

Picture Perfect Accessibility Guidelines

Theo Dwyer, Gavyn Martin and Emily Donoghue

Potential Accessibility Issues

Video games provide social connection, joy, escape, and so much more to people around the world. We want to include as many people as possible in our game experience and based on the type of gameplay involved in Picture Perfect, we have thought of some ways in which we can support and include those with limited mobility, color blindness, low vision, blindness, deafness, and limited ability to process information and acting on it. Ideally, we'd like our game to be as accessible as possible but given our time constraint and technical abilities, not all of our Guidelines will be implemented in the prototype but we'll do our best!

Our Solutions and Accessibility Features

Limited Mobility

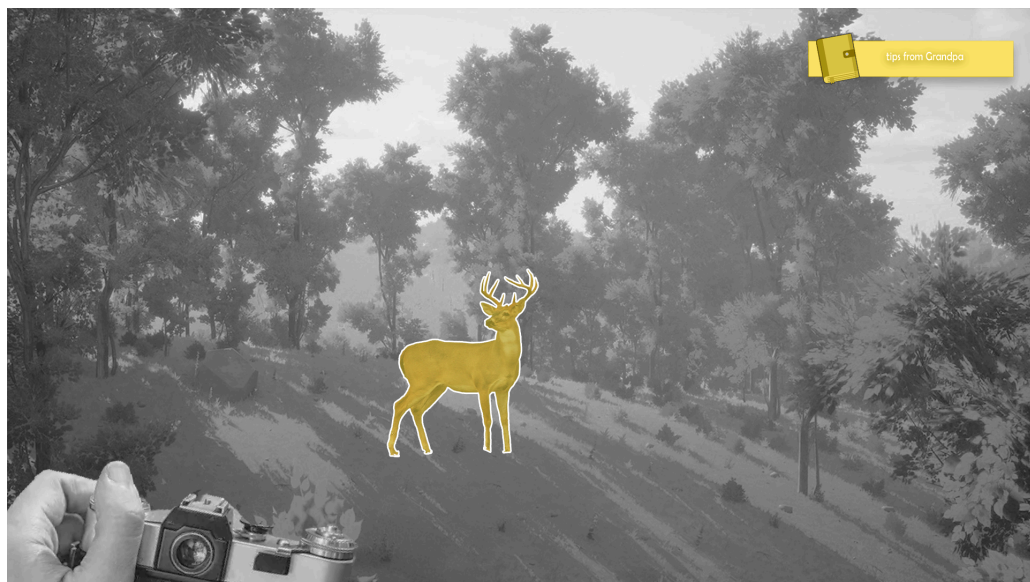
Players can have varying degrees of mobility and some inputs may be difficult to use. Here are the following guidelines we would like to implement to increase the usability of our game.

- Full Button Remapping: Players will be able to fully remap every button to suit which controller configuration they have.
- Flipped Controls and Controller Orientation: Input controls can be flipped and players can choose how they wish to hold their controller.
- One Button Controls: All player input controls can be remapped to one singular button if the player's setup supports it.
- Aim Assist: When enabled, aim assist will ensure that when the camera is pointing in the general direction of a photography subject, it will lock on to that subject to ensure better picture quality.
- Camera Sensitivity: Players will be able to adjust how sensitive the camera's aim is to player input.

Visually Impaired

Any information that is shown visually can hinder gameplay to blind and low-vision players. Therefore, our goal is to include UI customization, additional auditory cues, and volume customization to assist players in navigating the world and facilitating gameplay. Here are the following guidelines we would like to implement in our game.

- Text-to-Speech Menu narration: Menus and other onscreen text can be read aloud in English and other languages with the help of AI.
- Gameplay input narration: Auditory narration will be provided during gameplay to help players know what actions they're taking in game and which buttons they're clicking. For instance, when the player uses the phone, an audio cue will say "phone is now in use."
- Camera control narration: Auditory narration that indicates when subjects are in the camera's frame and in focus. (ex: "subject is in frame/focus!")
- Environmental narration: Auditory narration will be provided to assist players in navigating the environment and finding various environmental elements critical to gameplay, For example, "There's a river to your left. The birds are to your right."
- High Contrast Mode: Mutes the environment and highlights important gameplay elements, for example the animals and other photography subjects will be highlighted in different colors while the background becomes black and white.



