

# Secrets of VR Audio Production for New Realities

Tom Bible

*Audio Director*

SUBMERSION **AUDIO**

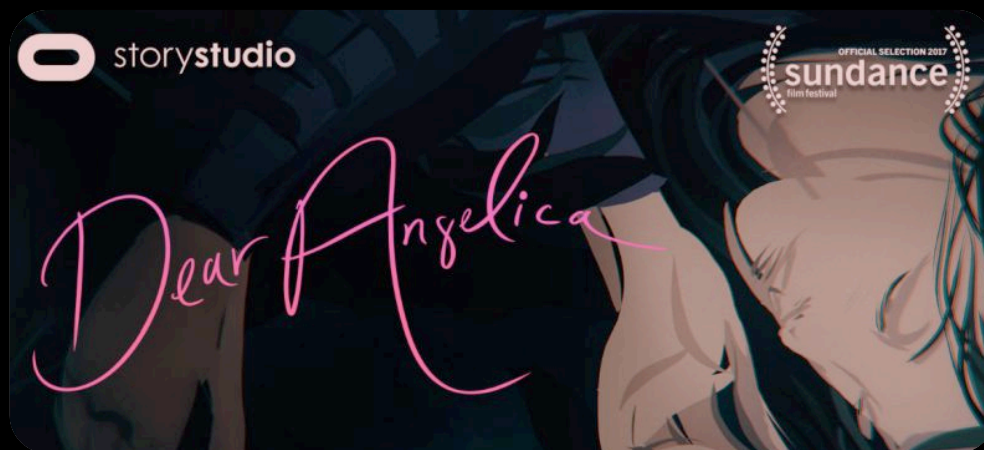
Kevin Bolen

*Immersive Audio Designer*

Skywalker Sound



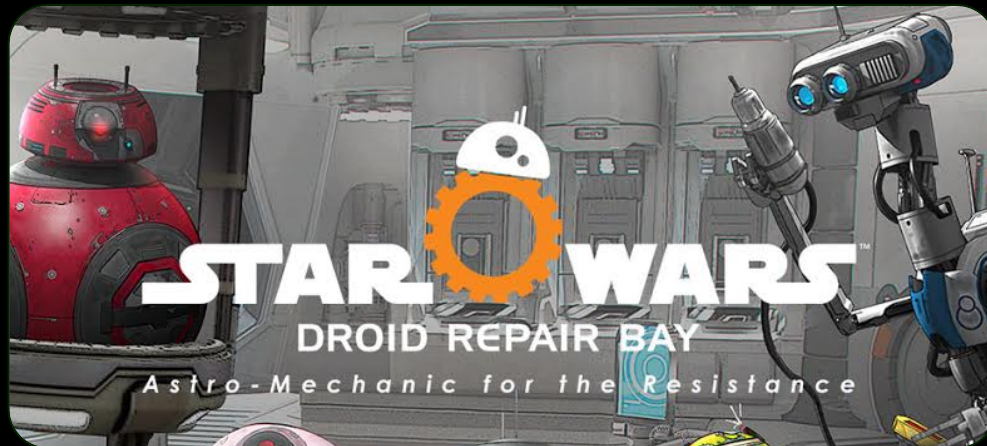
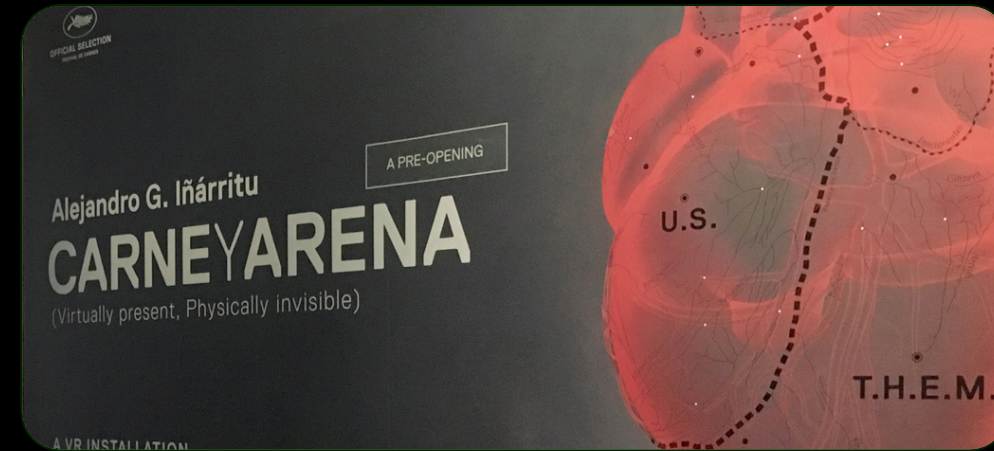
# Tom Bible – SUBMERSION **AUDIO**







