

# Alexa.NET – More Than Voice

Name : Steven Pears

Twitter: @stevenpears

Github: stoiveyp

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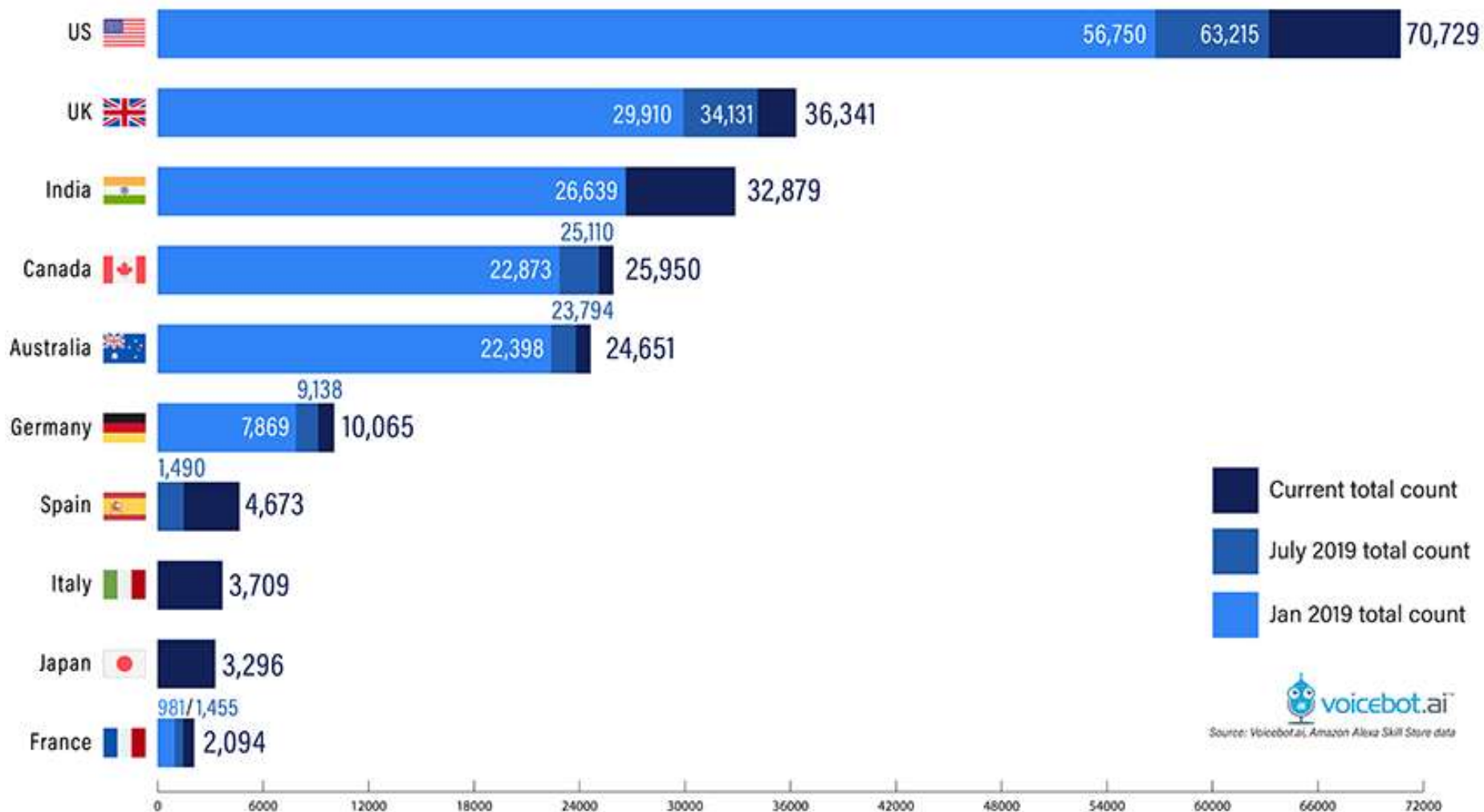
# Little about me

 Work for Experian

 1 Outage / Decade

 Certified Skill Builder

# Little about Alexa



# Little about Alexa

English (AU)

English (CA)

English (IN)

English (UK)

English (US)

French (CA)

French (FR)

German (DE)

Hindi (IN)

Italian (IT)

Japanese (JP)

