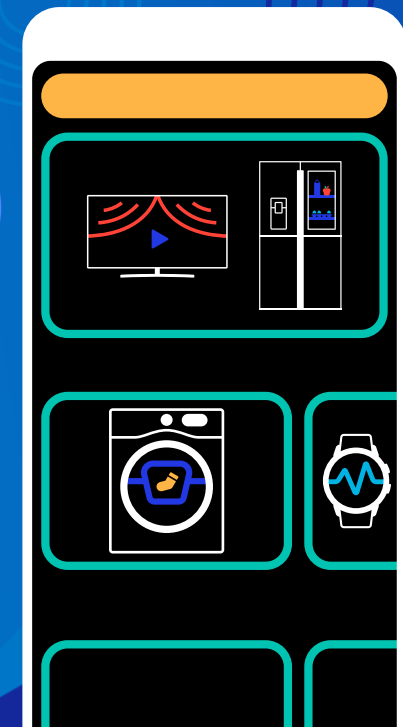


Bixby for Voice Developers Voice Lunch – Feb 2021

Roger Kibbe
Senior Developer Evangelist
Samsung
@rogerkibbe



Who Am I



@rogerkibbe

Roger Kibbe

Senior Developer Evangelist
Samsung

“Technology empowers and enables “

“Technology should get out of the way”

Dad - two teen daughters

San Francisco Bay Area Native

UC Berkeley Graduate – Go Bears!

What Is Bixby?

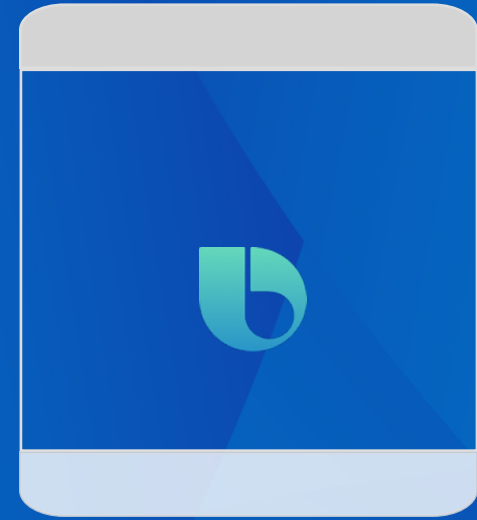
- Samsung's Voice/Conversational AI assistant
- Bixby 2 introduced November 2018
- Viv Labs – Acquired by Samsung 4 years ago
- Story starts with Siri
 - Dag Kittlaus and Adam Cheyer founded Siri
 - Sold to Apple - worked there for a couple years
 - Left to create a next generation conversational AI platform and founded Viv Labs

Bixby Reach

- #1 in Smartphones
- #1 in Televisions
- #1 in US Appliances
- 70% of US Households have a Samsung device
- Significant market share in portable speakers/automotive via Harman
- Bixby coming to all of the above and more . . .

Bixby Reach

100's millions of Bixby Enabled
Devices per Year



Bixby Development

Bixby Development Style



Traditional

- Imperative
- Code Driven
- “How to do”