# Kevin Bolen – Skywalker Sound





# VR Audio Production

- Why Audio is Important in VR
- How to Plan for VR Audio Production
- The VR Audio Production Process







# Why is Sound Important?

Character

Place

Time

Provides Information

Drives Emotions

Works with our senses to create overall experience



# Why is Audio Important in VR?



# KONG VR

## DESTINATION SKULL ISLAND

ENTER THE WORLD OF SKULL ISLAND & EXPERIENCE  
A FACE-TO-FACE ENCOUNTER WITH THE KING

**KONG**  
**SKULL ISLAND**  
IN CINEMAS 9 MARCH

#KONGisKING

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# Designing *with* Sound

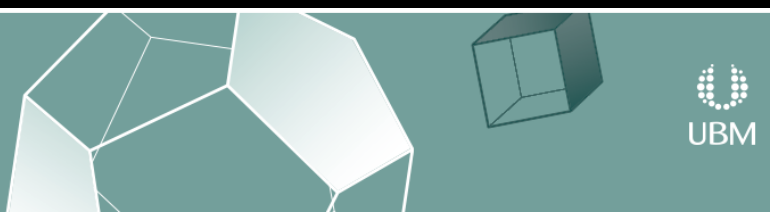
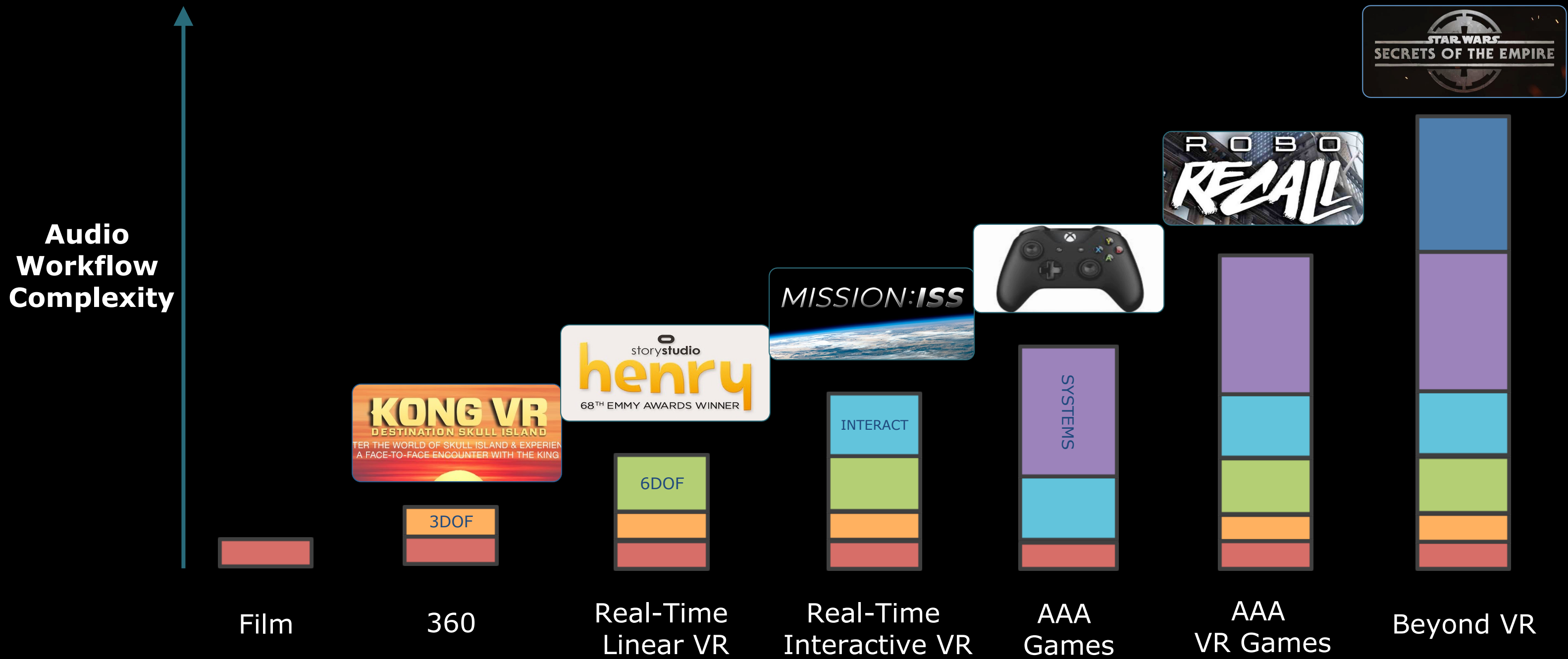