Portuguese (BR)

Spanish (ES)

Spanish (MX)

Spanish (US)

# Little about Alexa



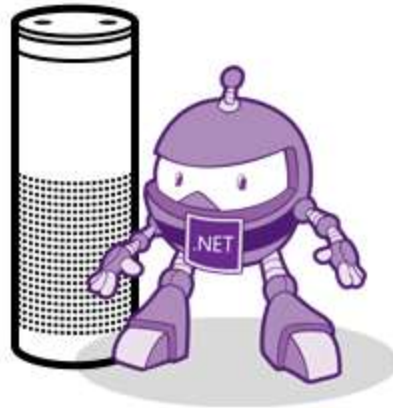
# Little about Alexa

28,000 devices can work with Alexa

150 with Alexa built in

No official .NET SDK

# Alexa.Net



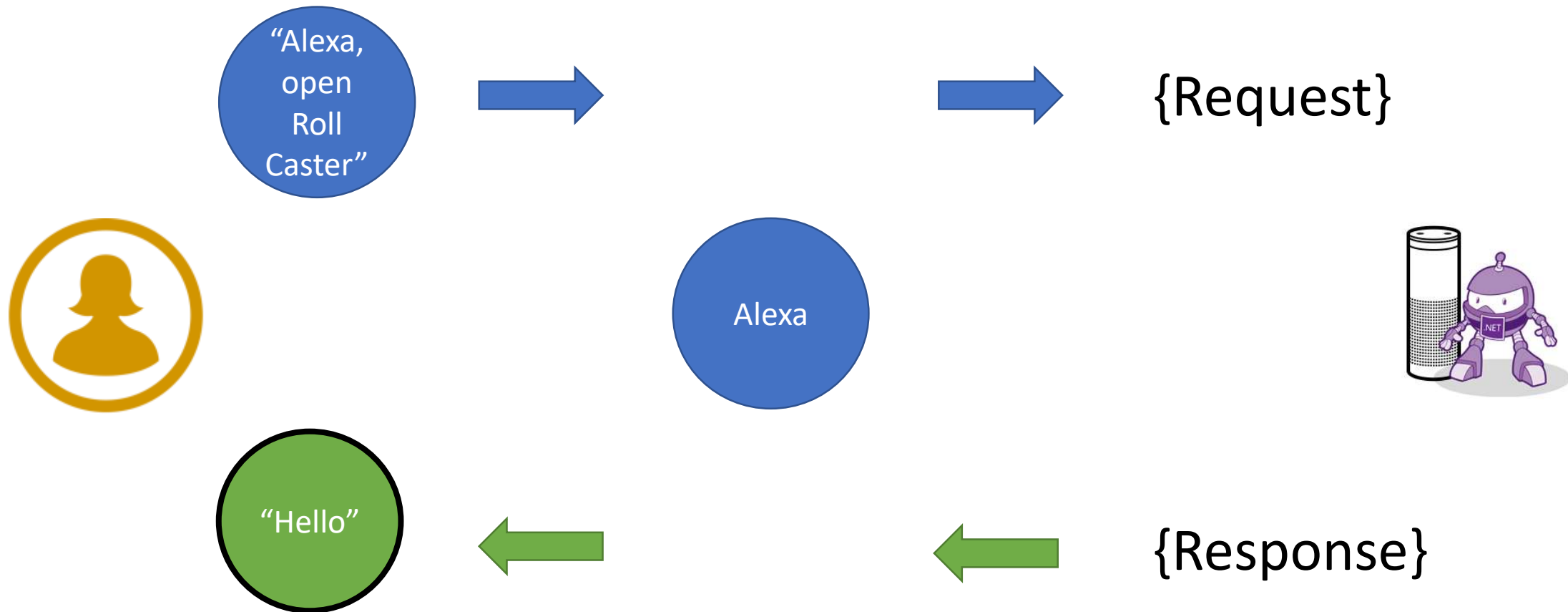
<https://github.com/timheuer/alexa-skills-dotnet>



