

Webinar 6/12/2020

Developing for the Watch

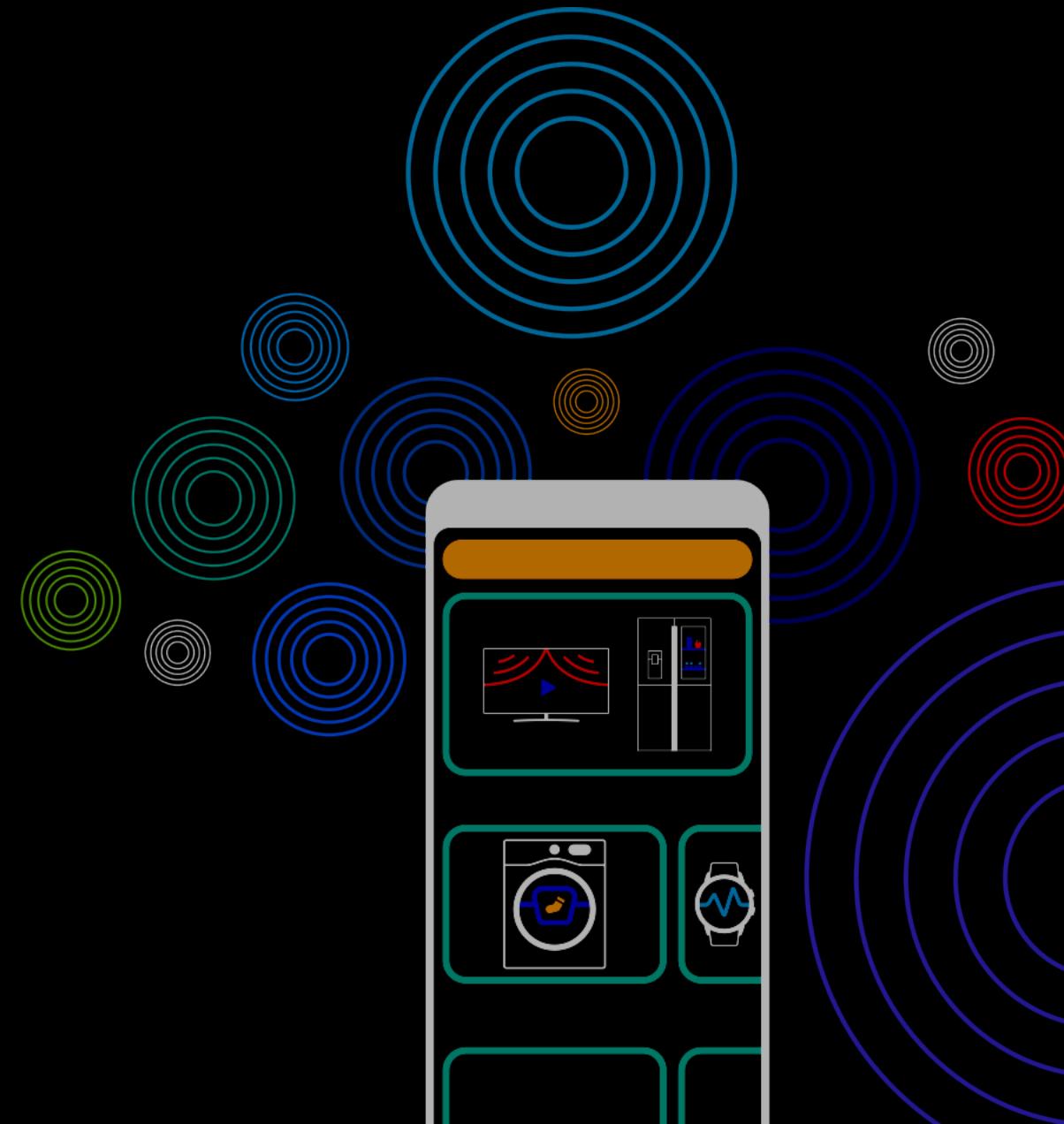
How To & Best Practices

Jonathan Pan

Technical Evangelist

Viv Labs / Samsung Bixby

@JohnWithoutTheH



Who are these blokes?