Think & Plan Holistically  
Collaboration & Synchronous Development



# Planning for VR Audio Production















# ROBO REZAIL



7 Characters



5 Weapons

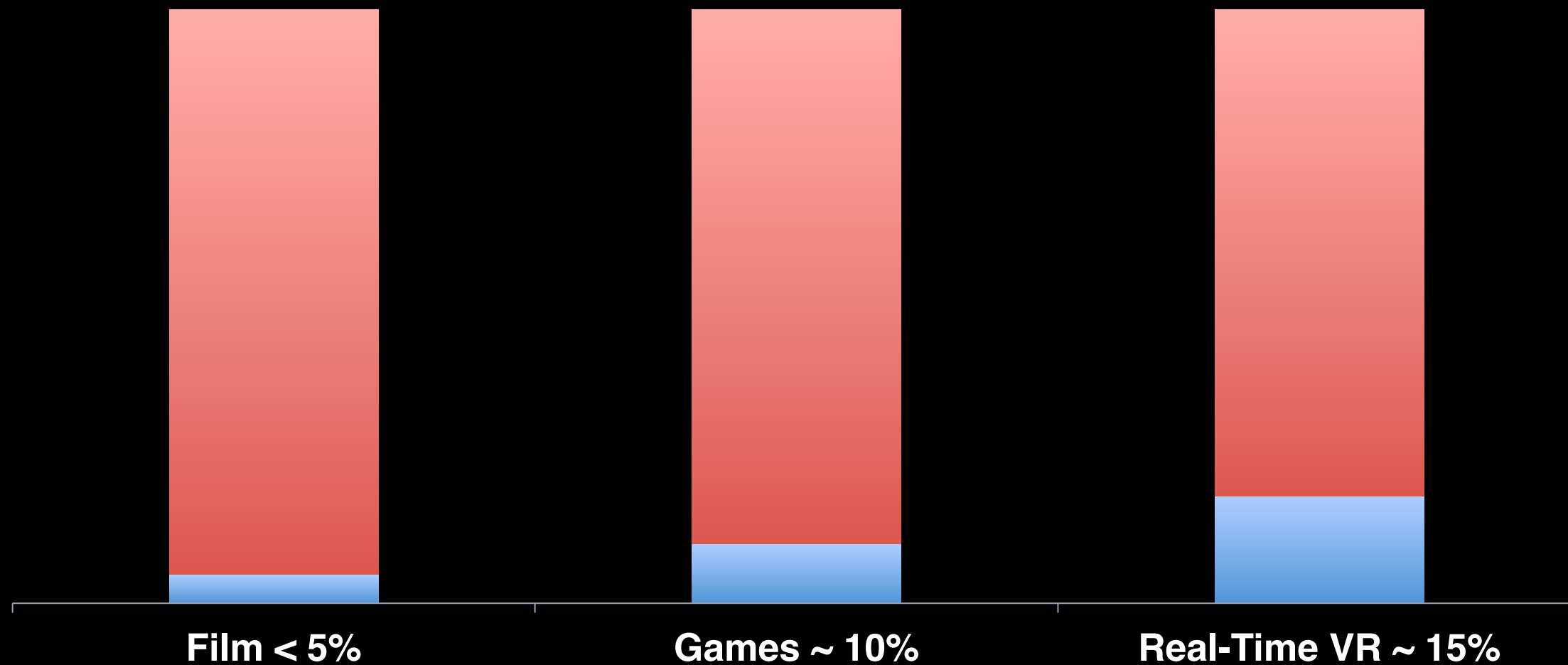


4 Locations





# Budgeting for VR Audio



# Audio in the VR Production Process





# “Traditional” Phases of Production

Phase	Audio Tasks
Pre-production	
Production	Record
Post-production	Record Edit Mix Master