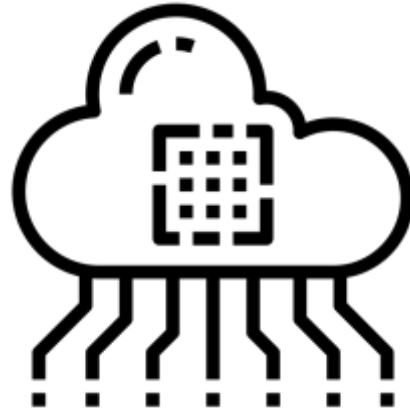
# Roll Caster



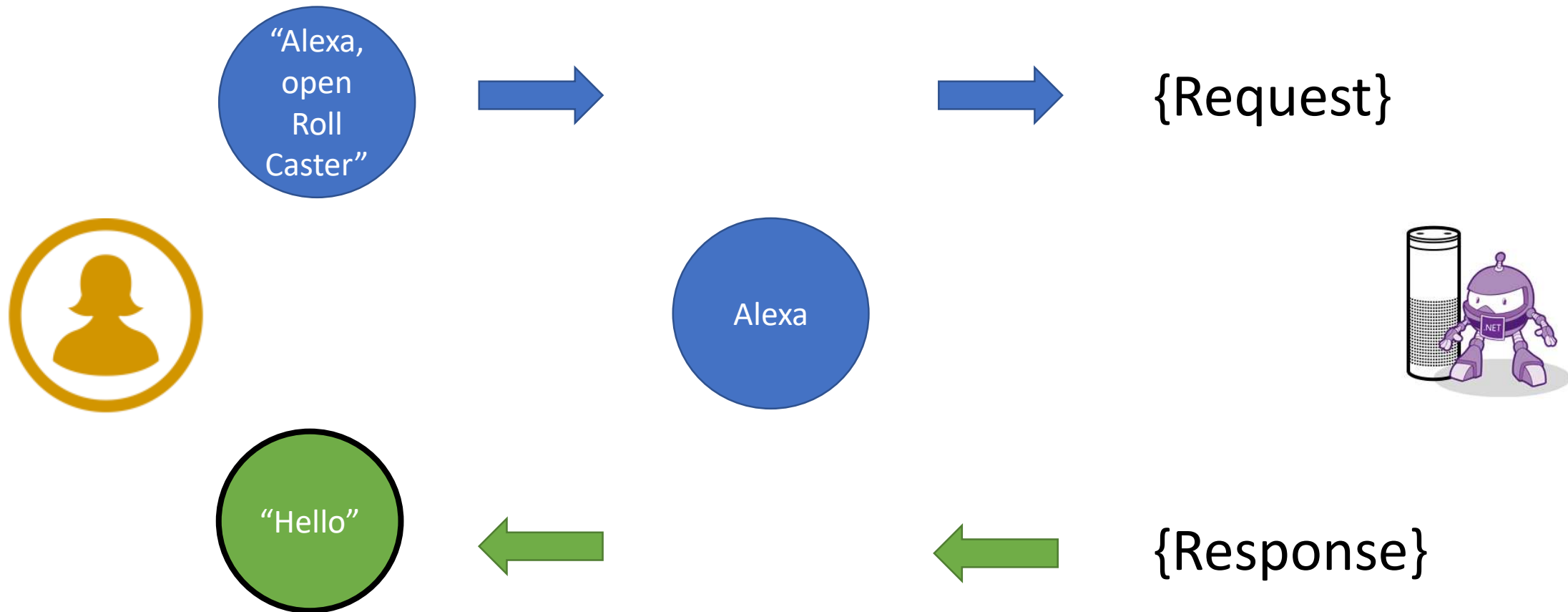
# Request Flow



# APIs



# Request Flow



# Request Flow

{Request}

Request Type

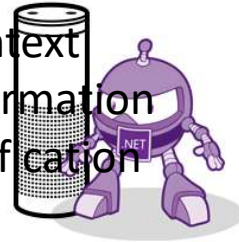
Request Data

Request Context

Device Information

User Identification

API Access



{Response}

Customer Name



Full Name ?

Given Name ?