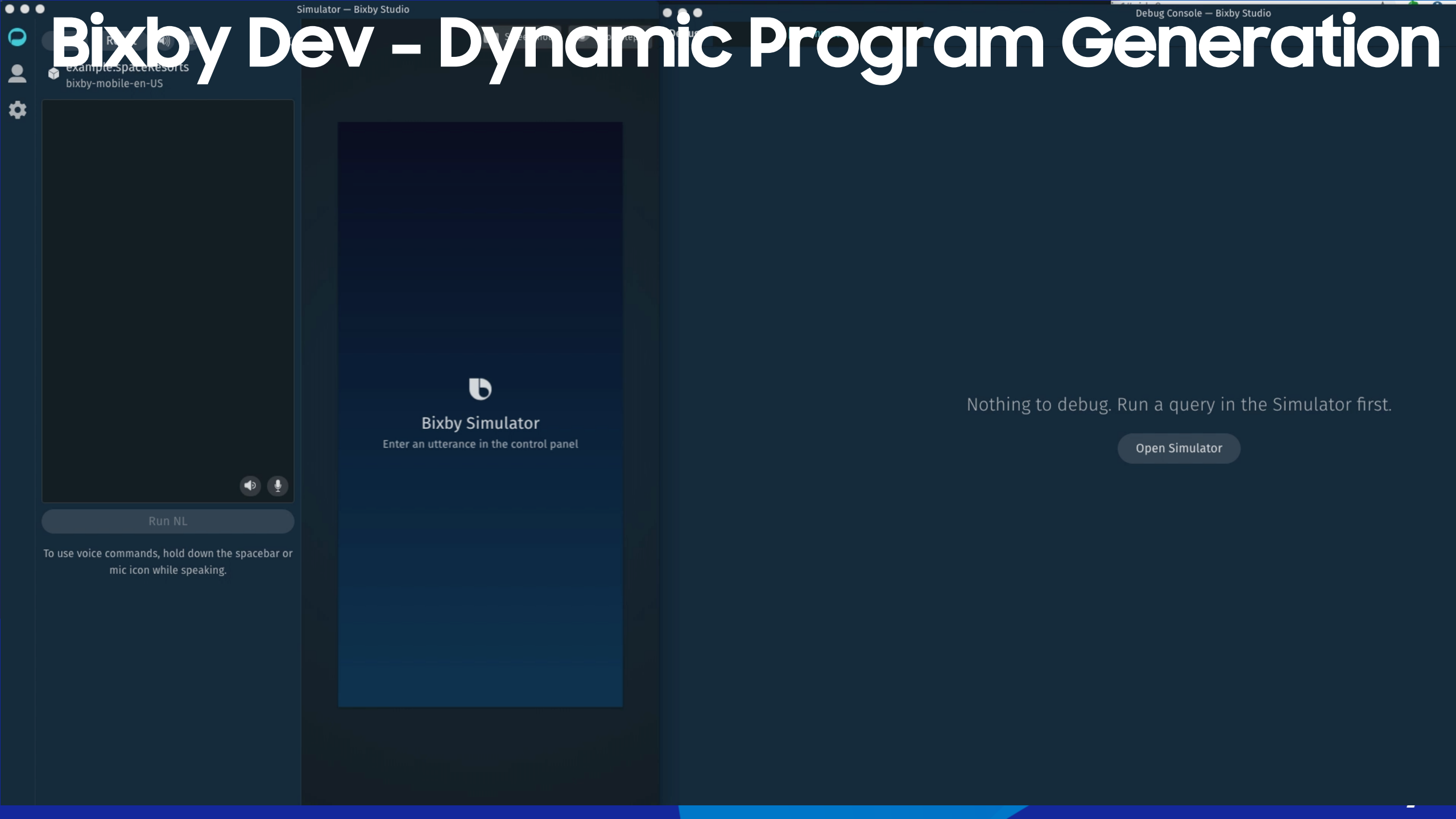


Bixby

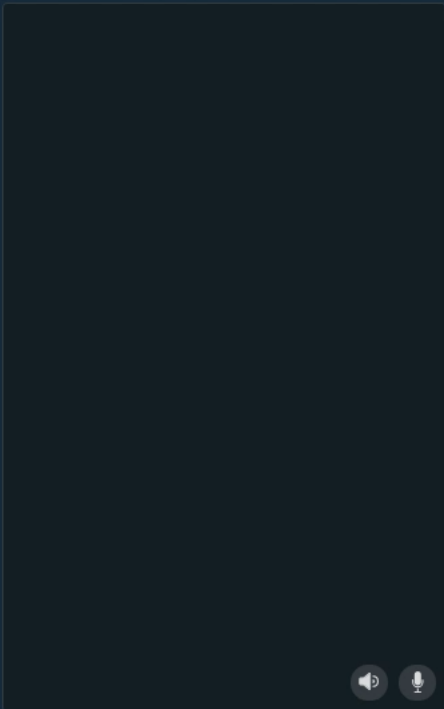
- Declarative/Opinionated
- Model Driven
- “What to do”

Bixby Development – AI Driven

- Bixby models are “compiled” into programs on the fly – Dynamic program generation
- Model and Dynamic program generation handle
 - NLU (Natural language understanding)
 - Required and optional inputs, computed inputs and eliciting input from user.
 - Flows
 - Output variables, speech and UI layout
 - Errors, retries and related user messaging
- A fraction of typical code is written for a Bixby Capsule

