AR Authoring Tutorial Codebook

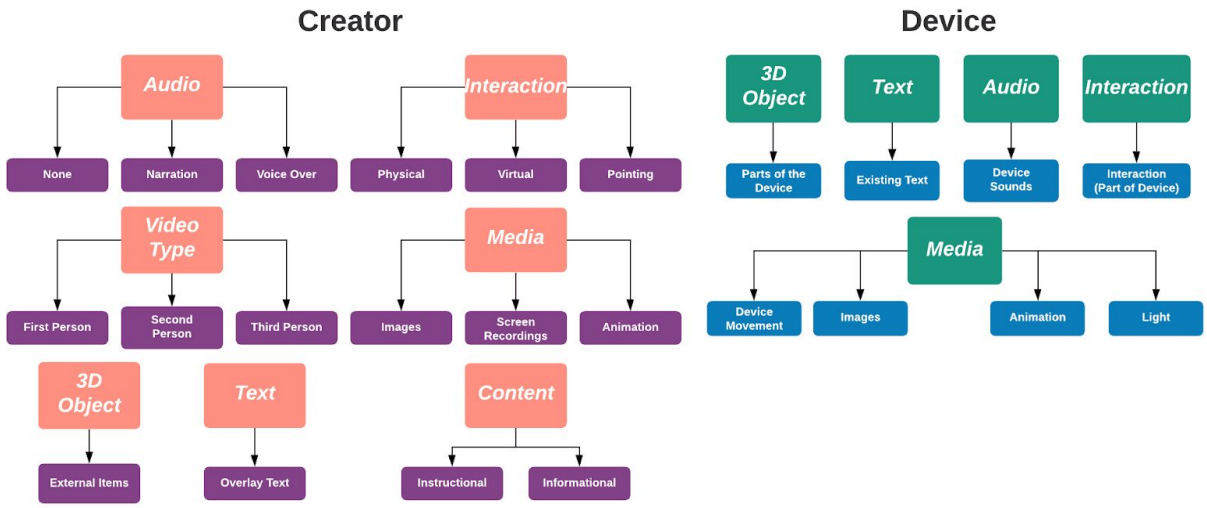
General Definitions:

Device	Creator	Consumer
A *Device* is any form of technology that has a screen. A Creator or Consumer may interact with a device to complete a task. An example of a device in the real world would be a kiosk Examples: Parking Meters, Microwaves, Coffee Machines, Kiosks, 3D printers, Car Audio Systems & Interfaces, Refrigerators etc.	A *Creator* is the expert of something specific and creates the video tutorials for a beginner audience. The creators develop the content and tutorial. For example, a creator might make a tutorial on how to use a scanner using their expertise or familiarity. Examples: How to use a 3D printer, How to use a Kiosk, ect.	A *Consumer* is the novice user learning something specific from the tutorial videos made by the creators. For example, a consumer might want to learn how to use their new keurig, so they might watch a tutorial specific to that. Examples: How to use a 3D printer, How to use a Kiosk, ect. *(Key difference is the consumption of content rather than creation)*

Code Hierarchy Explained:

The codebook is split into two parts, the *Device* and the *Creator*. The codes are organized in seven categories: 3D Object, Text, Audio, Content, Video Type and Interactions. There are overlapping categories between the two, but it is important to distinguish between what the device is doing and what the creator is doing that guides the end user. Each category is split into sub categories that are the codes used in our research.

Diagram of Code Hierarchy:



Part 1: Device

3D-Object

A *3D-Object* refers to a material item that has a width, height and depth. All real world objects are 3D. Objects for a Device are as follows:

1. **Parts of the Device:**
   Definition: If a system has any object a user may interact with such as a door handle or top cover, then that is categorized as a 3D object a part of the system.

   Examples: Door Handle, Top Covers, Gas Pump etc.

Text

The term *Text* is used to refer to any text that may appear on a device:

1. **Existing Text:**
   Definition: If a video tutorial has *existing text*, then that means there is text that prompts the user to do something that is already a part of the system. For instance, if a user interacted with an airline kiosk, there will be instructions on what to do like “Type in your confirmation code” or “pick your seat”.

Audio

Audio refers to the sound produced from the device.

1. **Sound:**
   Definition: Certain interactions may trigger a sound response from the device.

   Example: Beeping noises at a gas pump, sound effect after something is pressed or done, etc.

Media/Visual Cues

Devices often have *visual cues* or feedback that prompt a creator or consumer to do something. These following types of media might already be a part of the device:

1. **Images:**
   Definition: An *image* may appear on a screen prompting a consumer or creator to do something, or showing a consumer or creator what to do.

2. **Animations:**
   Definition: An *animation* is anything graphical that already exists on the device. These animations are visual cues that prompt a user to do something, estimate a wait time or just an extra visual that shows a consumer or creator how to do something.

   Examples: An animated clock that represents waiting, a GIF animation that has a hand swiping a credit card or inserting a coin, ect.

