFT.COM/EN-US/CORTANA](https://developer.microsoft.com/en-us/cortana)

- [DOCS.MICROSOFT.COM/EN-US/CORTANA/SKILLS-FAQ](https://docs.microsoft.com/en-us/cortana/skills-faq)

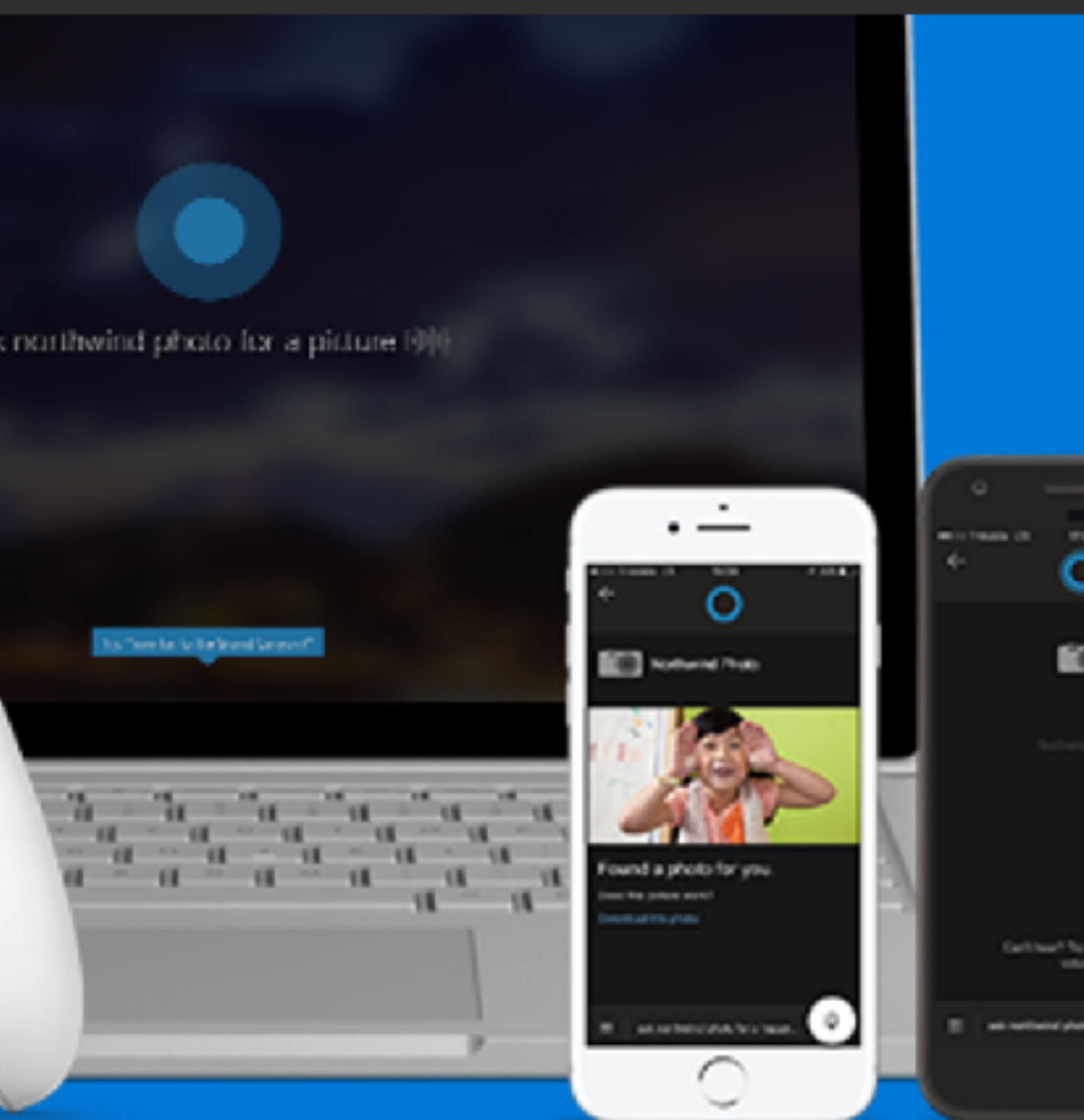
*Change paths to your local region*



# Create intelligent, personalized experiences for users with the Cortana Skills Kit

Create a Cortana skill to reach millions of users in a natural and helpful way.

GET STARTED



### Use the skills kit to provide Cortana with new capabilities

Skills help users complete tasks and get things done.

From conversational tooling through the Bot Framework to intelligent APIs with the Cognitive Services, the skills kit provides all the tools and docs you need to promote your services and engage users through the Cortana experience.

Once created, your skill works wherever your code runs, including on Windows 10, Android, iOS, and headless devices like the new Harman Kardon Invoke. Use our skill management tools to make the development process simple.



User talks to Cortana



Cortana invokes skills

**CORTANA SKILL**

- Cortana user profile data
- Microsoft Bot Framework
- Cognitive Services

**CORTANA DASHBOARD**

- Deployment tools
- Publishing pipeline



Skills connect to services



CORTANA SKILLS KIT

# SIRI

**\* SERVICE NAME:**

**- SIRI**



# SIRI

## \* PURPOSE:

- **SIRIKIT** ENABLES YOUR iOS APPS AND WATCHOS APPS TO WORK WITH SIRI
- **HOMEKIT** ALLOWS USERS TO COMMUNICATE WITH AND CONTROL CONNECTED ACCESSORIES IN THEIR HOME USING YOUR APP



# SIRI

**\* COMPANY:**

**- APPLE**



# SIRI

## **\* HOMEPOD:**

**- ANNOUNCED PRODUCT**

**- "HOMEPOD WILL HAVE  
MORE PEOPLE QUERYING  
SIRI."**

[www.apple.com/homepod/](http://www.apple.com/homepod/)



# SIRI

## **\* LOCALIZATION AND LANGUAGE SUPPORT:**

**- I DON'T KNOW**

**- HOMEPOD: ENGLISH (US, UK, AUSTRALIA)**



# SIRI

**\* DEVELOPER HOME(S):**

**- DEVELOPER.APPLE.COM/  
SIRIKIT/**

**- DEVELOPER.APPLE.COM/  
HOMEKIT/**







# SiriKit

SiriKit enables your iOS apps and watchOS apps to work with Siri, so users can get things done with your content and services using just their voice. In addition to extending Siri's support for messaging, photo search and phone calls to more apps, SiriKit also adds support for new services, including ride booking and personal payments.