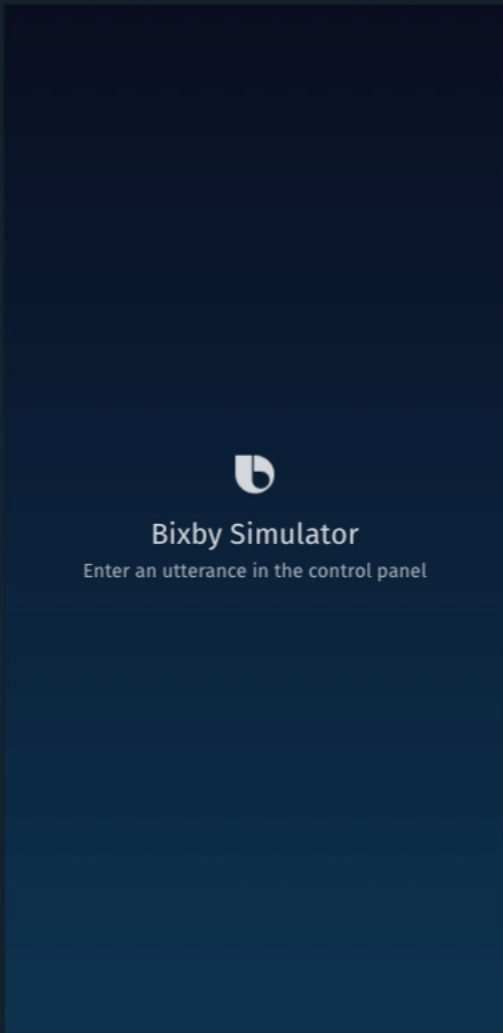


Bixby Dev - Dynamic Program Generation



Run NL

To use voice commands, hold down the spacebar or mic icon while speaking.



Nothing to debug. Run a query in the Simulator first.

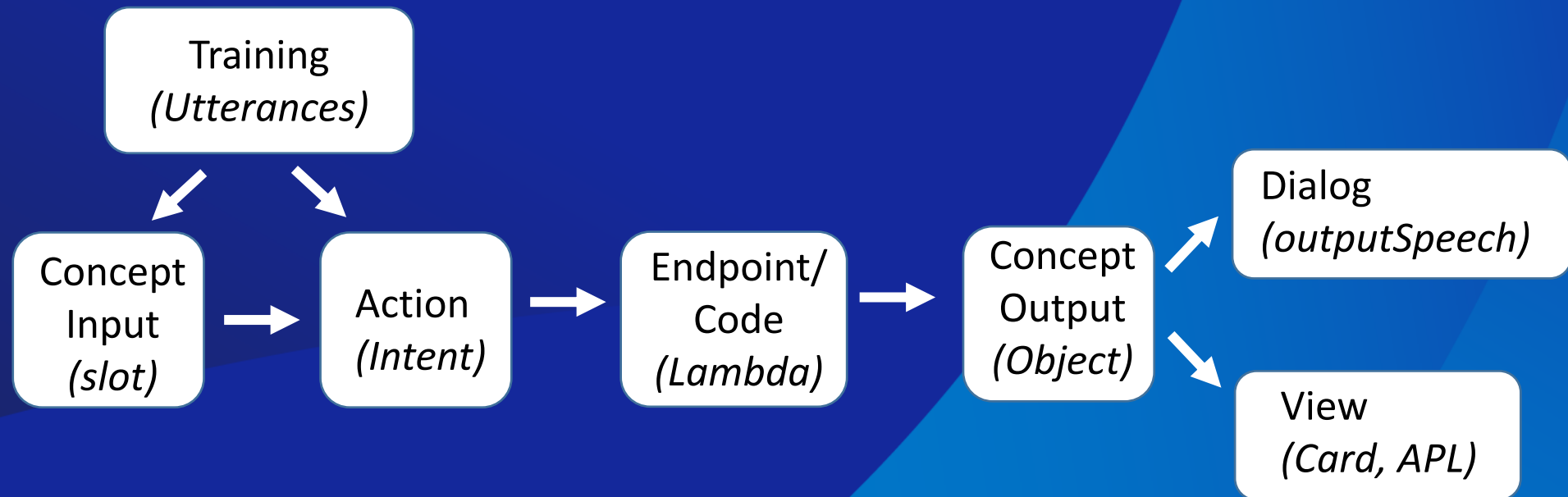
Open Simulator

How to Start Developing for Bixby

Demo Rock, Paper, Scissors Capsule

Source Code: github.com/bixbydevelopers/capsule-sample-rock-paper-scissors

Bixby Development – Components



Rock, Paper, Scissors Capsule Code Walkthrough

Source Code: github.com/bixbydevelopers/capsule-sample-rock-paper-scissors



“Rock” to Rock,
Paper, Scissors
Capsule

NLU Training

Training: [Rock, Paper, Scissors]
Intent/Goal: SelectHand
Role: UserHand

Models

Action: SelectHand
Input: UserHand
Output: Hands



Endpoint

ShootHands.js

```
function shootHands(userHand) { ...  
  return {userHand, bixbyHand, whoWon}  
}
```

