

# Bixby Office Hours

*Building for Our Ambient  
Computing Future*

# Introductions



**Roger Kibbe**

- Senior Technical Evangelist
- Father of two teen daughters
- UC Berkeley Graduate – Go Bears!

@rogerkibbe



**Jonathan Pan**

- Technical Evangelist
- Winner of the 2019 Internal Hackathon
- Has too many cats! (meow)

@JohnWithoutTheH

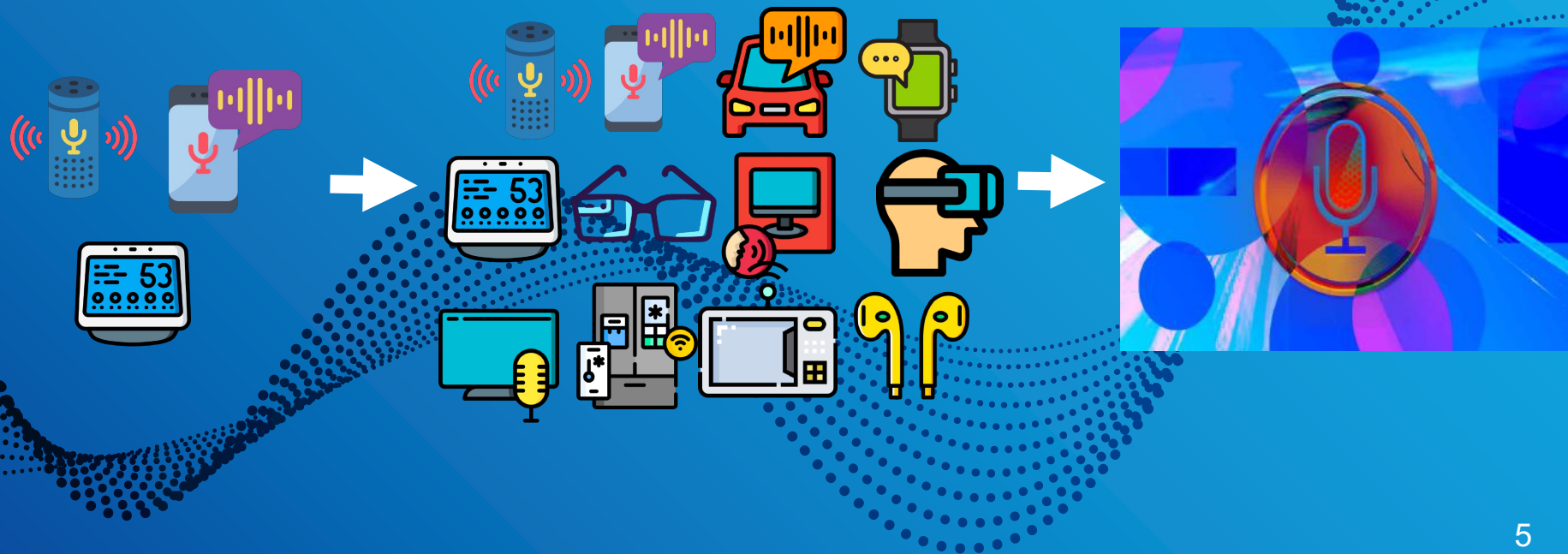
# Ambient Computing

# But Wait . . . Devices?

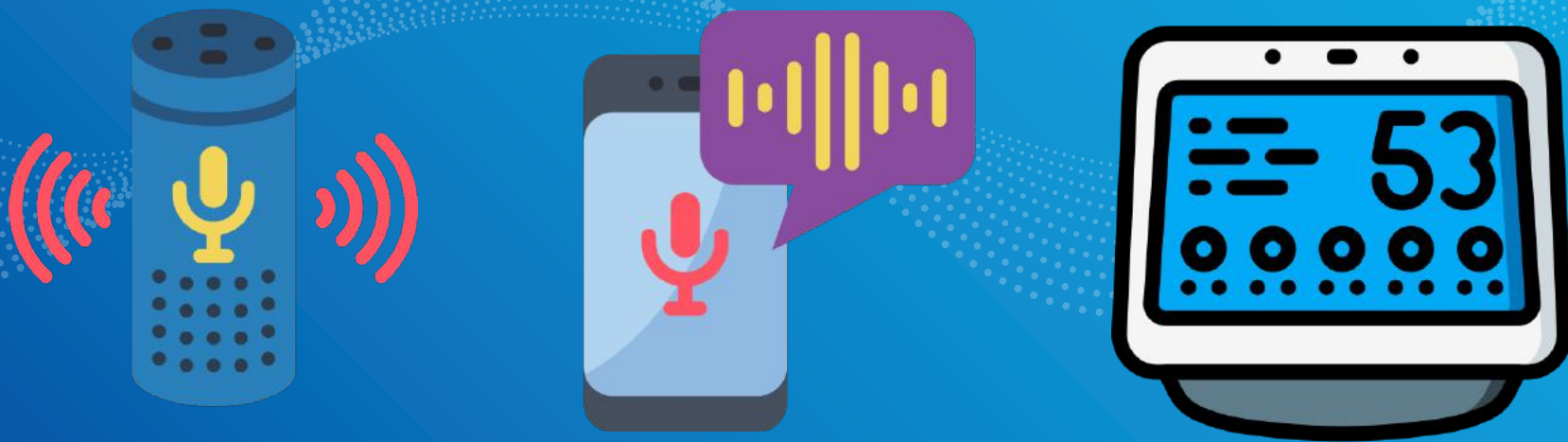




# An Evolution



# Today



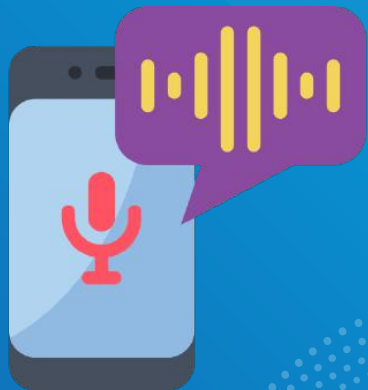


**CALL  
TO  
ACTION**

# Tomorrow







# Phones

Modalities:



Screen Size:



Medium

Mobile/Stationary



## Opportunities

- Everything
- Voice enabling apps and web
- Location Aware

## Considerations

- UI Expectations
- Headphone/buds usage



# Smart Watch

Modalities:



Screen Size:



Mobile/Stationary



## Opportunities

- Simple commands e.g. request and response
- Voice first interface
- Location Aware

## Considerations

- Tiny Screen
- Quick interactions
- Often paired with phone



# Hearables/ EarBuds

Modalities:



Screen Size:



Mobile/Stationary



## Opportunities

- Voice first interface
- Location Aware
- Stereo

## Considerations

- Quick interactions
- Privacy/Social Pressure
- Paired Device



# Smart Appliances

Modalities:



Screen Size:



Large

Mobile/Stationary



## Opportunities

- Cooking/"GPS for the Chef"