Introduction



Jonathan Pan

- Developer Evangelist
- Winner of the 2019 Internal Hackathon
- Has 4 too many cats (meow)

@JohnWithoutTheH



Roger Kibbe

- Senior Developer Evangelist
- Winner of the 2018 Bixby Hackathon
- Father of two daughters
- UC Berkeley Graduate – Go Bears!

@rogerkibbe

Enable the Watch Target

```
capsule {  
    id (jonmpn.copycat)  
    default-action (CopyCat)  
    version (0.0.22)  
    format (3)  
    targets {  
        target (bixby-mobile-en-US)  
        target (bixby-watch-en-US)  
    }  
}
```

Watch vs Mobile

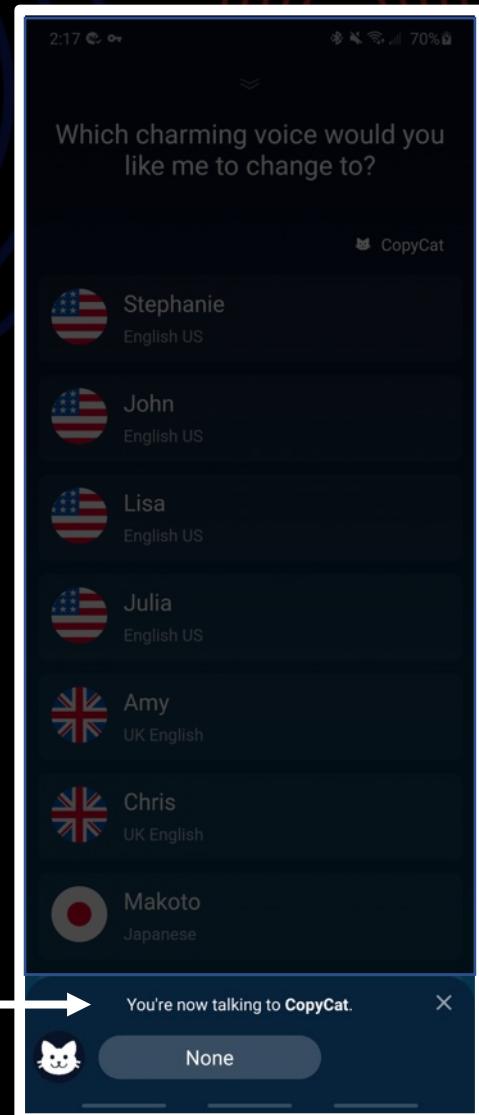
Lock-In on Mobile

"Ask CopyCat to say does result view lock in work?"



This is an input-view lock-in

"Change Voice"
Continues the conversation
with CopyCat



Watch vs Mobile

Result-View Lock-In Not Supported on Watch

*"Ask CopyCat to say
does result view lock
in work?"*

Does result view lock
in work

I can only speak in this
voice on your watch

Utterance goes to top level
interpreter instead of CopyCat

Watch vs Mobile

Input-View Lock-In Works on the Watch

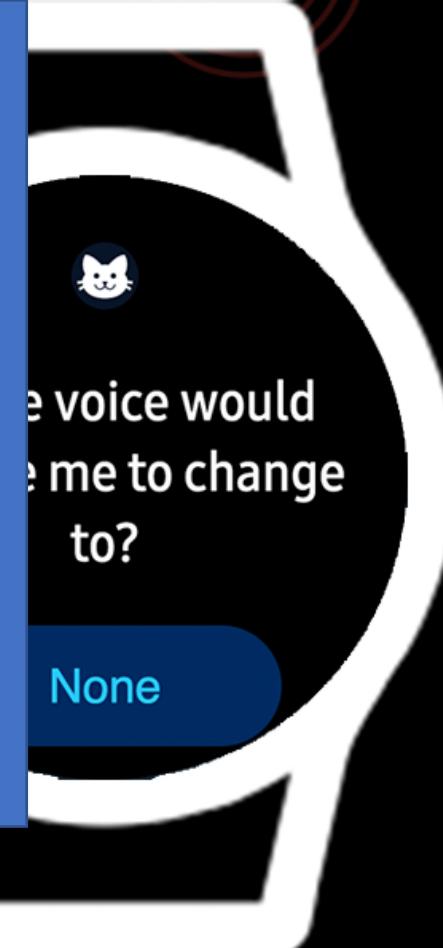


Result-View Lock-In Not Supported on Watch

End user can force result-view lock-in with Named Dispatch

I would omit this slide – it's an edge case and doesn't always seem to work. We shouldn't have people designing for this

*"Ask CopyCat to see if
does result view lock-in work?"*



Result-View Lock-In Not Supported

How Does This Affect My Capsule?