3. **Light:**
   Definition: Certain interactions or states might trigger light response to indicate something is on.

   Examples: Pressing a physical button and having a light on the device turn on or a screen turning on by touching it.

4. **Device Moving:**
   Definition: Certain interactionsUpon interactions with the device may trigger a response that makes the device move.

   Example: Upon pressing a button, the device moves.

Part 2: Creator

3D-Object

A *3D-Object* refers to a material item that has a width, height and depth. All real world objects are 3D. Objects for a Creator are as follows.

1. **External Items:**
   Definition: If a creator brings in an object outside of the parts of the device, such as a credit card or package, then that would be categorized as an external object. This object is independent of the device and is typically something the creator needs to perform a task.

   Examples: Credit Card, Package, Scissors, Mugs, PLA Filament, Paper etc.

Text

The term *Text* is used to refer to any text that may appear edited in a video tutorial.

1. **Overlay Text:**
   Definition: If a video tutorial has *Overlay Text*, that means the text was edited into the video and is overlaid on the video. This type of text guides creators and consumers through completing a task.

Audio

The term *Audio* refers to how a tutorial video narrates the process. The type of Audio may depend on how the video was created. The audio of a tutorial can be categorized in three areas:

1. **VoiceOver:**
   Definition: If a tutorial video is *Voiced Over,* then the video is likely scripted. The Voice over narrates the steps that are demonstrated in the tutorial and is used in the post production process with video editing.

2. **Narration:**
   Definition: If a tutorial video uses *narration* then that means there is a person explaining their steps while demonstrating. This type of audio could be scripted or unscripted.

3. **No Audio:**
   Definition: If a tutorial video has no audio, that means there is no one explaining the process. The video will instead be text, image and demonstration based.

Content

A video tutorial may be informative, instructional or a combination of both. The content of the video tutorial can help distinguish what is necessary in a tutorial.

1. **Informative:**
   Definition: If a tutorial video is *informative* then that means the tutorial introduces a system and the things a user can do with the system. These videos tend to be longer, and explain an interaction with more detail. An example of an informational tutorial video would be for a product that has many different use cases so it showcases the product and it's functionality or to explain certain parts of the system.

2. **Instructional:**
   Definition: *Instructional* tutorial videos are straightforward "how-to-do…" tasks. They usually involve a series of consecutive steps that follow the lines of "first do this" and "now do this". These videos tend to be shorter than informative videos.

Video Type

The *Video Type* varies throughout each tutorial video, and the way a tutorial is recorded can be categorized in three areas:

1. **First Person:**
   Definition: A *first person* video is made by someone using their own held hand device (most likely a phone) to record a process. The video is recorded from the creators point of view.

2. **Second Person:**
   Definition: A *second person* tutorial video is a video that is directed to the audience. This means that there is usually a person being filmed by the creator. As they begin to demonstrate and interact with the device, they address the consumers.

3. **Third Person:**

Definition: A *third person* tutorial video is when there is some type of narration going on throughout the tutorial. There is no set point of view and tend to be informative.

Interactions

In tutorial videos, there is usually a demonstrator that interacts with the system to show the start to finish process. Even if there is no demonstrator in a video, there may be visual cues that still show the interactions needed to complete a task.

1. **Physical Interaction:**
   Definition: A *physical interaction* is an interaction that occurs between the creator and the physical systems and the 3D objects they use.

   Common Physical Interactions: Pressing a button, turning a dial, picking up an object, opening and closing, lifting an object, placing an object, inserting or moving an object, etc.

2. **Virtual Interaction:**
   Definition: A *virtual interaction* is an interaction that occurs between the user and the screen that is part of the system.
   Common Virtual Interactions: Pressing a button, typing, swiping, sliding, scrolling , ect.

3. **Pointing:**
   Definition: A user may point to a part of the system to show a location or to explain a feature.

Visual Cues/Feedback & Other Media

Systems often have visual cues or fedback that prompt a user to do something. Video tutorials may also incorporate some type of media to further explain a process: There are six different types of media categories utilized in video tutorials. The media is often combined to

1. **Images:**
   Definition: An image in a video tutorial can be a screen shot of the current state of the system (like an image of the current screen a user interacts with) or a drawing/diagram that is a visual representation of what needs to happen/ what something should look like.

2. **Screen Recording:**

Definition: A *screen recording* may occur during a recorded tutorial video (after being edited in). A screen recording usually shows a screen based process/ interaction with a device and is used to show an interactive process with a screen that is part of the system.

Example: A 3D printing tutorial might utilize some Computer Aided Design Software on a laptop, separate from the 3D printing system. The video might transition to a screen recording of developing a CAD model with that software as part of an informative process to show how to use the printer.

3. **Animations:**

Definition: An *animation* is anything graphical that is edited in for a tutorial video. These animations are visual cues that prompt a user to do something, estimate a wait time or an extra visual that shows a user how to do something.

Examples: An interactive mobile flow, circles and boxes to highlight an area, etc.