# Henry



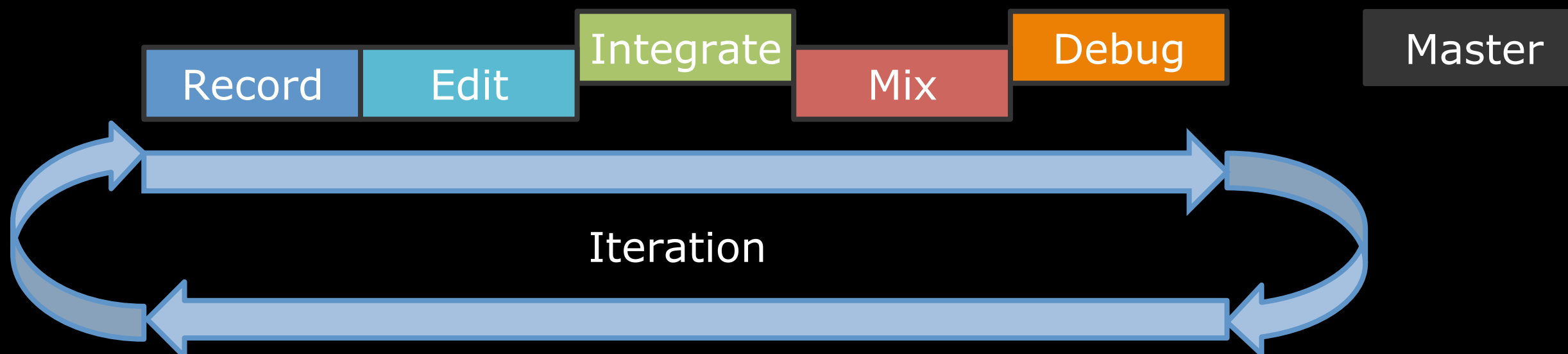




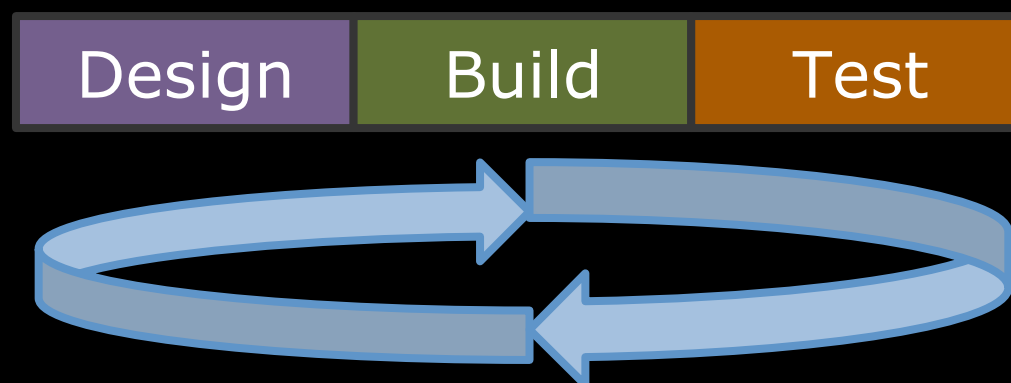




## Content



## Systems



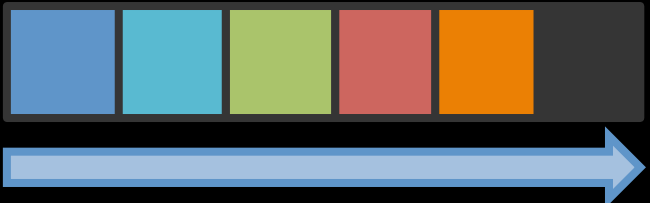


Pre-production

Production