- No result-view lock-in.
- A result-view is the end of their interaction with your capsule.
- Use input views for lock-in

Result-View Lock-In Not Supported

Conversation Drivers

- Conversation drivers do not show in result views
- Conversation drivers show in input views but not after a selection-of
- Conversation drivers are currently always displayed in the IDE. We're aware of this discrepancy

Improving the Watch Experience

Conditionals for the Watch

```
if ($scan.device == 'bixby-watch') {
```

Can be used in “Bixby-land”

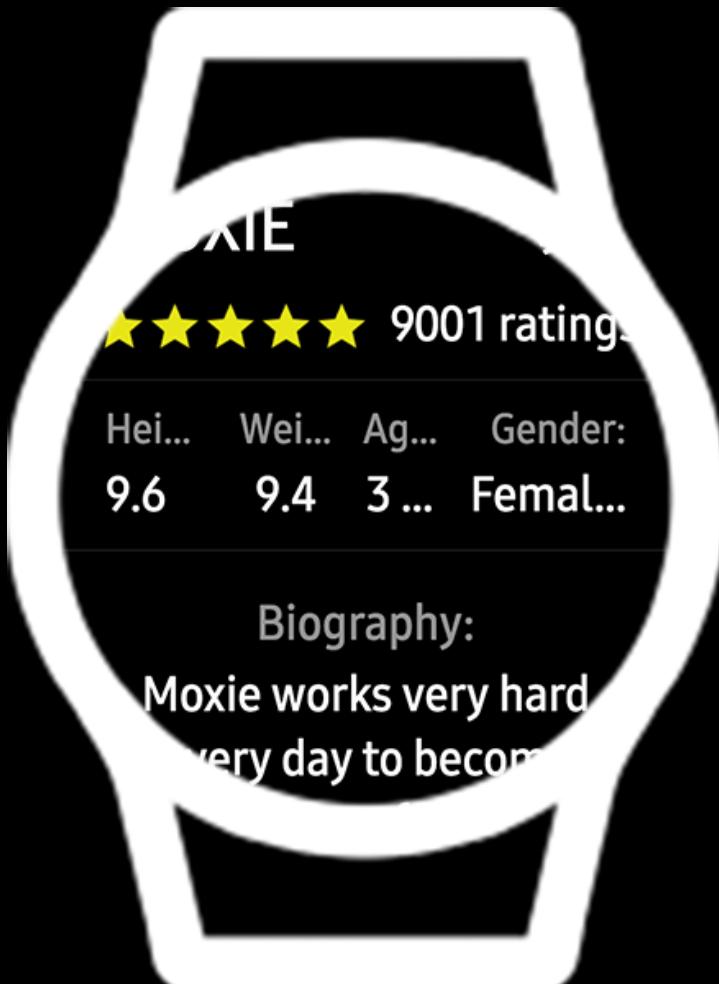
- Views
 - Result Views
 - Input Views
 - Layout Macros
- Models
 - Actions
 - Concepts
- Dialogs
 - Dialog Macros

```
if ($vivContext.device == 'bixby-watch') {  
    console.log("Do something for the watch")  
}
```