- Family Entertainment
- Family Scheduling/Organization

## Considerations

- Screen? Visible or Not
- Privacy



# Automobile

Modalities:



Screen Size:



Medium

Mobile/Stationary



## Opportunities

- Location Aware
- Entertainment/News: 30 billion commute hours

## Considerations

- Safety – Voice First, simplified supporting UI





# Television

Modalities:



Screen Size:



Large

Mobile/Stationary



## Opportunities

- Big Screen Multimodal – Games, Multiplayer
- Overlays – Sports, Information

## Considerations

- Screen first device
- Privacy



# Computer

Modalities:



Screen Size:



Mobile/Stationary



## Opportunities

- Voice enabling apps and web
- Entertainment

## Considerations

- UI Expectations – Screen first device
- Privacy



# Household Electronics

## Kitchen, Laundry, HVAC

Modalities:



Screen Size:



Small/None

Mobile/Stationary



### Opportunities

- Simplifying Use
- Cooking
- Purpose built voice assistants

### Considerations

- Safety – Kitchen
- Keep it simple



# AR/VR



Modalities:



Screen Size:



Medium

Mobile/Stationary



## Opportunities

- Voice First
- Location Aware
- Games, Entertainment

## Considerations

- Screen/Display first
- Privacy/Social Acceptance



VOICE





# Thank You

presentation: [bit.ly/bix31221](https://bit.ly/bix31221)

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