Post-Production

Full Timing Lock



Release





# Dear Angelica



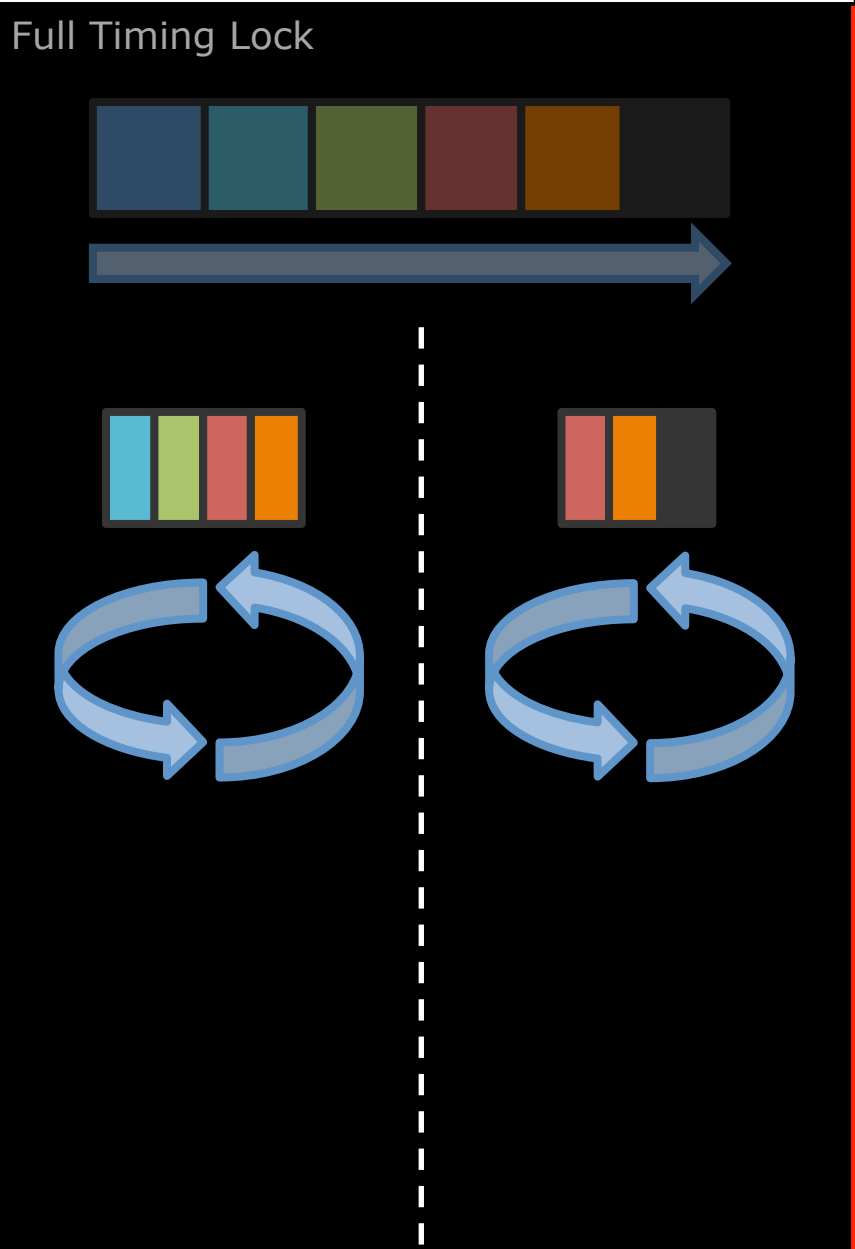
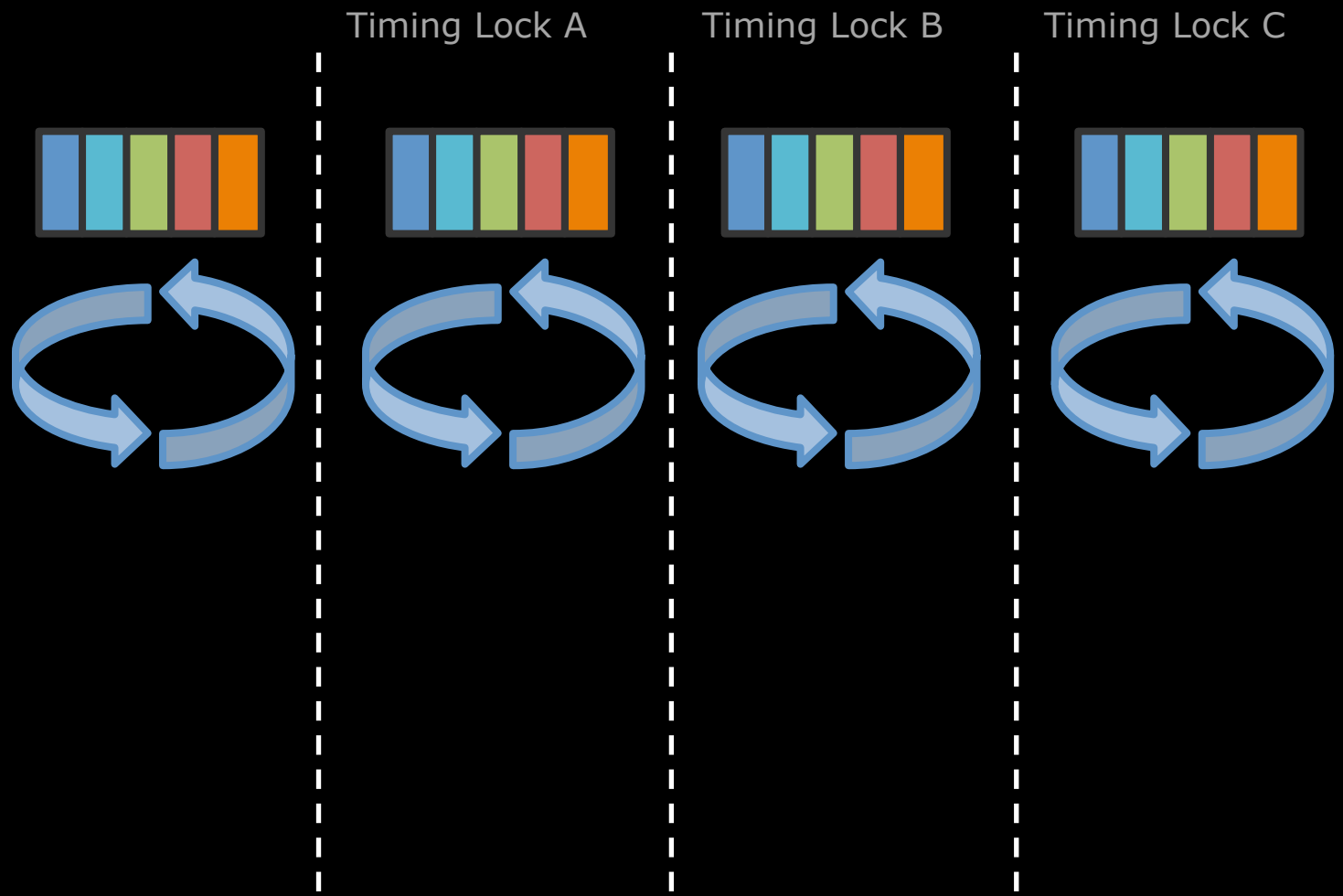
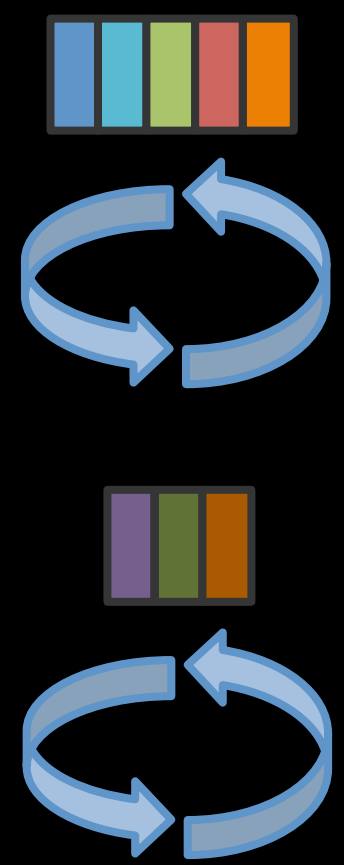