Conditional for JavaScript

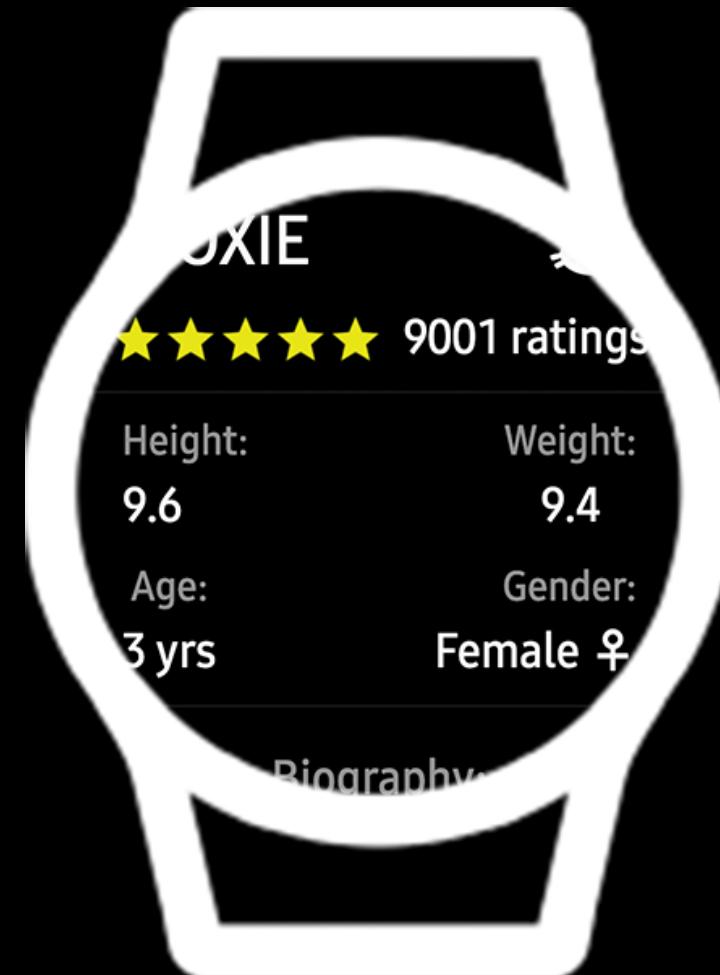
Allow for device-specific layout optimization

Custom layout depending on device



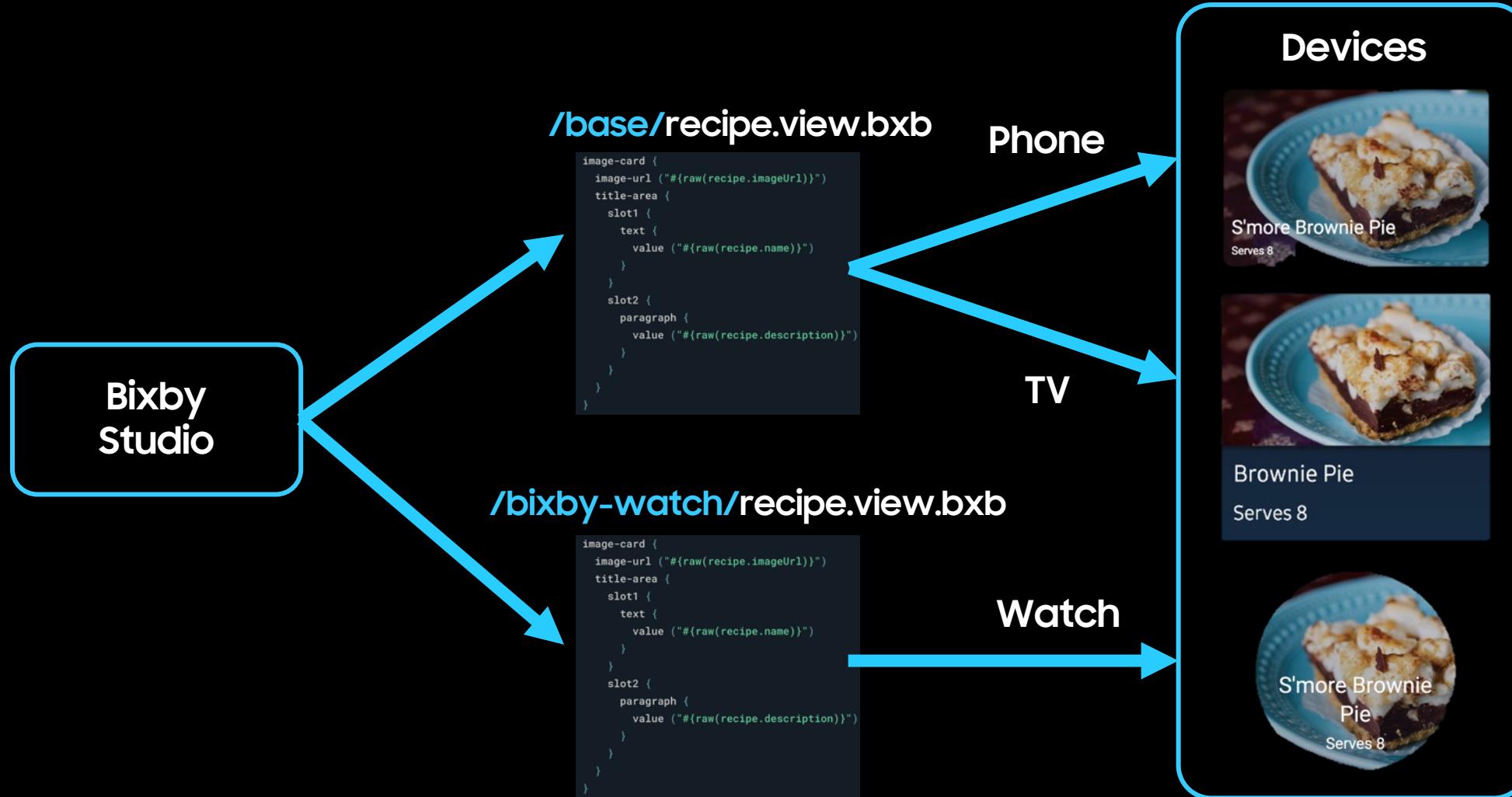
Simple if-else to change layout

```
// the pet's stats
if($can.device == 'bixby-watch'){
    hbox...
    hbox...
} else {
    hbox...
}
```