## Supported Domains and Intents

Apps adopt SiriKit by building an extension that communicates with Siri, even when your app isn't running. The extension registers with specific domains and intents that it can handle. For example, a messaging app would likely register to support the Messages domain, and the intent to send a message. Siri handles all of the user interaction, including the voice and natural language recognition, and works with your extension to get information and handle

# OPEN SOURCE OPTIONS

**\* MYCROFT**

**\* JASPER**

**\* (I'M SURE THERE ARE  
OTHERS, TOO.)**

# DESIGNING FOR VOICE



<http://gph.is/1cqe4FA>

# CONVERSATION BASICS

## **\* TURN-TAKING**

- WE TAKE TURNS BASED ON SUBTLE CUES**
- OTHERWISE, WE TALK OVER EACH OTHER**
- HOW DO WE TAKE TURNS?**

<https://developers.google.com/actions/design/>

# CONVERSATION BASICS

## **\* THREADING**

- CONVERSATION EVOLVES OVER TIME**
- INCLUDES CONTEXT**
- HOW DO WE KEEP TRACK OF WHAT'S BEEN SAID?**

# CONVERSATION BASICS

## \* THE NATURAL EFFICIENCY OF LANGUAGE

- "READING BETWEEN THE LINES"
- LEAVING SOME THINGS UNSPOKEN
- HOW DO WE COMPENSATE FOR THIS IN CODE?

# CONVERSATION BASICS

**\* SAYING THE SAME THING,  
DIFFERENTLY**

- PEOPLE USE DIFFERENT WORDS TO  
MEAN THE SAME THING**
- CONTEXT INFLUENCES RESPONSE**
- HOW CAN OUR APP RECOGNIZE  
VARIABLE RESPONSES?**

# CONVERSATION BASICS

**\* GETTING "BACK ON TRACK"**

**- NO SUCH THING AS  
ERRORS**

**- HOW CAN WE DESIGN  
CONVERSATIONS THAT  
CAN GET BACK ON TRACK?**



# COOPERATIVE PRINCIPLE

## \* COOPERATIVE CONVERSATION:

- BE TRUTHFUL
- BE INFORMATIVE
- BE RELEVANT
- BE CLEAR

Be Cooperative...Like Your Users

<https://developers.google.com/actions/design/be-cooperative>

# CHOOSING PROJECTS

**CHOOSE PROJECTS WHERE  
ADDING VOICE WILL:**

**\* MAKE IT FASTER**

**\* MAKE IT EASIER**

**\* MAKE IT FUN**

<https://alexa.design/guide>

# WHAT'S FASTER?

**SETTING TIMER WITH TOUCH  
(MICROWAVE/PHONE)**

**OR**

**SAYING "ALEXA, SET A  
TIMER FOR 3 MINUTES" FROM  
ANYWHERE IN THE ROOM?**

# WHAT'S EASIER?

- \* PLAY/STOP A SONG WITH MENUS, SCREENS, BUTTONS?**
- \* HANDS-FREE, EYES-FREE VOICE REQUEST**

# MORE "EASY" EXAMPLES

**"SINGLE-TURN DIALOGUE" IS EASY:**

**\* ASKING FOR THE WEATHER**

**\* ASKING FOR A JOKE**

# IT SHOULD BE EASY

- \* MULTIPLE-TURN DIALOGUE NEEDS TO BE EASY**
- \* REQUIRES MORE DESIGN WORK**
- \* EXPLORE INTERACTION THAT CAN FLOW IN VARIOUS WAYS**
- \* INCLUDE "DIALOGUE CORRECTION" IN YOUR DESIGN**

# DESIGNING FOR FUN

- \* GAMES SHOULD BE EASY TO PLAY BUT STILL PRESENT A CHALLENGE**
- \* IS THERE A PLACE TO INCORPORATE HUMOR, SURPRISE, OR DELIGHT?**
- \* HOW DO YOU WANT USERS TO FEEL DURING/AFTER INTERACTION?**

# BE CHOOSY

- \* BE CHOOSY ABOUT WHAT TO EXPOSE AS VOICE INTERACTION**
- \* DOES IT MAKE IT FASTER, EASIER, OR MORE FUN FOR THE USER?**



# WHAT'S THE PURPOSE?

- \* WHY WOULD PEOPLE WANT TO USE YOUR VOICE UI?**
- \* IN WHAT CONTEXT WILL THEY USE IT?**
- \* WHAT WILL THEY GET FROM IT THAT THEY CAN'T GET ANOTHER WAY?**

# CREATE A PERSONA

- \* WHAT'S YOUR UI'S PERSONALITY?**
- \* WHAT KINDS OF THINGS WOULD THEY SAY?**
- \* IS IT IN-LINE WITH YOUR BRAND'S VALUES?**

# SCRIPT DIALOGUES

- \* WRITE THE SCRIPT BETWEEN AI AND THE USER**
- \* FOCUS ON THE "HAPPY PATH" (AT FIRST!)**
- \* DOES THE DIALOGUE FLOW NATURALLY?**

# TIPS FOR SCRIPTS

- \* **KEEP INTERACTIONS BRIEF**
- \* **WRITE FOR HOW PEOPLE TALK, NOT READ OR WRITE**
- \* **INDICATE WHEN THE USER NEEDS TO PROVIDE INFO**

# DIAGRAM THE FLOW

- \* REFERENCE THE HAPPY PATH SCRIPT**
- \* MAP OUT ALL THE INPUTS NEEDED FROM THE USER**
- \* BRANCH OUT TO COVER ADDITIONAL LOGIC, FALLBACKS, AND CONVERSATION REPAIR**

# SCRIPT EXAMPLE

UI *Welcome to Number Genie! I'm thinking of a number from 0 to 100. What's your first guess?*

User 50

UI *It's lower than 50. Next guess?*

User How about 9.