## Skill Settings

### PERMISSIONS

You have granted the following permissions:

- ✕ Alexa Notifications
- ✕ First Name
- ✕ Email Address
- ✕ Mobile Number

MANAGE PERMISSIONS

# Progressive Response



# Progressive Response

Send audio while processing a request

Up to five “progressive” responses for each final response

Great for passive confirmation



# Personalisation



# Customer Profile

Given Name

Full Name

Mobile Number

Address

NuGet: [Alexa.NET.CustomerProfile](#)

# Settings API

Time Zone

Distance

Temperature

NuGet: [Alexa.NET.Settings](#)

# Reminders



# Reminders

Created while using skill

Absolute / Relative time

Recurring

Confirmed by the user

NuGet: [Alexa.NET.Reminders](#)

# Proactive Events



# Proactive Events

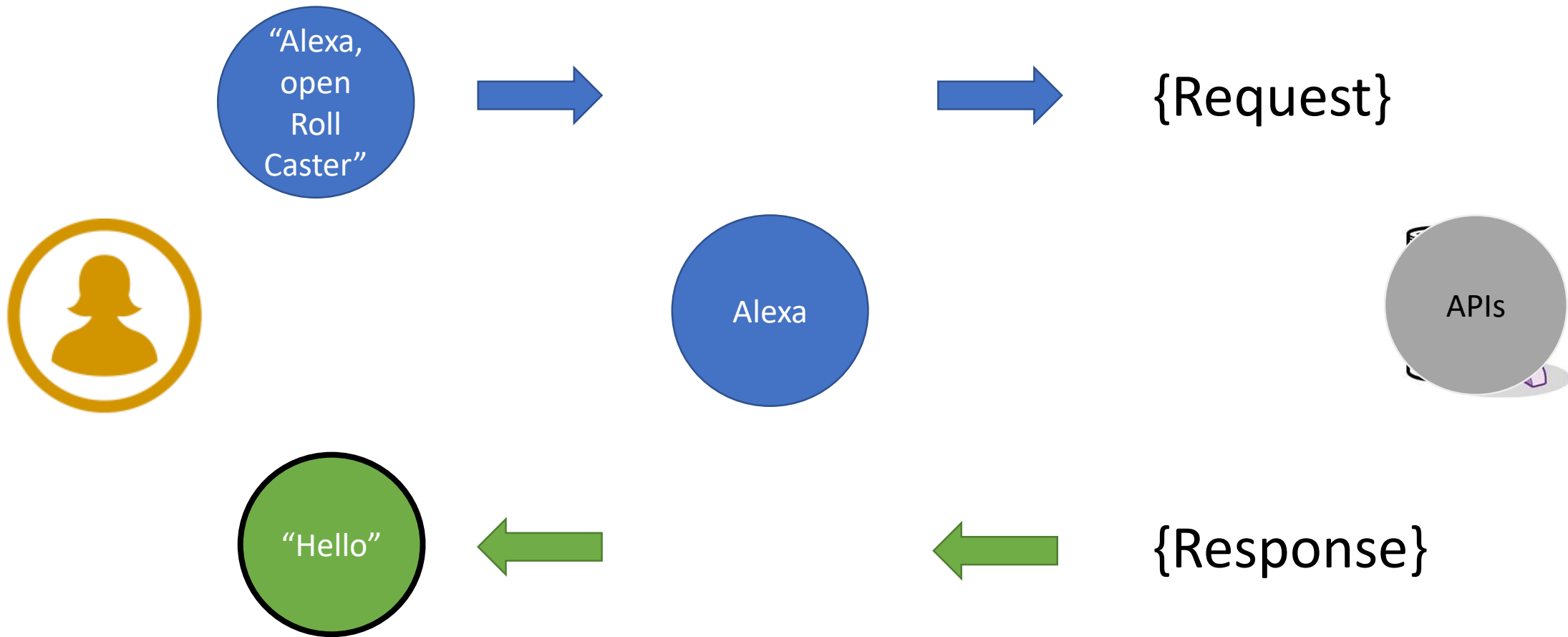
Sent to the user as required (still confirmed)

Specific types of Events (Order status, Weather Alert etc.)