- Font Color and Scaling Customization: Players will be able to adjust the text size, text font, text color, and toggle the visibility of the text's outline of all the onscreen text, subtitles included.

Subtitle example:



- Color Blindness: Players can customize the color palette of the HUD to suit their needs.
- Black and White Mode: Players can remove all the colors and change the contrast. This is different from high contrast mode because gameplay elements will not be highlighted.

Deaf and Low Hearing

Any information provided to the player through the use of audio like narration, conversations with NPCs, or audio cues (animal sounds, take a photo sounds, etc) will make gameplay hard for people who are deaf or low hearing. To address this we would like to implement the following:

- Subtitles will include names of characters and animals.
- “Visual Subject Sensing:” An HUD element, in the form of directional spikes, will appear on screen in the direction of the photography subject.
- “Audio Subject Sensing:” A directional audio cue will play in the direction of the photography subject. It will start off low with intermittent sound cues, but as players get closer to the subject, the sound cues will increase in volume and in frequency, similar to that of a metal detector.



(speaker won't appear on screen, it's to indicate the direction from which the audio will play)

- Audio Track Volume Customization: Players will be able to control the volume of individual tracks within the gameplay, specifically they will be able to control the volume of the soundFXs, the dialogue, cinematics, music, accessibility audio cues, and text-to-speech narration.

Limited Processing Ability

Information can sometimes be overwhelming and thus ruin the player's experience for those with limited processing abilities. It constrains how much information players can focus on, process and retain. Regardless of the difficulty mode, individual audio and visual accessibility features can be toggled on and off.

- Hints: Players will be able to toggle on and off hints that will appear on screen when players are lost and/or inactive for a long period of time.

- Custom Difficulty Settings: Players will be able to choose from three types of gameplay each with varying degrees of assistance and intensity.
 - **Relaxed Mode** - A Park Ranger helps guide players to picture locations and helps them complete their tasks. The animals are friendly and do not run away when approached.

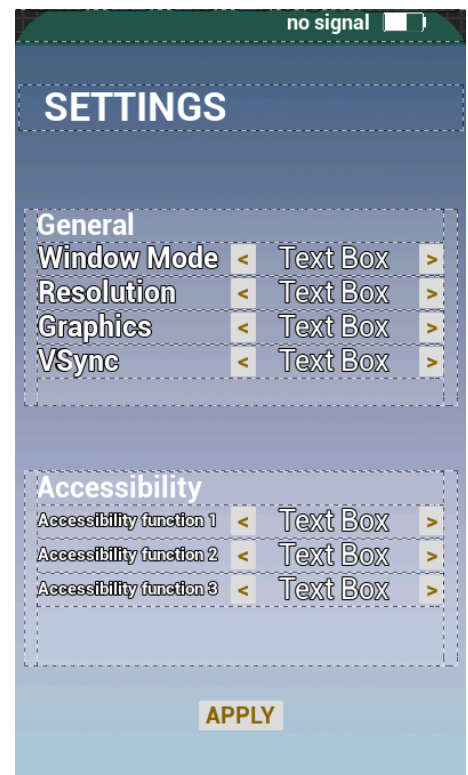


- **Basic Mode** - There will be no Park Ranger after the tutorial. When animals see the player, they will avoid them if the player gets too close.
- **Hard Mode** - No hints will be given to the player and there will be no Park Ranger. Animals will run away if they hear the player. Players will earn less exposure points for each photo and player progression will be harder.

UI Implementation

In addition to gameplay modifications, we will ensure that these accessibility features are easily discoverable and customizable through the user interface:

- **Settings Menu and Settings App:** The game's settings can be found in the Settings Menu and will be accessible through the Pause Menu, or through the Settings application on the in-game phone (settings app UI on right).
- **General Accessibility Section in Setting Menu:** Accessibility features will have a dedicated section within the Settings Menu for all accessibility-related options.
- **UI Settings:** Within the Setting Menu, in the accessibility section, the user interface can be changed and adjusted. Accessibility features such as contrast modes, text size, and color schemes, are all modifiable.



Final Thoughts:

By incorporating these accessibility features, we aim to create a gaming experience that can be enjoyed by all players, regardless of their physical or cognitive abilities. While we may not be able to address every possible need due to time and technical limitations, we are committed to prioritizing the most impactful solutions and continuously improving accessibility in future updates.