UI *Piping hot! Go lower.*

User Okay...is it 8?

UI *Keep going.*

User 7!

UI *Yes! It's 7. How about another round?*

User No thanks.

UI *Alright, talk to you later then.*

# INTERACTION MODEL

**\* WHAT ARE THE CONCRETE THINGS THAT CAN HAPPEN?**

**=> INTENTS**

**\* WHAT IS SAID TO MAKE THESE THINGS HAPPEN?**

**=> UTTERANCES/USER SAYS**

**\* WHAT DATA DO YOU NEED TO FULFILL THE REQUEST?**

**=> SLOTS/ENTITIES**

# RESOURCES

**\* VIDEO:**

**ACTIONS ON GOOGLE:  
CONVERSATION DESIGN  
TIPS**

**[YOUTU.BE/MSUPVBBHIGA](https://www.youtube.com/channel/UCMsUPVBBHIGA)**



# RESOURCES

**\* THE CONVERSATIONAL UI  
AND WHY IT MATTERS**

**DEVELOPERS.GOOGLE.COM/  
ACTIONS/  
DESIGN/**

# RESOURCES

\* **VOICE DESIGN GUIDE**

**ALEXA.DESIGN/GUIDE**



# ACTiVATION

- \* WAKE WORD OR ACTION**
  - "HEY SiRi", "ALEXA", "OK, GOOGLE"**
  - PUSH A BUTTON ON DEVICE TO ACTiVATE**

# INVOCATION

**\* (KEYWORDS +) THE NAME OF YOUR APP**

**- ALEXA: "ASK/OPEN/  
LAUNCH FISH JOKES"**

**- GOOGLE: "LET ME TALK TO  
FISH JOKES"**

# INTENTS

- \* MAPS WHAT THE USER SAYS TO ACTIONS**
- BUILT-IN INTENTS HELP WITH COMMON RESPONSES EVERY APP SHOULD HAVE**
- CUSTOM INTENTS ARE THE VOICE UI'S SPECIAL SAUCE**

# USER SAYS/UTTERANCES

- \* PHRASES OR WORDS YOUR APP RECOGNIZES**
- ADD MANY VARIATIONS**
- WHAT ABOUT CONTEXT?**
- CAN CONTAIN SLOTS/ENTITIES WHICH FEED ARGUMENTS TO YOUR ENDPOINT**

# USER SAYS



## User says

” Add user expression

” The **history of Google**

” **Google's history**

” Tell me about Google

” I want to hear about Google

” Let's hear about **Google's headquarters**

” Tell me about the **headquarters**



# UTTERANCES



getFishJoke ✎

 Sample Utterances (3) ?



What might a user say to invoke this intent?



"tell me a joke"



"give me a joke"



"make me laugh"



 Intent confirmation (optional) ?

Does this intent require confirmation?

NO

# SLOTS/ENTITIES

## **\* OPTIONAL ARGUMENTS**

**- DEFINED AS A TYPE &  
POPULATED WITH TERMS**

**- USED AS PARAMETERS IN  
"USER SAYS" PHRASES/  
UTTERANCES**

# INTENT: ENTITIES



● choose\_fact

SAVE

” History

” I want to hear about the history

” I want to hear about Google's history

Events ?

Action

tell.fact

REQUIRED ?

PARAMETER NAME ?

ENTITY ?

VALUE

IS LIST ?

PROMPTS ?



category

@fact-category

\$category



Which category ...



Enter name

Enter entity

Enter value



—

# ENTITIES



## fact-category

Define synonyms   Allow automated expansion

history	history, Google's history, past, Google's past, history of Google
headquarters	headquarters, HQ, Google's headquarters, Google HQ, Googleplex
<a href="#">Click here to edit entry</a>	

[+ Add a row](#)

# SLOTS



ALEXA SKILLS KIT | SKILL BUILDER BETA

Intermediate Fish Jokes

English (US)



Skill Information



Interaction Model



Configuration



Test



Publishing

Dashboard

Code Editor

Intents (4)

ADD +

AMAZON.CancelIntent (required)

AMAZON.HelpIntent (required)

AMAZON.StopIntent (required)

getFishJoke

category

Slot Types (1)

ADD +

CATEGORY

## CATEGORY

Slot Values (5)

"food"	
"fishing"	
"boating"	
"popular"	
"silly"	

Slots using CATEGORY (1)

SLOT NAME	INTENT
category	getFishJoke

# SPECIFY ENTITIES



choose\_fact

SAVE

Try it now

FactsApp

Intents

Entities

Training [beta]

Integrations

Analytics [new]

Fulfillment

Prebuilt Agents

Small Talk

Docs

Add output context

User says

Search in user says

Add user expression

The history of Google

PARAMETER NAME

@fact-category:category

category

Filter

Google's history

@sys.email

Tell me about Google

@sys.language

I want to hear about

@sys.unit-weight-name

Let's hear about Google

@sys.unit-length-name

Please use test console above to try a sentence.

# SELECT SLOT



ALEXA SKILLS KIT | SKILL BUILDER BETA

SIGN OUT

Fish Jokes  
English (US) ▾

Save Model Build Model Skill Information Interaction Model Configuration Test Publishing Privacy & Compliance

Dashboard

Code Editor

Intents (5) ADD +

- AMAZON.CancelIntent (required)
- AMAZON.HelpIntent (required)
- AMAZON.StopIntent (required)
- GetCategorizedJokes**
- Category
- GetFishJokes

Slot Types (1) ADD +

- LIST\_OF\_CATEGORIES

## GetCategorizedJokes

Sample Utterances (32) ?

for {

Utterances should not contain hyphens, apostrophes, periods, and other special characters.