Push Notifications

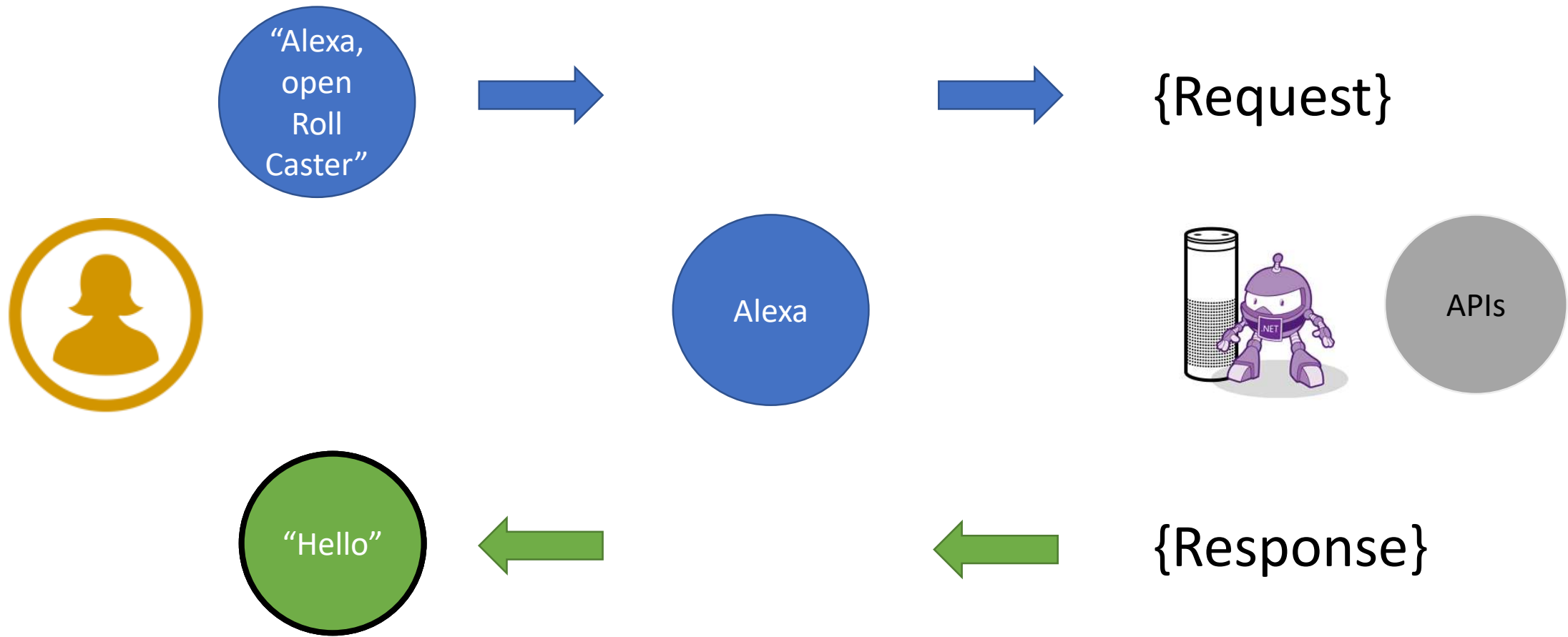
NuGet: [Alexa.NET.ProactiveEvents](#)

# Request Flow





# Request Flow



UNIT CONVERSION

16.5 = 10.25

Kilometres

Miles

What's sixteen and a half kilometres in miles?

16.5 kilometres is 10.25 miles.