Allow for device-specific layout optimization

Completely different layout per device



Views for the Watch

- Simplify your views
- The less scrolling the better
- Images generally don't look great on the watch
- Hboxes have a maximum of 4 columns on watch (8 on mobile)
 - Always check your hboxes to see if they fit on the watch



Autoscroll on the Watch

- Some Views auto-scroll down to the view after/during TTS
 - Result View file with stuff in the content key
 - Input Views with a selection-of

```
result-view{
  match:Output(output)

  render{
    layout{
      section{
        content{
          if (output.di
            paragraph("")
            spacer
        }
      }
    }
  }
}
```

```
input-view{
  match:VoiceChoice(choices)

  render{
    selection-of |(choices){
      select-button-text(Derp)
      where-each (voice){
        cell-card{
          ...
        }
      }
    }
  }
}
```

Mic behavior on the Watch

- For all input views, the mic opens after TTS and waits a bit for the user's input
- If the user starts scrolling after the mic opens, the mic turns off
 - The user can double press the Home key to reopen the mic for Bixby
 - The user can use the UI for certain types of inputs

Additional Points

- Here's what DOES work well on the watch
 - Simple request/response type capsules
 - Simple loops e.g. quizzes/trivia
- Here's what DOESN'T work well on the watch
 - Anything relying upon a complex UI
 - Movie Agent
 - Chess
- Test it – try it on the watch? Is the user experience easy and entertaining/useful
- Consider the watch as a voice only device with a small screen. Use voice, not the UI for the experience
- Natural Language categories do not (yet) work on the watch

Partially Supported and Unsupported Things

Unsupported

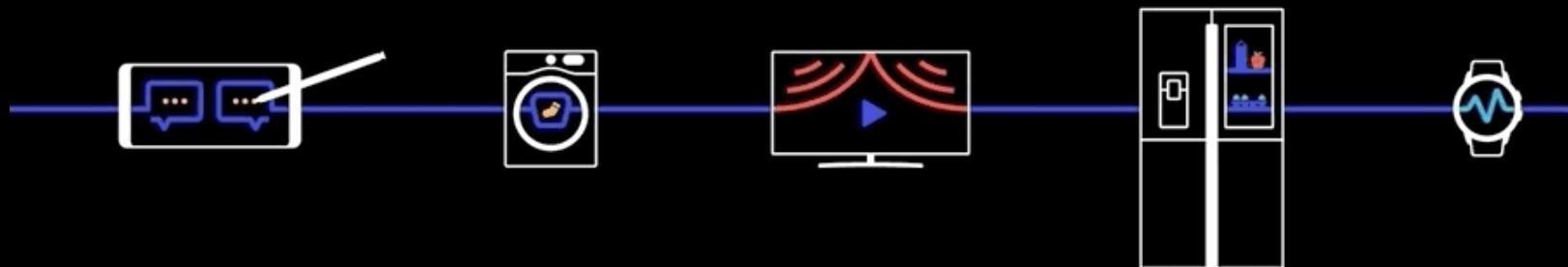
- Video component in result views
- Autocomplete in Input Views
- AudioPlayer library capsule
- ShareVia library capsule

Supported but with Differences

- Punch outs (open on paired phone)
- Map cards – works but not UI optimized

Where can I find resources to learn how to build for Bixby?