“fo		
“w		
“what is a {Category} joke”		
“jokes for {Category}”		
“some joke for {Category}”		
“a joke for {Category}”		

Select an intent slot

Category

Create a new intent slot +

Intent Slots (1) ?

ORDER	REQ	SLOT
-	<input type="checkbox"/>	Category
		LIST_OF_CATEGORIES ▾

Create a new intent slot... Add

# SLOTS in PHRASES



Fish Jokes English (US) Save Model Build Model Skill Information Interaction Model Configuration Test Publishing Privacy & Compliance

Dashboard

Code Editor

Intents (5) ADD +

- AMAZON.CancelIntent (required)
- AMAZON.HelpIntent (required)
- AMAZON.StopIntent (required)
- GetCategorizedJokes**
  - Category
- GetFishJokes

Slot Types (1) ADD +

- LIST\_OF\_CATEGORIES

## GetCategorizedJokes

Sample Utterances (32) ? 🔍

for {Category} jokes 🔄

"for a {Category} joke"	🗑️
"what a {Category} joke is"	🗑️
"what is a {Category} joke"	🗑️
"jokes for {Category}"	🗑️
"some joke for {Category}"	🗑️
"a joke for {Category}"	🗑️
"joke for {Category}"	🗑️

## Intent Slots (1) ?

ORDER	REQ	SLOT
-	<input type="checkbox"/>	Category <span>✎</span>
LIST_OF_CATEGORIES ▾		

Create a new intent slot... Add



# ENTITIES IN PHRASES



User says

Search in user says



” Add user expression

” The **history of Google**

” **Google's history**

” Tell me about Google

” I want to hear about Google

” Let's hear about **Google's headquarters**

” Tell me about the **headquarters**

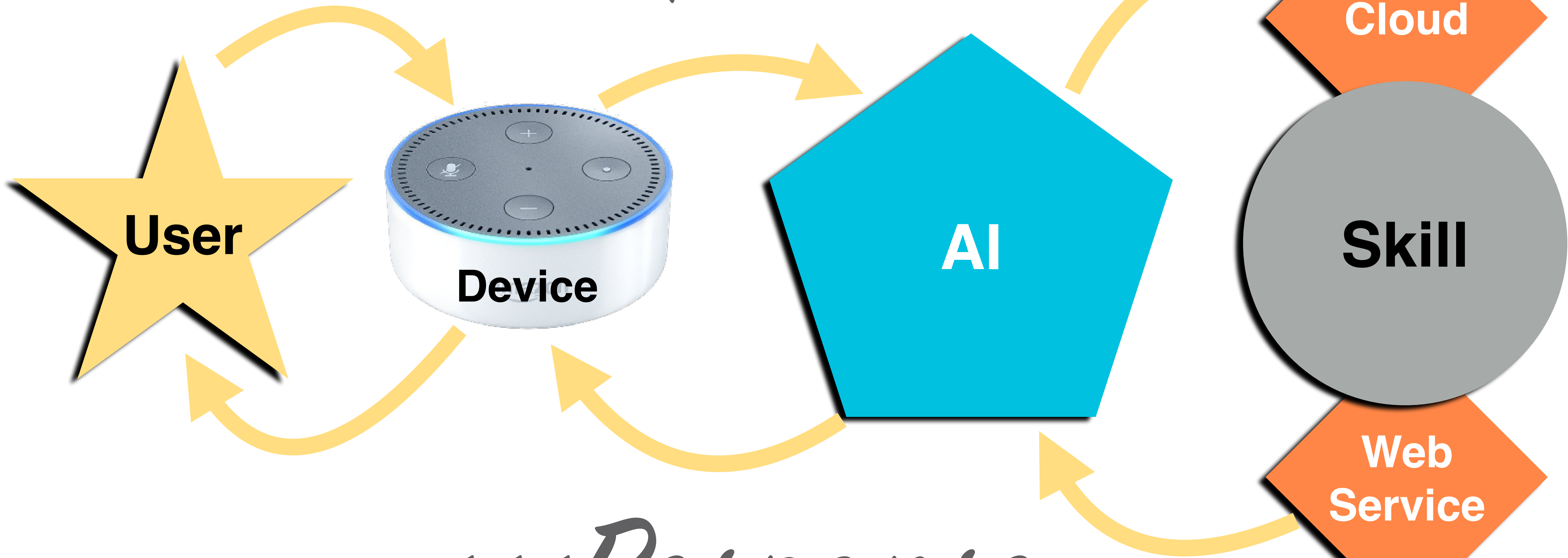
” **Headquarters**

” **History**

” I want to hear about the **history**

” I want to hear about **Google's history**

*Request >>>*



*<<< Response*

# FULFILLMENT



## ⚡ Fulfillment

### Webhook

ENABLED



Your web service will receive a POST request from API.AI in the [form of the response](#) to a user query matched by intents with webhook enabled. Be sure that your web service meets all the [webhook requirements](#).

[Webhook example](#)