## Weather in Nottingham, United Kingdom

AccuWeather.com

Sunday, 25 August 2019  
Mostly sunny; very warm

High 29° / Low 15°  
Wind: NE 5.8 km/h

RealFeel: 20°  
Precipitation: 10%



9:00 a.m.  
19°



10:00 a.m.  
22°



11:00 a.m.  
23°



12:00 p.m.  
25°



1:00 p.m.  
27°



2:00 p.m.  
27°



3:00 p.m.  
28°

# Directives



# Alexa Presentation Language



Roll Caster

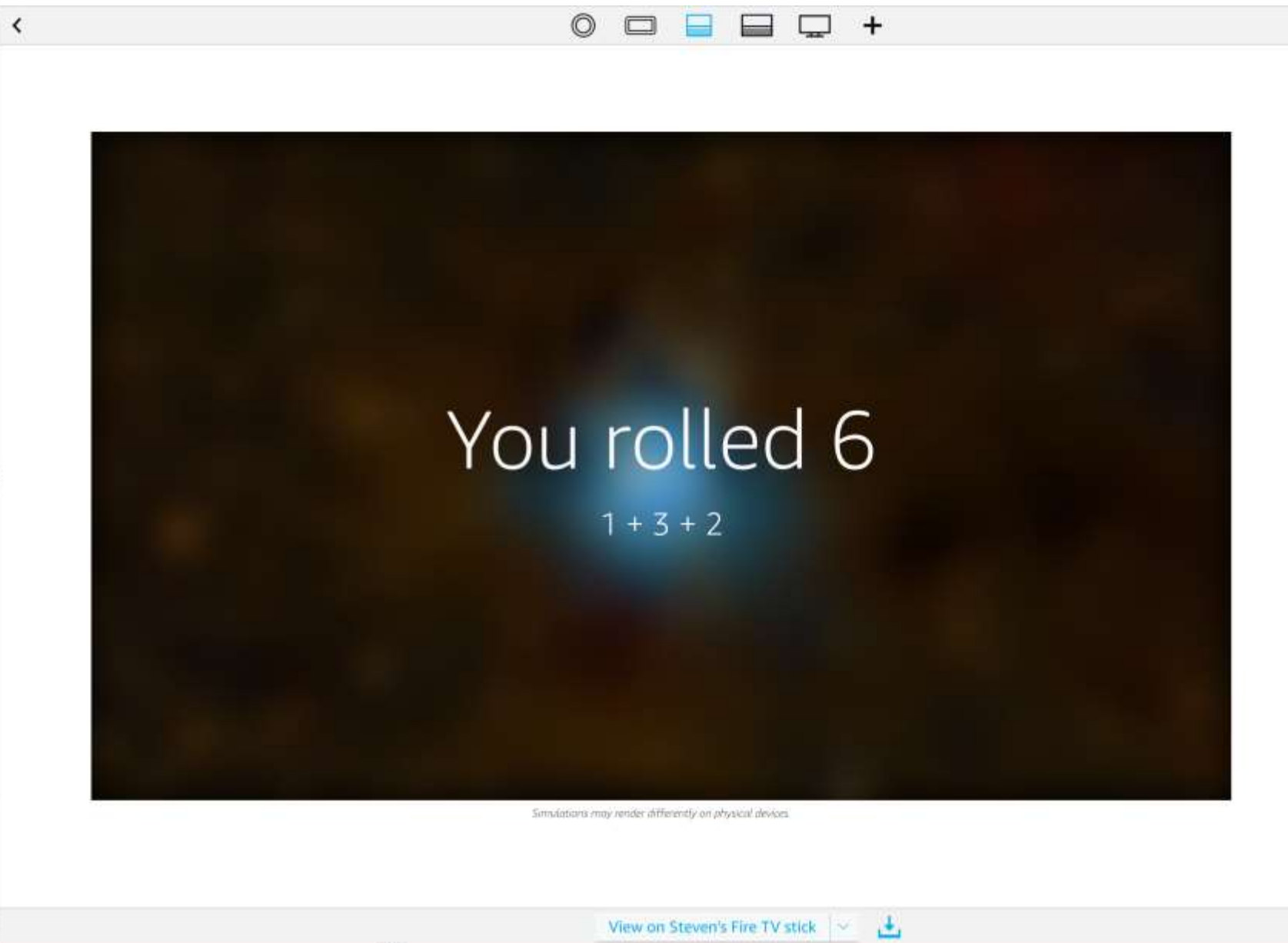
*To quit, try "Alexa, exit."*

You rolled 6

$$1 + 3 + 2$$

```
1 * (  
2  
3  
4  
5  
6 *  
7  
8  
9 *  
10 *  
11  
12  
13  
14  
15  
16  
17 *  
18  
19  
20  
21  
22  
23  
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25 *  
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40 *  
41 *  
42  
43  
44  
45  
46 *  
47  
48 *  
49 *  
50  
51  
52  
53  
54 *  
55 *  
56  
57  
58  
59  
60
```

```
{  
  "type": "APL",  
  "version": "1.1",  
  "theme": "dark",  
  "mainTemplate": {  
    "parameters": {  
      "payload"  
    },  
    "items": [  
      {  
        "type": "AlexaHeadline",  
        "backgroundBlur": true,  
        "backgroundImageSource": "https://rol",  
        "headerBackButton": false,  
        "primaryText": "You rolled",  
        "secondaryText": "1 + 3 + 2",  
        "onMount": {  
          "delay": 0,  
          "type": "rollIn",  
          "duration": 2000  
        }  
      }  
    ],  
    "import": [  
      {  
        "name": "alexa-layouts",  
        "version": "1.1.0"  
      }  
    ],  
    "commands": {  
      "rollIn": {  
        "parameters": [  
          "delay",  
          "duration"  
        ],  
        "commands": {  
          "type": "AnimateItem",  
          "duration": "${duration}",  
          "value": [  
            {  
              "property": "opacity",  
              "from": 0.0,  
              "to": 1.0  
            },  
            {  
              "property": "transform",  
              "from": [  
                {  
                  "rotate": -120.0,  
                  "translateX": "-100%"  
                }  
              ],  
              "to": [  
                {  
                  "rotate": 0.0,  
                  "translateX": 0.0  
                }  
              ]  
            }  
          ]  
        }  
      }  
    }  
  }  
}
```



