

Developing an Inclusive and Accessible Gaming Experience

Main Aims

The aim of this project is to make a game that is accessible to as many people as possible.

Not many games are accessible for people with different disabilities, such as visual impairment, hearing impairment, epilepsy, amputees, and so many more. Neither do they have much representation of people with disabilities. A lot of gamers feel seen and validated when they see positive representations of game characters that look like them. People with disabilities are rarely seen doing normal things in video games and are usually portrayed as unrealistic superheroes or they are not shown at all. Many disabled gamers struggle to play video games, as most developers do not make games with them in mind.

Games are an integral part of a lot of people's daily routines and are very good stress outlets and brain stimulators. I believe everyone deserves to be able to

Methodology

The game will be developed using Unreal Engine 5—C++ and Blueprints

Time Frame

The goal is to finish planning the base game idea by mid January, continue researching into and start development as soon as possible.

Research

I researched into different disabilities, different games and accessibility technologies. According to the World Health Organization's estimation, 1.3 billion people experience a significant disability. This is an average of 1 in every 6 people. Unfortunately, people with disabilities do not use the internet and tech in general as much as the rest of the population because it is not as easily accessible to them.

Games have expanded human communication and a sense of community by allowing people to connect and form communities over different video games. Many games can be considered educational and teach skills such as mathematics, problem-solving, and teamwork. It's important to ensure that everyone can participate.

Lots of game studios are seeing the benefit of making games accessible and have been developing products to make games more accessible for people with disabilities.

For example, Sony included accessibility options on their PlayStation 4 console and made them available to developers. Microsoft released the Xbox Adaptive Controller in 2018, which helps players with disabilities find new ways to play games.

They also made the X-key joystick to use with the adaptive controller for people needing adaptable controls



Xbox Adaptive Controller

<https://www.xbox.com/en-GB/accessories/controllers/xbox-adaptive-controller>

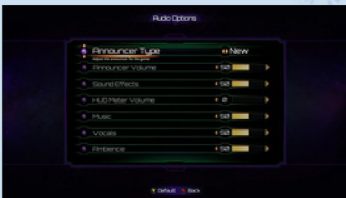
Initial design ideas

The current initial idea of the game is a simple narrative puzzle game where the main focus is making it accessible to as many groups of people as possible, The minimum requirement is at least two groups.

My first priority is to focus on implementing different accessibility options

Some Accessibility features to implement:

- Subtitles and captioning
- Audio voiceover and audio options
- colour blind settings
- customizable controls
- large fonts and UI scaling
- Epileptic friendly options
- motor accessibility



Killer Instinct Audio Options on Xbox



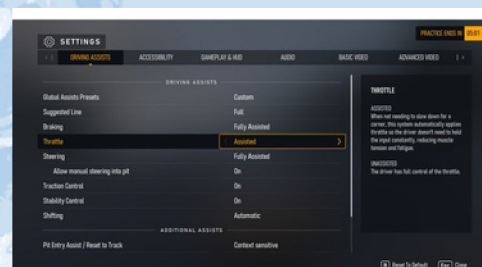
Forza Motorsport Accessibility options

Examples of good accessibility in video games:

Killer instinct is an example of a game with amazing accessibility features. It excels with its fully remappable controls, which enabled one player with spinal muscular atrophy, Dayton "Wheels" Jones, to qualify for two World Finals and receive secondplace at Combo Breaker 2017. Killer instinct also has excellent positional audio cues that are unique to each character and their moves, helping blind and visionimpaired players.

World of Warcraft is a game that has consistently been listening to players and pushing out new accessibility options.

Forza Motorsport won the "2023 Accessibility Innovation in Games" award. It allows disabled players to complete races with very few inaccessibility barriers. This game redefined accessibility, with features for blind, low visioned and physically disabled players.



Forza Motorsport driving assists options



PlayStation Accessibility Controller

<https://news.sky.com/story/playstation-accessibility-controller-unveiled-to-help-players-with-disabilities-12780420>



X-key joystick

<https://www.keyboardspecialists.co.uk/products/copy-of-x-keys-xk-12-joystick>