URL\*

BASIC AUTH

HEADERS

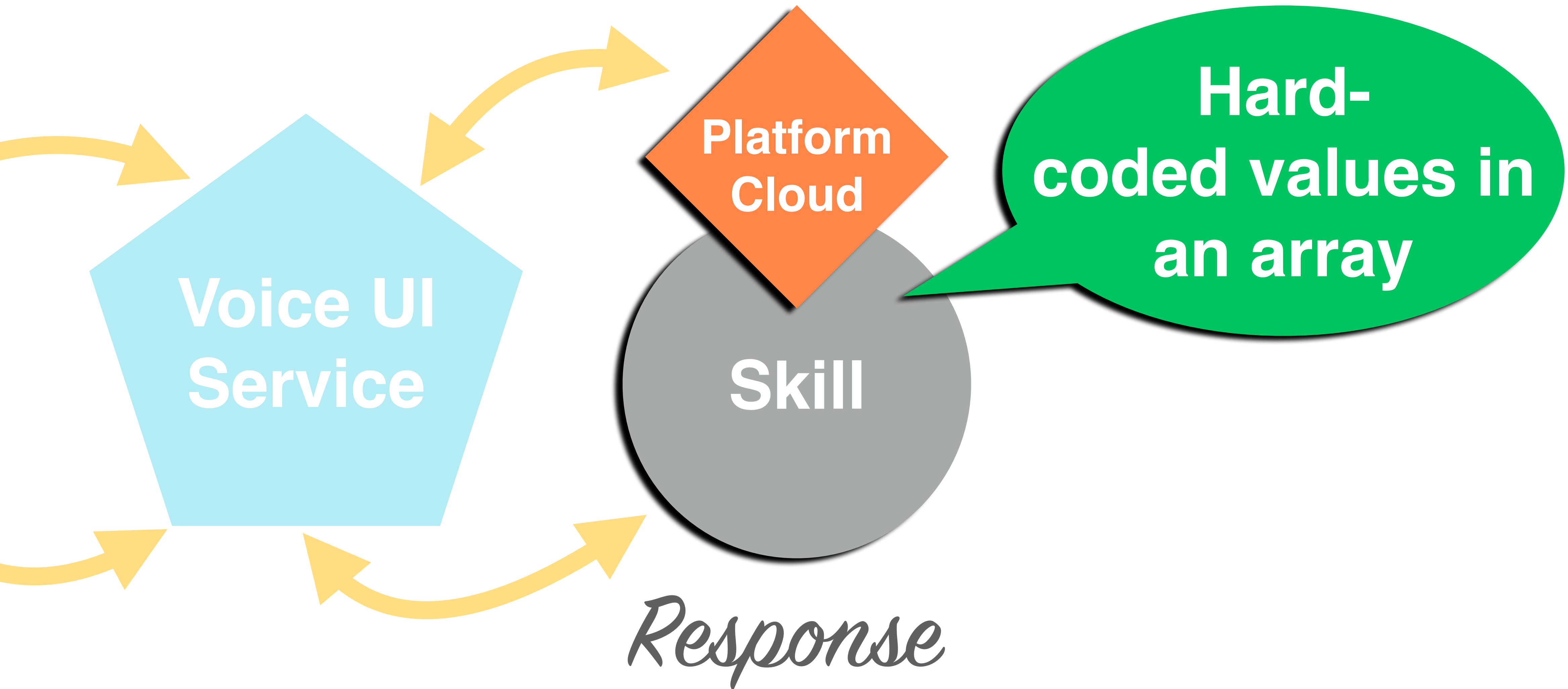
[+](#) Add header

DOMAINS

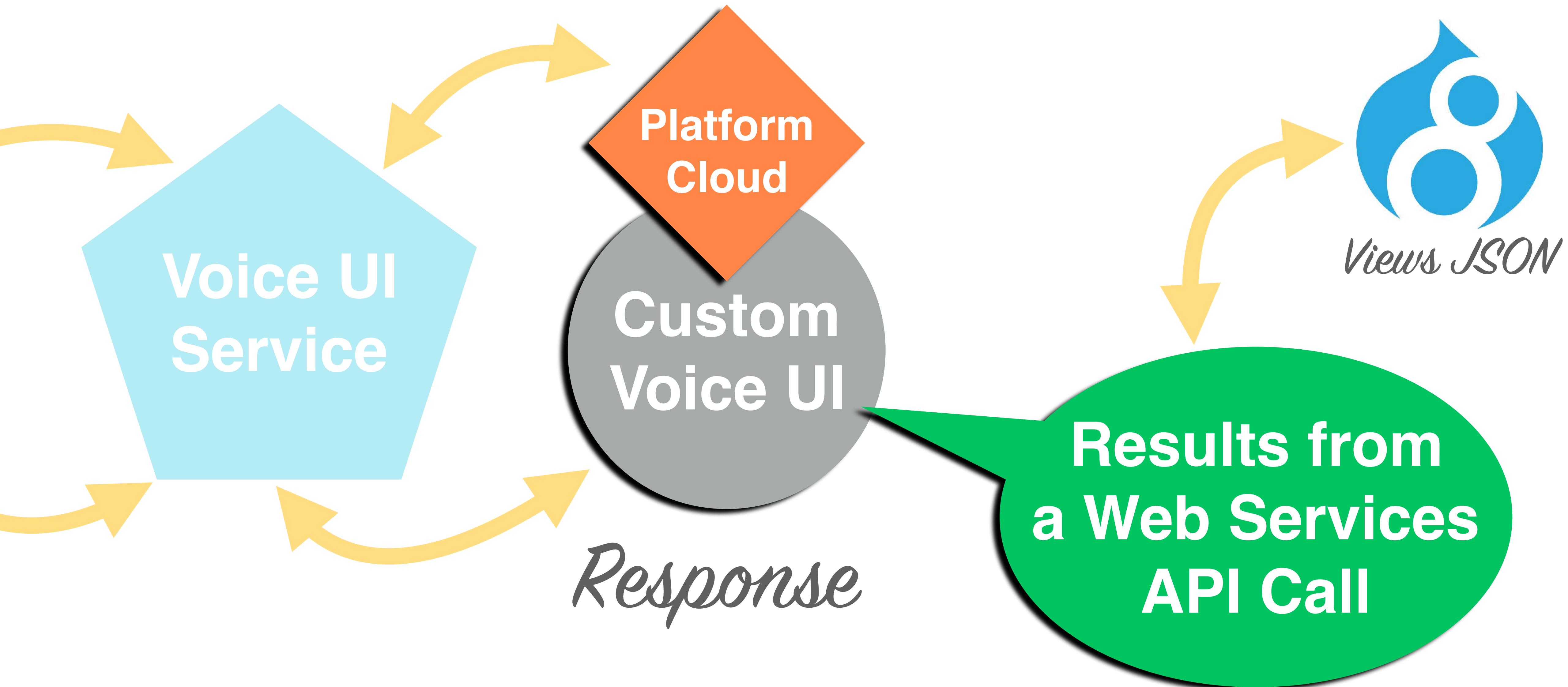


# ENDPOINT POSSIBILITIES

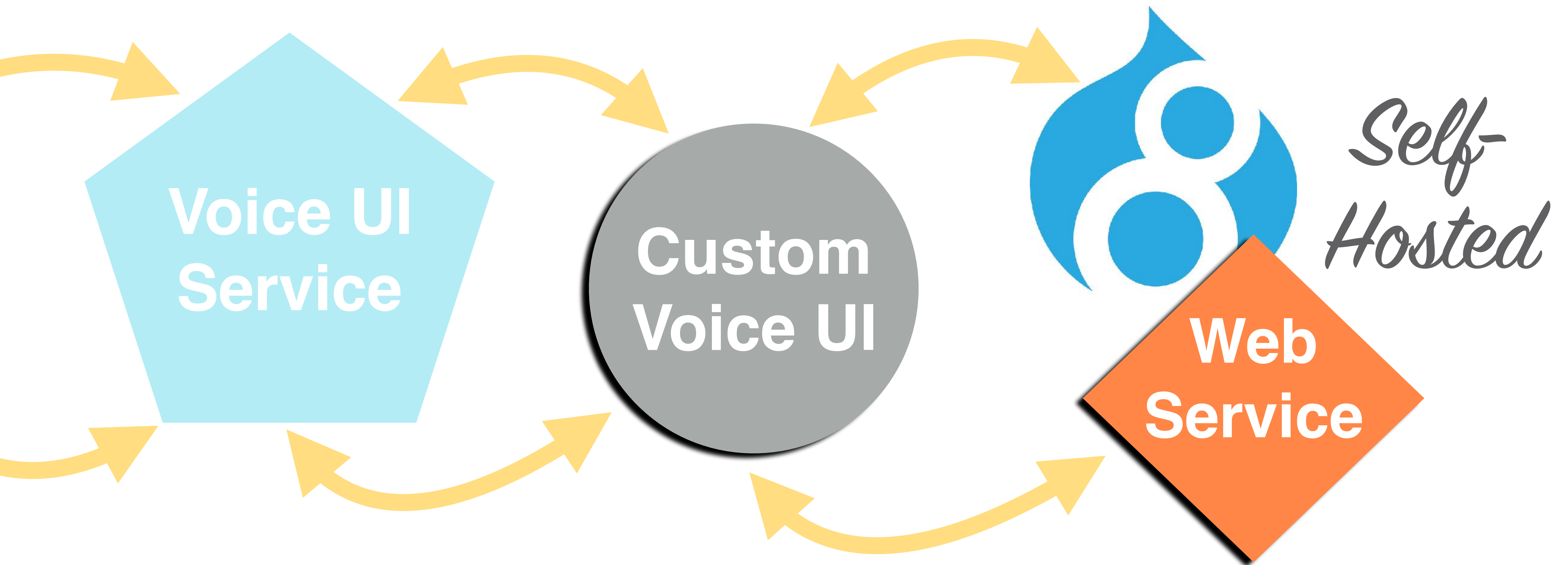
# HARD-CODED VALUES



# WEB SERVICES API CALL



# ALL DRUPAL



**THERE'S A MODULE  
FOR THAT!**



# ENDPOINT POSSIBILITIES

## \* DRUPAL INTEGRATION:

- **VIEWS** DISPLAY: REST EXPORT
- **ALEXA** PROJECT
- **CHATBOT API** PROJECT
- **API.AI** WEBHOOK PROJECT
- **PHP** SDK FOR API.AI



# VIEWS: REST EXPORT

## Displays

Page REST export Page 2 + Add Edit view name/description

Display name: REST export View REST export

<b>TITLE</b> Title: <a href="#">Joke Me</a>	<b>PATH SETTINGS</b> Path: <a href="#">/joke-me-please</a> Authentication: <a href="#">No authentication is set</a> Access: <a href="#">Permission</a>   <a href="#">View published content</a>	<b>ADVANCED</b> <b>CONTEXTUAL FILTERS</b> Add <b>RELATIONSHIPS</b> Add <b>OTHER</b> Machine Name: <a href="#">rest_export_1</a> Administrative comment: <a href="#">None</a> Use aggregation: <a href="#">No</a> Query settings: <a href="#">Settings</a> Caching: <a href="#">Tag based</a>