# RenderDocument

NuGet: [Alexa.NET.APL](#)



# Basic Controls

Text

Button

Image

Video

You rolled 6

$$1 + 3 + 2$$

# Layout Controls

Container

Pager

Sequence

You rolled 6

$$1 + 3 + 2$$

Roll History# 1

Roll History# 2

Roll History# 3

Roll History# 4

Roll History# 5

Roll History# 6

Roll History# 7

Roll History# 8

Roll History# 9

# Data Binding

**Items:** “\${payload.itemlist}”

**Text:** “\${data.rollnumber}”

Roll History# 1

Roll History# 2

Roll History# 3

Roll History# 4

Roll History# 5

Roll History# 6

Roll History# 7

Roll History# 8

Roll History# 9

Roll History# 1

Roll History# 2

Roll History# 3

Roll History# 4

Roll History# 5

Roll History# 6

Roll History# 7

Roll History# 8

Roll History# 9



# Data Binding

**When:** “`${viewport.shape == 'rectangle'}`”

**When:** “`${viewport.width > 1024}`”

# Responsive Controls

Background

Button

Divider

Header

Footer

Image

Ordinal

Page Counter

Text List Item

Headline

TextListItem

You rolled 6

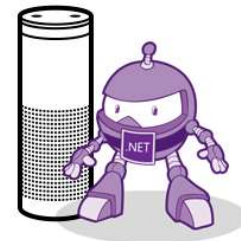
$$1 + 3 + 2$$

## ROLL HISTORY

- 1 Result: 23
- 2 Result: 56
- 3 Result: 67
- 4 Result: 18



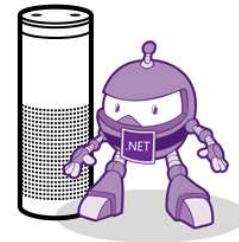
“Show my history”



# Commands



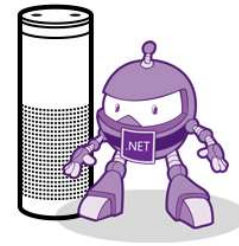
**Show Page 1**  
*ExecuteCommandDirective*



# Commands



Tap #1  
*UserEventRequest*



# Commands

AutoPage

SetPage

ScrollToIndex

ScrollToComponent

SpeakItem

Parallel

Sequential



# ExecuteCommands (v1.1)

SetValue

AnimateItem

Custom Commands

OnMount

Steven Peers - New instance | TweetDeck | Alexa Developer Console | Alexa Developer Console

http://developer.amazon.com/visual/work/10g1p1es

alex developer console

Multimodal Displays

VWA Alexa Design Guide

Layers (0)

- Root/Display
  - Background

Components

- Container
- Frame
- Image
- Scroll View
- Sequence
- Text
- Touch Wrapper
- Video

You rolled 10  
5 + 2 + 3

View on Steven's Fire TV stick

Warning

English (US)

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APLT



APLT



# In-Skill Purchasing



# Products

Entitlement

Subscription

Consumable

NuGet: [Alexa.NET.InSkillPricing](#)

# ConnectionRequest

Buy

Cancel

Upsell

## Roll History

Roll History keeps track of your last ten rolls and lets you list them and ask about the detail, in case you need to check something in the middle of a game.

**£0.99/month** Cancel at any time.

By saying 'Yes', you agree to the [Alexa Terms of Use](#) and authorise us to charge your default card or another card on file £0.99 per month after your 7-day free trial. Your subscription continues until cancelled. Cancel at any time by visiting the [Your Memberships & Subscriptions](#) section of Your Account on Amazon.com. To view full terms, go to [Alexa Terms of Use](#) in the [Legal & Compliance](#) section of the Settings menu.