Pre-production

Production

Polish  
~~Post-Production~~







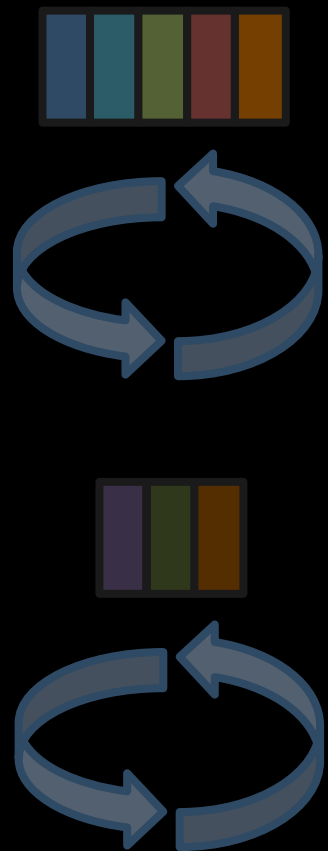
# Phases of VR Audio Production

Phase	Audio Tasks
Pre-production	Design Build Test Edit Integrate Mix
Production	Edit Integrate Mix
Polish	Edit Integrate Mix Debug
Final	Debug Master





# Dear Angelica –Pre-production



- Prove out workflow and features before production
- Concept development
- Interaction & Design
- Experimentation