<b>FORMAT</b> Format: <a href="#">Serializer</a>   <a href="#">Settings</a> Show: <a href="#">Entity</a>	<b>HEADER</b> The selected display type does not use header plugins	
<b>FIELDS</b> The selected style or row format does not use fields.	<b>FOOTER</b> The selected display type does not use footer plugins	
<b>FILTER CRITERIA</b> Add Content: <a href="#">Publishing status (= Yes)</a> Content: <a href="#">Content type (= Joke)</a>	<b>NO RESULTS BEHAVIOR</b> The selected display type does not use empty plugins	
<b>SORT CRITERIA</b> Add Global: <a href="#">Random (asc)</a>	<b>PAGER</b> Items to display: <a href="#">Display a specified number of items</a>   <a href="#">10 items</a>	

Save Cancel

# ALEXA

## Alexa

[View](#)[Version control](#)[Automated testing](#)

Posted by [meba](#) on *6 April 2016*, updated *27 June 2017*



1

This project is not covered by Drupal's [security advisory policy](#).

This is an integration module for Amazon Echo devices, allowing Drupal to respond to Alexa Skills Kit requests. Right now the module provides only a basic integration. Developers will need to create their own customized handler module (see the included `alexa_demo` module for an example) to handle custom Alexa skills. Events integration is coming soon.



