CPSC 481 – Fall 2019 University of Calgary

**Task Centered Design Walkthrough Template**

**Modify the design to suit your report formatting style if needed. Add as many pages as you need (you probably will need few pages for each task).**

**Task 3: AR Display**

John Doe is visiting a museum, upon entering the museum, he notices a poster informing him that he can use his smartphone’s AR camera to scan the exhibits to unlock a variety of interactive options. He had some experiences with AR technology by the means of Pokémon Go, and he is interested in trying out new technologies. Therefore, he decides to download the app and try out the AR features.

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| --- | --- | --- | --- | --- |
| Description of task step | Does user have training or knowledge to do this step? | Is it believable that they would do it? | are they motivated? | Comments (including possible solutions) |
| Download the app. | No | Yes | Yes | **Possible Solution:** Museum employees offer to help user install app. |
| Launch the app. | Yes | Yes | Yes |  |
| Select the museum they are visiting. | No | Yes | Yes | User may not have location service turned on to select the correct museum.  **Possible Solution:** Have a guided walkthrough on the app show how to do so. |
| Click the “Continue as Guest” button. | Yes | Yes | Yes | User does not want to waste time to login since he just wants to try out the AR options. |
| Select “Scan an Artifact”. | Yes | Yes | Yes | User wants to try out the AR function, therefore he is motivated to select the “Scan an artifact” button. |
| Points the phone at an artifact (A sword). | Yes | Yes | Yes | Since the user had some prior experiences with AR, he would know how to point the camera at an artifact.  **Note:** The camera may launch the frontal camera, in that case the user will have to adjust the camera to rear-view camera.  **Possible Solution:** Detect if the camera was launched in selfie mode, then prompt the user to switch to the rear-view camera. |
| Press the “Scan” button. | Yes | Yes | Yes |  |
| Select “Place Artifact in AR” button. | Yes | Yes | Yes | User wants to see the AR interaction. Therefore, he would be motivated to press it to see the 3D model of the artifact. |
| Moves the phone to scan for horizontal plane to place the 3D model. | Maybe not | Yes | Maybe not, user may just point the phone on the ground. | Although he had some prior knowledge of AR from Pokémon Go, he may not know that it needs a horizonal plane to place the 3D model. He may also dislike the fact that he must move the phone around, he may think it will look silly while doing so. |
| Press the “Place” button. | Yes | Yes | Yes | User is motivated to place the 3D model on desired plane. |
| Select the view AR info button. | No | Yes | Maybe not | There is no text description of the button, it is just a button with an eye icon, user may not know what it means.  **Possible Solution:** Add text description to the buttons. |
| Select the tip of the sword. | Yes | Yes | Yes | User would like to read more about the details of the artifact. |
| Select the “Hide AR Info” button. | Yes | Yes | Yes | The icon changes from an eye to a “crossed-out” eye. Therefore, the user should be able to understand the implication. If not, then there is a possible solution.  **Possible Solution:** Like above, add text description to the button. |
| Select the “View Animation” button. | Yes | Yes | Yes | After trying out the first option, the user would want to check out the rest of the AR options. Thus, it is possible for the user to select this button. |
| Select “Animation 2” button. | Yes | Yes | Yes | After realizing there are multiple animation options to be played, the user would want to view them all. |
| Select “Back” button. | Yes | Yes | Yes | User would like to go back to the default 3D model page to try out other options. |
| Select the “Play” button for audio description. | Yes | Yes | No | User is interested in AR interaction; Audio description is not in their interest. |
| Select the “Selfie” button. | Yes | Maybe | Maybe | The user may not be motivated to press the button because they will just take a screenshot of the 3D model since there lacks text description.  **Possible Solution:** Add text description to clarify the intention of the button. |
| Press the “Camera” button to take a selfie with the 3D AR model of the artifact. | Yes | Maybe | Maybe | The user may not be motivated to take a selfie with the AR artifact model.  **Note:** Again, the camera may launch the incorrect camera. Thus, missing the artifact entirely.  **Possible Solution:** Notify the user the camera does not detect the artifact in frame. Prompt the user to either point the camera at the artifact or switch the camera from rear to front, or vice versa. |
| Share the selfie to one of the social media he choice. | Yes | Maybe | Maybe the user wants to retake the photo. | User may not want to share the picture he took on social media.  **Possible Solution:** Add a “Save to device” option for the user save the picture taken locally. |
| 1. **Error: App does not recognize the artifact due to suboptimal scanning condition.** | | | | |
| 1. User scans the artifact from the back. | Knowledge low | Maybe | Yes | If the user scans the artifact from the back, the system may not recognize the artifact. It will force the user to relocate and attempt the scanning process again. |
| 1. User stands in suboptimal distance from the artifact. | Knowledge low | Maybe | Yes | If the user stands too far away/ too close to the artifact, the AR camera may not recognize the artifact due the size being too large/ small. Again, prompting the user to retry the scanning process. |
| 1. **Error: Cannot find the museum** | | | | |
| Location not turned on | No | No | Yes | Going into the location settings can be difficult if you are not technologically advanced  **Possible Solution:**Create a small demo that the user can reference |

AR is not a common feature used by many apps in general, because of this we must assume people are not familiar with how it works. Since the knowledge of this is very low we have to at least have a tutorial option on how to use. It can be something completely optional, just something that pops up and lets you know that a quick tutorial on how to use the AR features is available. Without users will be lost and forced to figure it out on their own, this will lead to most users simply ignoring the feature. Therefore, a way to get the user familiar with AR is necessary.