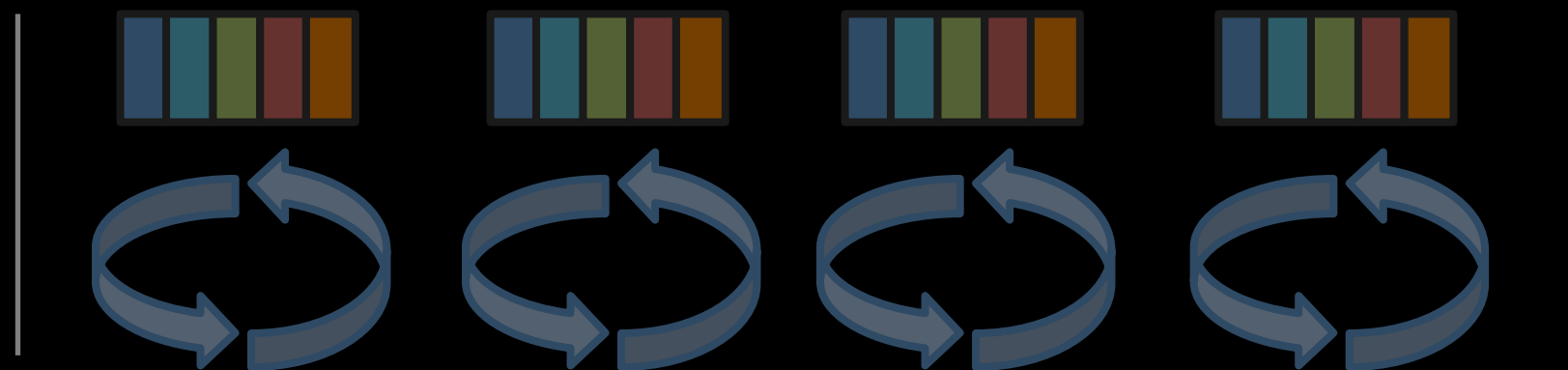






# Production

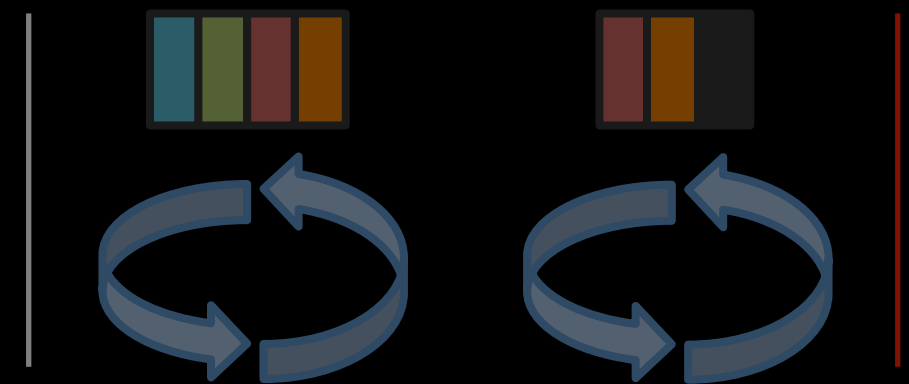
- Production Dialog
- Field Recording
- Sound Design
- Sound Editorial
- Music Composition
- Music Recording
- Audio Implementation
- Initial Mixing





# Post Production = Polish & Final

- Improve overall consistency
- Iterate on the experience as a whole
- Debugging







# Mixing for VR

- Balance **narrative focus** and **spatial awareness**
- Balance **mix control** with **acoustic simulation**
- Manage **cognitive load**