## Installation

The installation is very easy, follow this [step by step guide](#) for a basic application

## Maintainers for Alexa

[hampercm](#) – 10 commits  
last: 1 month ago, first: 1 year ago

[View all committers](#)

[View commits](#)

## Issues for Alexa

To avoid duplicates, please search before submitting a new issue.

Search

# CHATBOT API

## Chatbot API

[View](#) [Version control](#) [Automated testing](#)

Posted by [gambry](#) on *1 June 2017*, updated *14 September 2017*



This project is not covered by Drupal's [security advisory policy](#).

In the era of Chatbots and Personal Assistants like Alexa, API.ai, Google Home, Wit.ai & Co. this module tries to create common layer serving Drupal content to any of these services.

In a common Drupal 'headless' scenario you want to serve the content of your website through as many service as possible, including but not limiting to Amazon Echo, a Facebook bot, custom devices using Api.AI, etc.

Normally you will require separated custom pieces of code for every chatbot/personal assistant platform protocol, duplicating effort and points of failure.

Using Chatbot API you write your code once without caring about handling the requests and responses.

Chatbot API by itself doesn't do anything. You should install it only if another module asks for it or you want to build your own integration driver.

### Maintainers for Chatbot API

[larowlan](#) – 2 commits

last: 1 day ago, first: 6 days ago

[gambry](#) – 6 commits

last: 3 days ago, first: 3 months ago

[View all committers](#)

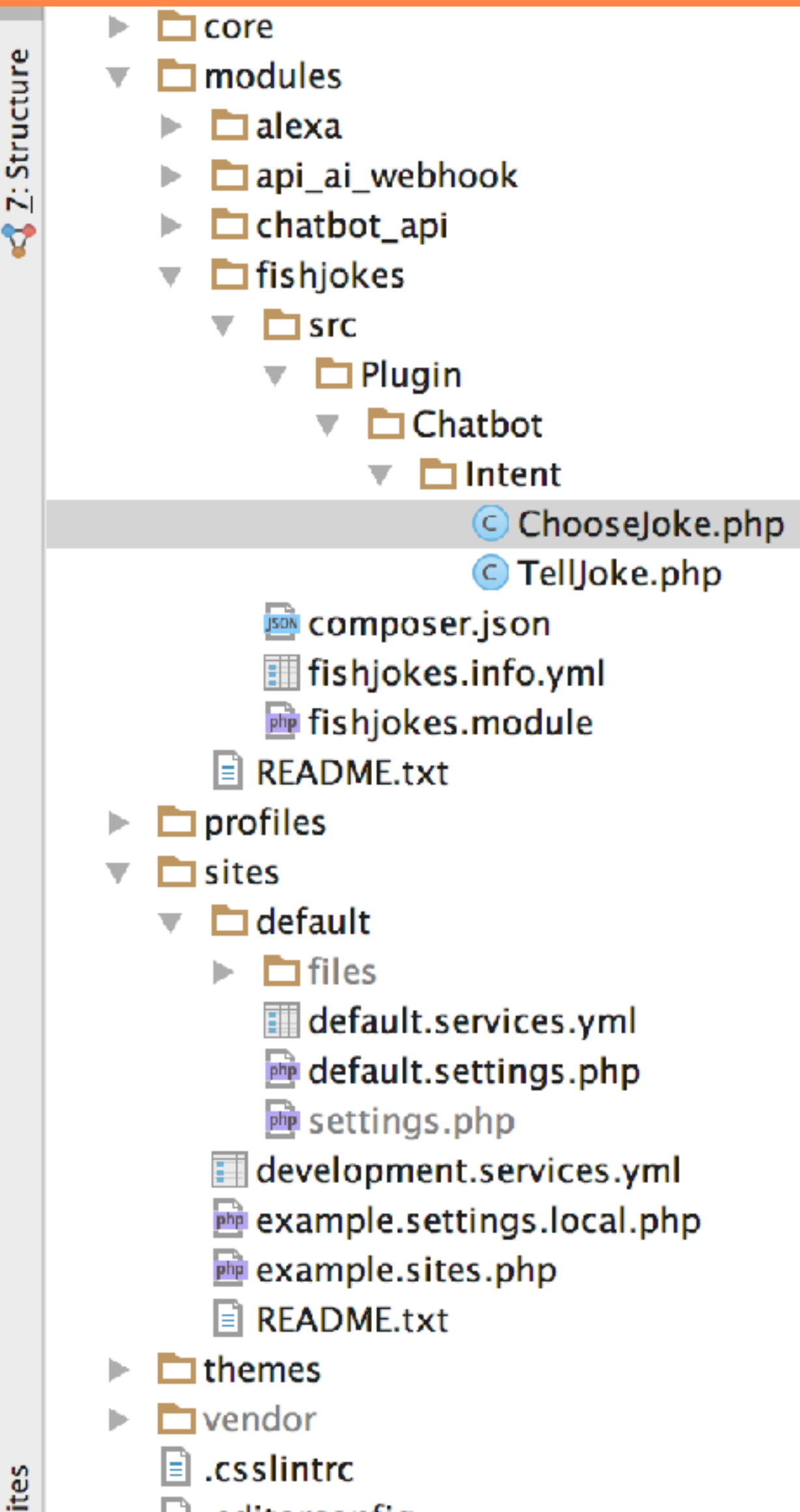
[View commits](#)

### Issues for Chatbot API

To avoid duplicates, please search before submitting a new issue.