# ConnectionResponse

Bought

Already Owned

Purchased

# Gadgets



# Gadgets

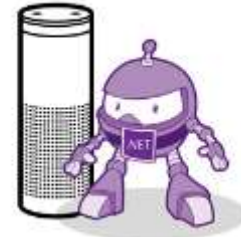


NuGet: [Alexa.NET.Gadgets](#)

# Gadgets



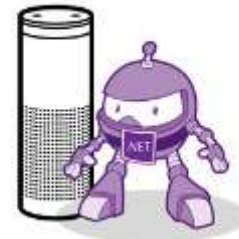
**Roll Call!**  
*StartInputHandler*



# Gadgets



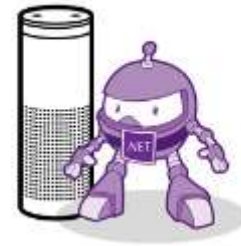
Device IDs  
*InputHandlerEvent*



# Gadgets



Events &  
Patterns  
*StartInputHandler*

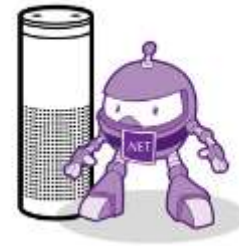


# Gadgets



Event &  
Timeout

*InputHandlerEvent*



# Custom Interfaces

ALL THE GADGETS!

Pair over Bluetooth to device

Messages use Protocol Buffers



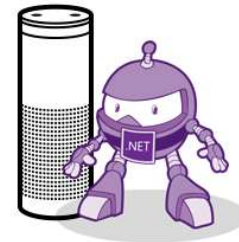
# Custom Interfaces



# Custom Interfaces



Do Stuff  
*SendDirective*

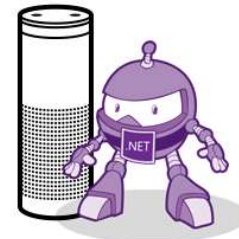


# Custom Interfaces



Tell me  
stuff

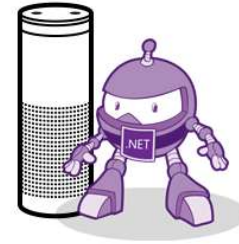
*StartEventHandler*



# Custom Interfaces



**I DID STUFF!**  
*EventsReceived*



# Personalisation



# Dynamic Entities

“Roll {CustomName}”

{CustomName}:

My Dice

# DialogUpdateDynamicEntities

“Roll {CustomName}”

{CustomName}:

My Dice

+ Fireball

+ Flaming Hands

# Leftovers





Alexa.NET.Management

- Roll Caster  
custom
- Nottingham Tech  
custom
- Tech Nottingham  
custom
- AlexaSamplePetMatch  
custom
- SimpleGadgetQuiz  
custom
- YourOwnAdventure  
custom
- Battle Cry  
custom
- ExperianTest  
custom
- CreateYourOwnAdventure  
custom
- DashBuddy  
custom
- Tap The Code  
custom
- Which One  
custom
- Guess the Code  
custom

# Roll Caster

amzn1.ask.skill.1



Overview Model Beta Certification Products

**Stage**  
Development

**Export Package**  
[Request](#)

Alexa.NET.RequestHandlers

# Request Handlers

bool CanHandle(SkillInformation information)

SkillResponse Handle(SkillInformation information)

# Request Handlers

Launch

Roll

RollAgain

Breakdown

RollHistory

BuySpecificProduct

BuyAnyProduct

PurchasedRollHistory

DeclinedRollHistory

ErrorRollHistory

Help

Fallback

SessionEnded

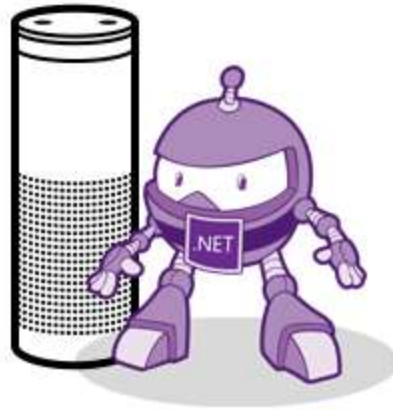
# Resources

Alexa Blogs: <https://developer.amazon.com/blogs/alexa/>

Design Guide: <https://developer.amazon.com/alexa-skills-kit/design>

Twitter: <https://twitter.com/alexadevs>

Alexa, end my talk.



“Certainly. Are there any questions you’d like answered?”