Model

Concept: Hands

- userHand
- bixbyHand
- whoWon

UI and Dialog




Dialog: handResult
UI/View: handResult

Bixby Development – IDE

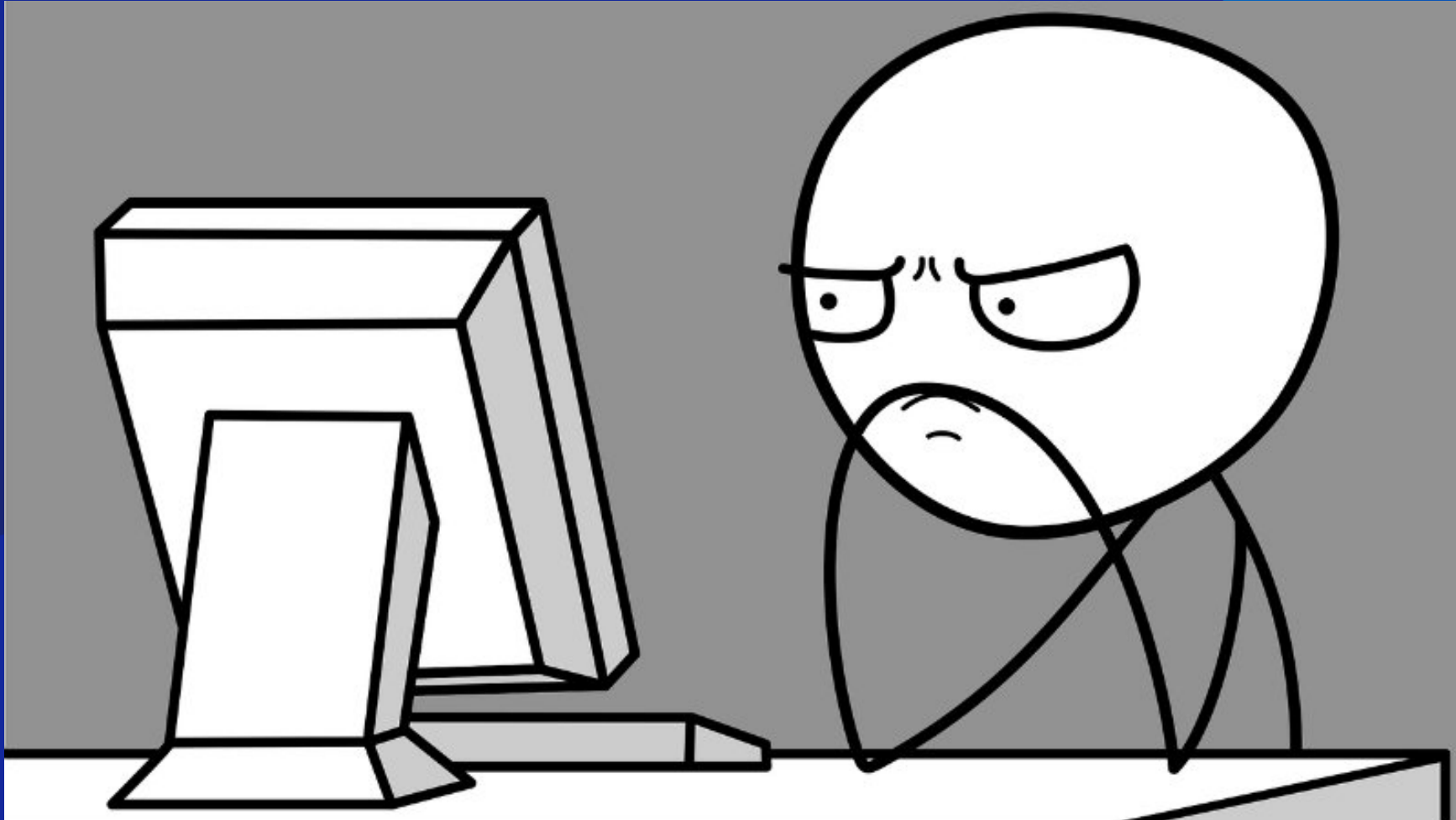
Bixby Developer Studio IDE - Single IDE for all Bixby development

- Modeling
- Code (JavaScript)
- NLU Modeling
- Simulator
- Debugger
- Unit Testing

Voice Assistant Terminology

	 Bixby	 amazon alexa	 Google Assistant
Voice Application	Capsule	Skill	Action
Application Start Name	Dispatch Name	Invocation Name	Invocation Name
NLU Training	Training	Sample Utterances	Training Phrases
Context/Input Objects	Concept	Slot	Entity
Goal/Intent	Action	Intent	Intent
Mapping Intent to Code	Endpoint	Handler	Web Hook
Code/Business Logic	JavaScript Function	Lambda	Cloud Function/Firebase
Output Speech	Dialog	Speak/Reprompt	Conversation
UI	View	Card/APL	Rich Response/ Interactive Canvas

Be Patient – It will All Make Sense



Bixby Developers Resources



bixbydevelopers.com



github.com/bixbydevelopers



www.youtube.com/c/BixbyDevelopers



Bixby Developers Chat Podcast
bixbydev.buzzsprout.com



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facebook.com/BixbyDevelopers

Thank you & AMA

Presentation: bit.ly/vlbixby

Source Code:

github.com/bixbydevelopers/capsule-sample-rock-paper-scissors

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