[Search](#)

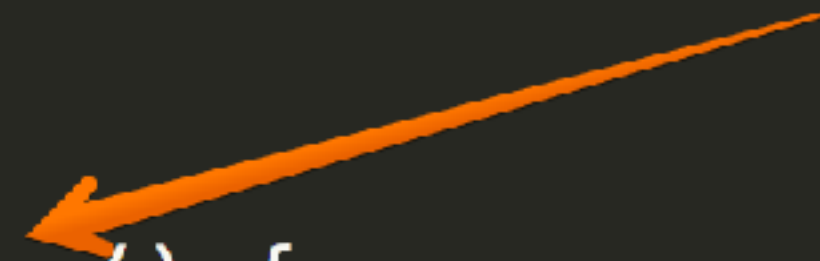
# CHATBOT iNTENT PLUGiN



File explorer showing project structure:

- core
- modules
  - alexa
  - api\_ai\_webhook
  - chatbot\_api
  - fishjokes
    - src
      - Plugin
        - Chatbot
          - Intent
            - ChooseJoke.php
            - TellJoke.php
    - composer.json
    - fishjokes.info.yml
    - fishjokes.module
    - README.txt
  - profiles
  - sites
    - default
      - files
        - default.services.yml
        - default.settings.php
        - settings.php
      - development.services.yml
      - example.settings.local.php
      - example.sites.php
      - README.txt
  - themes
  - vendor
  - .csslintrc
  - editmenf...

```
2
3 namespace Drupal\fishjokes\Plugin\Chatbot\Intent;
4
5 use Drupal\chatbot_api\Plugin\IntentPluginBase;
6
7 /**
8  * Plugin implementation of the 'choose_joke' Chatbot API Intent.
9  *
10  * @Intent(
11  *   id = "choose_joke",
12  *   label = @Translation("Choose Joke")
13  * )
14  */
15 class ChooseJoke extends IntentPluginBase {
16
17
18
19  /**
20   * {@inheritdoc}
21   */
22  public function process() {
23      // $term_name = $this->request->getIntentSlot
24      ('field_joke_category') ? $this->request->getIntentSlot
25      ('field_joke_category') : 'silly';
```



# VIEWS: CHATBOT\_INTENT

## Displays

Page **Chatbot Intent** [+ Add](#)

[Edit view name/description](#) ▼

Display name: [Chatbot Intent](#)

[Duplicate Chatbot Intent](#) ▼

### INTENT SETTINGS

Intent name: [joke\\_me\\_please](#)

### FORMAT

Format: [Unformatted list](#) | [Settings](#)

Show: [Fields](#) | [Settings](#)

### FIELDS

[Add](#) ▼

Content: [Joke Setup](#) [hidden]

Content: [Image](#) [hidden]

[Complete Joke](#)

### FILTER CRITERIA

[Add](#) ▼

Content: [Publishing status](#) (= Yes)

Content: [Content type](#) (= Joke)

Content: [Joke Category](#) (exposed) | [Settings](#)

### SORT CRITERIA

[Add](#) ▼

Global: [Random](#) (asc)

### HEADER

[Add](#)

### FOOTER

[Add](#)

### NO RESULTS BEHAVIOR

[Add](#)

### PAGER

Items to display: [Display a specified number of items](#) |

[1 item](#)

Link display: [None](#)

### ▶ ADVANCED

# API.AI WEBHOOK

## Api.AI Webhook

[View](#) [Version control](#) [Automated testing](#)

Posted by [gambry](#) on *21 June 2017*, updated *18 September 2017*



This project is not covered by Drupal's [security advisory policy](#).

This module integrates your Drupal website with [Api.AI Webooks](#), letting your Api.AI agents talk with you website, respond to Intents request and filling slots.

The integration is still basic. The module handles the request and triggers a Symfony Event which modules can subscribe to in order to add their logic.

Developers and Site builder may want to use [Chatbot API](#) module and take advantage of its Intents pluggable system in order to simplify the implementation of their Intents logic, as well as its `chatbot_api_entities` submodule to dynamically push Drupal content to Api.AI [entities](#).

[Basic and with custom HTTP headers authentications](#) method are supported.

### Installation

### Maintainers for Api.AI Webhook

[gambry](#) – 2 commits  
last: 2 days ago, first: 1 week ago

[View all committers](#)

[View commits](#)

### Issues for Api.AI Webhook

To avoid duplicates, please search before submitting a new issue.

Search

[Advanced search](#)

# API.AI PHP SDK

## Api.ai PHP sdk

---

packagist **v0.2.5** downloads **1k/month**

This is an unofficial php sdk for [Api.ai](#) and it's still in progress...

```
Api.ai: Build brand-unique, natural language interactions for bots,
```

## Install:

---

Via composer:

```
$ composer require iboldurev/api-ai-php
```



# THANK YOU, MAINTAINERS!

## \* DRUPAL INTEGRATION:

- **VIEW** DISPLAY: REST EXPORT

- **ALEXA** PROJECT

- **CHATBOT API** PROJECT

- **API.AI WEBHOOK** PROJECT

- **PHP SDK FOR API.AI**



# TESTING & PUBLICATION

# TESTING



## Simulator

talk to my test app

Okay. Here's the test version of my test app.

Welcome to Facts about Google! Do you want to hear about Google's history or do you want to hear about its headquarters?

history

Sure, here's a history fact. Google was founded in 1998. Would you like to hear another fact?

API.AI Snapshot - Created 9/20/17, 5:29 P

Surface

Language



English - United St

REQUEST

RESPONSE

```
{
  "conversationToken": "CiZD",
  "debugLevel": 1,
  "inputType": "KEYBOARD",
  "locale": "en-US"
```

# **SUBMIT FOR PUBLICATION**

- \* IT WILL BE THOROUGHLY TESTED**
- \* EXPECT FEEDBACK WITHIN 1-2 DAYS**
- \* ADDRESS FEEDBACK AND RE-SUBMIT!**
- \* ONCE APPROVED, IT'S PUBLISHED!**

# RECAP

- \* OVERVIEW OF VOICE PLATFORMS & OPPORTUNITIES**
- \* DESIGNING A VOICE INTERFACE**
- \* VOICE APP CONCEPTS**
- \* ENDPOINT POSSIBILITIES & DRUPAL INTEGRATION**

# FEEDBACK

- \* **SESSION TITLE:**  
**GET STARTED WITH VOICE  
USER INTERFACES**
- \* **VISIT THE SESSION PAGE  
OF THIS CONFERENCE AND  
CLICK "EVALUATE"**

Contact Amber Matz on Twitter @amberhimesmatz