Mix

Mix

Mix

Mix

Mix

Mix

Mix







# COLLISIONS



— 2017 —  
NEWS & DOCUMENTARY  
EMMY NOMINEE



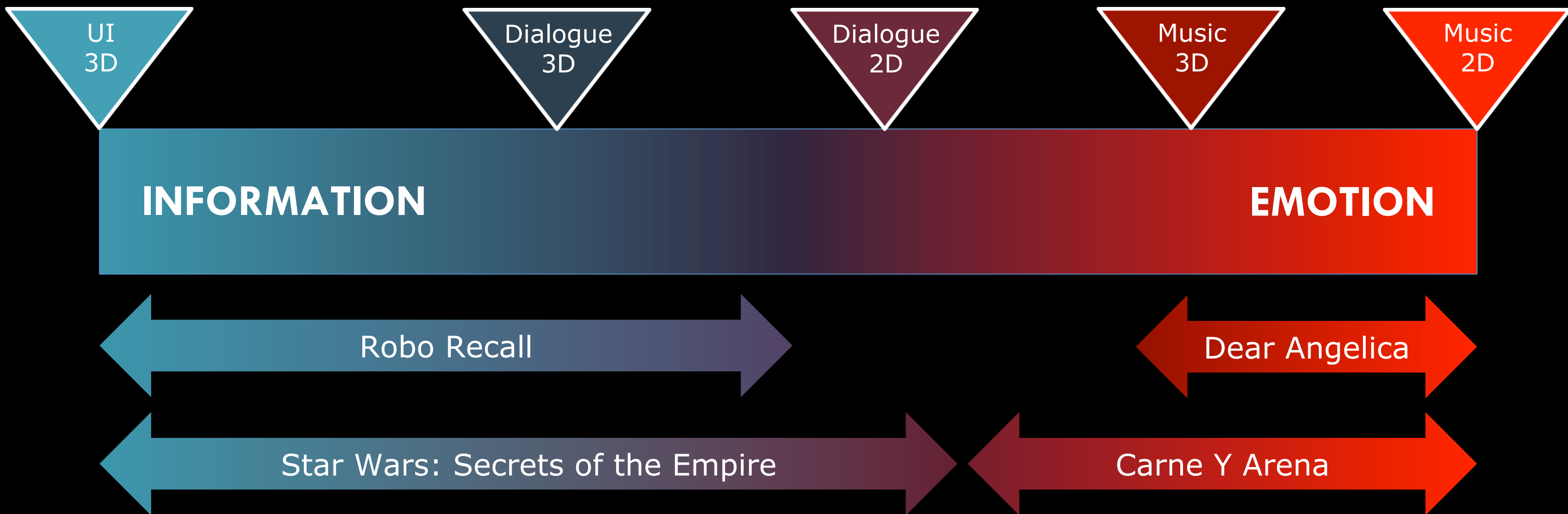
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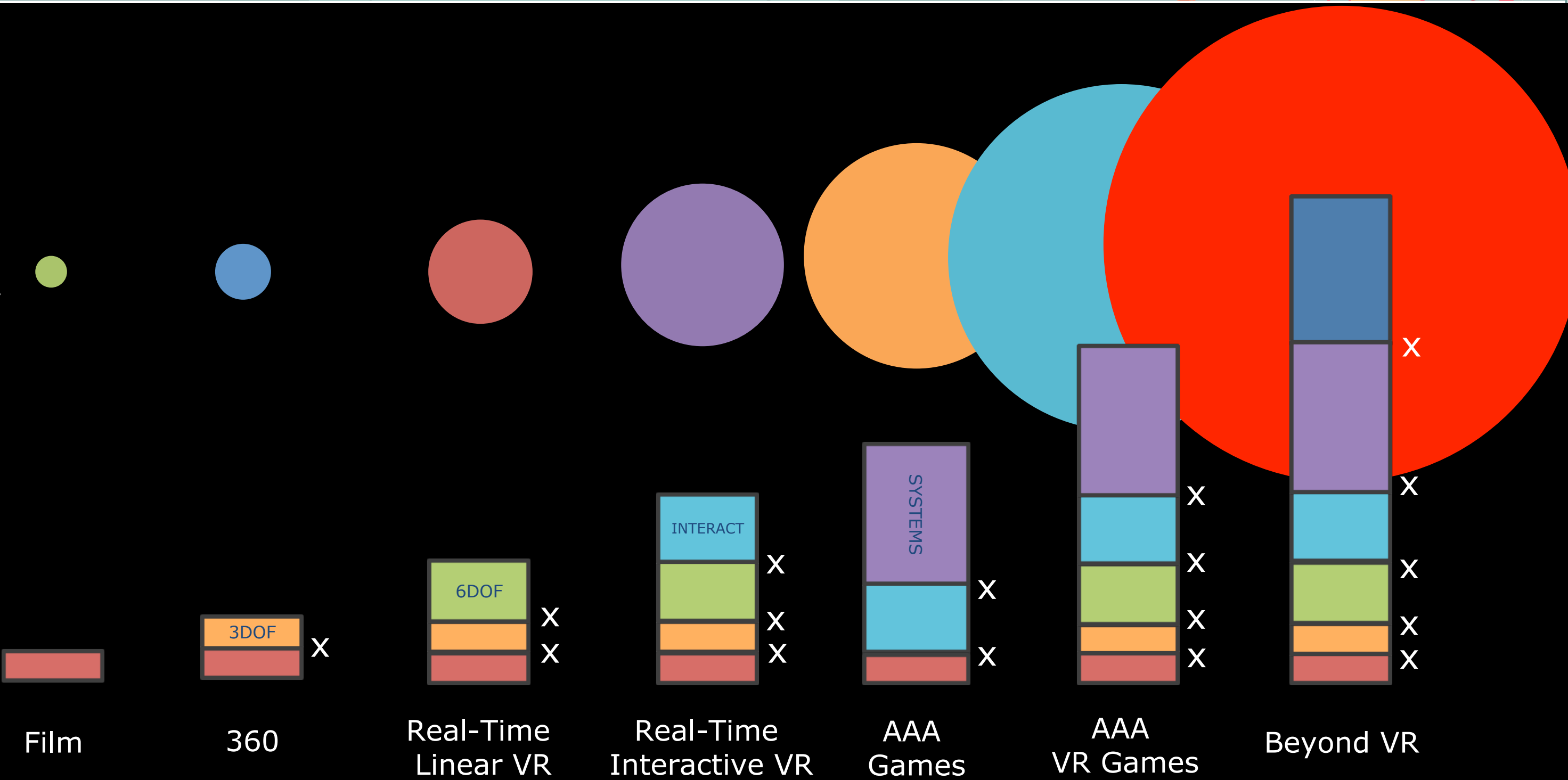


# Information vs. Emotion





Mix  
Complexity







# VR Audio Production “Secrets”

- Involve audio in pre-production planning
- Prove out every audio feature in pre-production
- Dynamic and interactive mixing creates complexity
- Complex audio may require 15% of budget or more
- Audio is not just post-production





# Thank You!

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