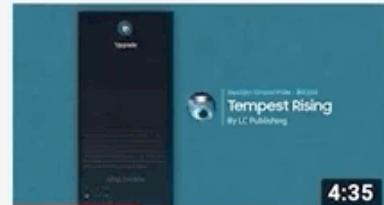
www.youtube.com/c/BixbyDevelopers



 **Bixby Developers**
387 subscribers

[HOME](#) [VIDEOS](#) [PLAYLISTS](#) [CHANNELS](#) [DISCUSSION](#) [ABOUT](#) 

[Bixby DevJam Winners](#) ► [PLAY ALL](#)


4:35


2:13


2:14


2:58

[Bixby DevJam 2019 Winners! Tempest Rising by LC...](#)
[Bixby Developers](#)
97 views · 1 week ago

[Bixby DevJam 2019 Winners! Farm Tycoon by Five Fifteen](#)
[Bixby Developers](#)
52 views · 1 week ago

[Bixby DevJam 2019 Winners! Stream Player by DigiVoice.io](#)
[Bixby Developers](#)
50 views · 1 week ago

[Bixby DevJam 2019 Winners! Stream Picker by Che...](#)
[Bixby Developers](#)
40 views · 5 days ago

How can you interact with us?

Bixby Developers Social Media



twitter.com/BixbyDevelopers

SAMSUNG

Bixby Developers

@BixbyDevelopers Follows you

Samsung Bixby is a next-generation, AI platform that enables developers to build rich voice and conversational AI experiences for the Bixby Marketplace

② San Jose, California bixbydevelopers.com Joined July 2018

14 Following 124 Followers

Followed by Voice First, Marko Arezina, and 41 others you follow

Tweets Tweets & replies Media Likes

Pinned Tweet

Bixby Developers @BixbyDevelopers · Dec 13, 2019

Tweeting about all that is new and cool Bixby development wise! Be sure



facebook.com/BixbyDevelopers

Bixby Developers

@BixbyDevelopers

Home Posts Reviews Videos Photos About Community Create a Page

Liked Following Share ...

Write a post... Photo/Video Tag Friends Check in ...

Posts

Bixby Developers 2 hrs ·

Kick off the new year with the Start Stretching capsule. #Bixby will walk you through new stretches. Just ask "With Start Stretching, give me a stretch" and congratulations on being a runner up in

How can you interact with me?

My Contact Information



twitter.com/JohnWithoutTheH

EXPLORER

OPEN EDITORS

JS johnWithoutTheH.js

```
johnWithoutTheH.js — JohnWithoutTheH
JS johnWithoutTheH.js > ...
1 const johnWithoutTheH = JohnWithAnH => {
2   return JohnWithAnH.replace("John", "Jon");
3 };
4
5 export default {
6   johnWithoutTheH,
7 };
8
```

Jon
@JohnWithoutTheH

Making stuff on Bixby
Removing H's from my name for 31 years

⌚ San Jose, CA 🕰 Born July 22, 1988 📅 Joined June 2019

174 Following 139 Followers

Tweets Tweets & replies Media Likes

Jon @JohnWithoutTheH · Jan 3

Another new tutorial video is up along with the sample code for my CopyCat capsule! This video covers how #Bixby remembers and forgets models along with how to use flags to reset context.



linkedin.com/in/jonmpan

Jonathan Pan

Technical Evangelist at Viv Labs

San Jose, California · 299 connections

Join to Connect

About

Ambitious and enthusiastic Software Engineer and Technical Evangelist currently working in cutting edge fields such as Augmented Reality (AR) and Full Stack Web Development. With multiple successful projects under my belt, I am always looking for opportunities to push the boundaries of what's possible.

Thank you

Jonathan Pan | Technical Evangelist | Twitter: [@JohnWithoutTheH](https://twitter.com/JohnWithoutTheH)

Do more with Bixby

SAMSUNG