

Retro Stylistic Transformations in Games

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1. INTRODUCTION

Retro aesthetics describe a nostalgic approach to replicating or paying homage to a bygone 'nostalgic' age by imitating old cultures and styles from the past. However, Guffey (2006 p.9) describes the word 'retro' as "a word with many meanings". For example, he discusses one interpretation of the word as a synonym for old-fashioned and another as a view on life that "cleaves to the values and mores of the past" (p.10). Following this interpretation, retro is closely related to nostalgia, which Garda (2013) describes nostalgia as pervasive in a culture "obsessed with its own history" (p.1).

Although there are games that include examples of retro stylistic transformations, there are numerous possibilities for how these transitions can occur that have yet to be explored. The purpose of this project is therefore to investigate the design of retro stylistic transformations in video games; explore specific techniques for their design and development through a prototype; and evaluate how effectively this seamlessly transforms between retro and modern art styles.

2. BACKGROUND

2.1 Restorative and reflective nostalgia

Within the video game industry, Garda (2013) proposes the idea of there being two different types of nostalgia: restorative and reflective. Restorative nostalgia describes an attempt to make a one-to-one recreation of past video game experiences, this can be seen through the creation of emulators. While reflective nostalgia uses the limitations of the past (such as graphical limitations, the compression of music and SFX) as aesthetics to form new gaming experiences around. Moreover, reflective nostalgia

informs another phenomenon, which the author describes as the '8-bitness'. The 8-bitness refers to an obsession with the revival of 8-bit era aesthetics indicated by how modern games utilize pixel art reminiscent of graphics from the 8-bit era, as well as other tropes from milestone releases during this era. According to Garda, both restorative and reflective nostalgia are key aspects in modern video game experiences. While the former can be found present in emulation, the latter can be witnessed in some modern indie and AAA games such as *Sonic Mania* (Whitehead et al. 2017).

2.2 Contemporary retro games

The 'contemporary retro game' describes a modern game that utilizes retro aesthetics and genres but combines them with game and level design practices found in modern titles. Kayali and Schuh (2011) discuss how modern games like the puzzle platformer *VVVVVV* (Cavanagh 2010) is an example of a contemporary retro game. This is because it uses graphics and sound design clearly inspired by old Commodore 64 games in tandem with contemporary video game practices. For example, *VVVVVV* lacks a life limit, a system commonly found in retro games. Additionally, the game's level design expands upon the unique gimmick of flipping gravity, which would be exceedingly difficult to implement on earlier, less powerful systems.

3. INVESTIGATION AND PROTOTYPE GAME

The goal of this project was to investigate the idea of retro stylistic transformations in games: transformations between retro and modern aesthetics, and how they can be seamlessly incorporated into modern gaming experiences. Previously, games have

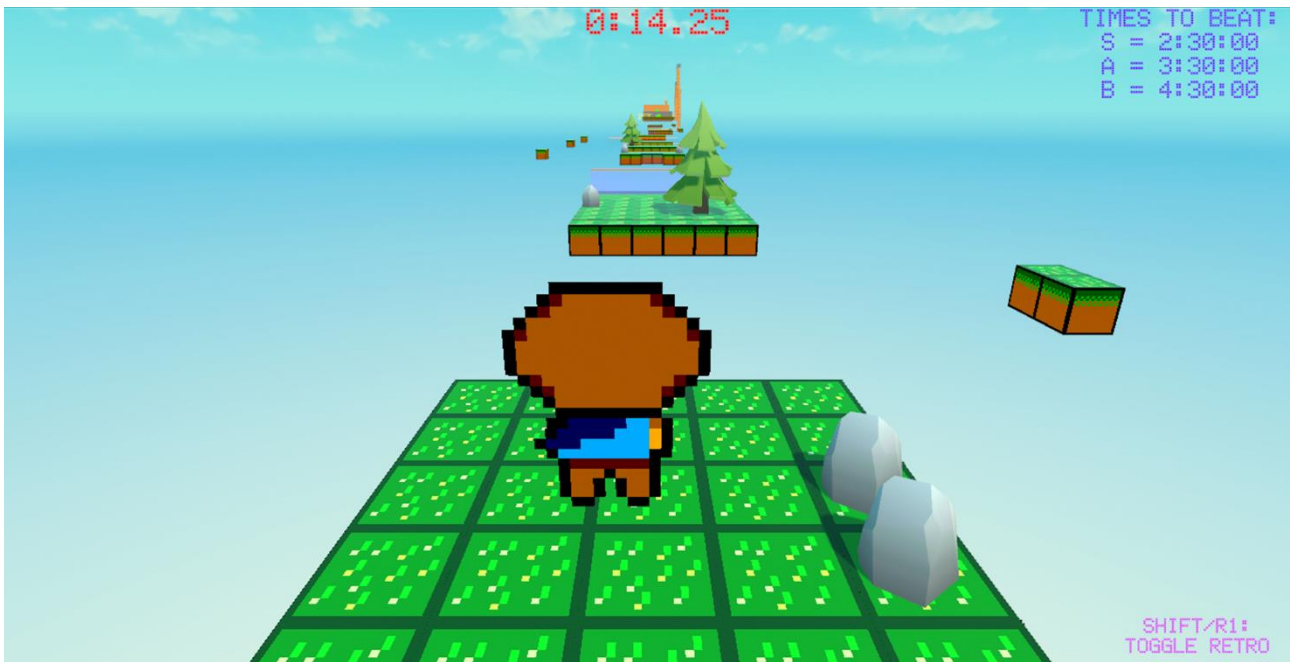


Figure 1: Screenshot showing the prototype in 3D perspective view.

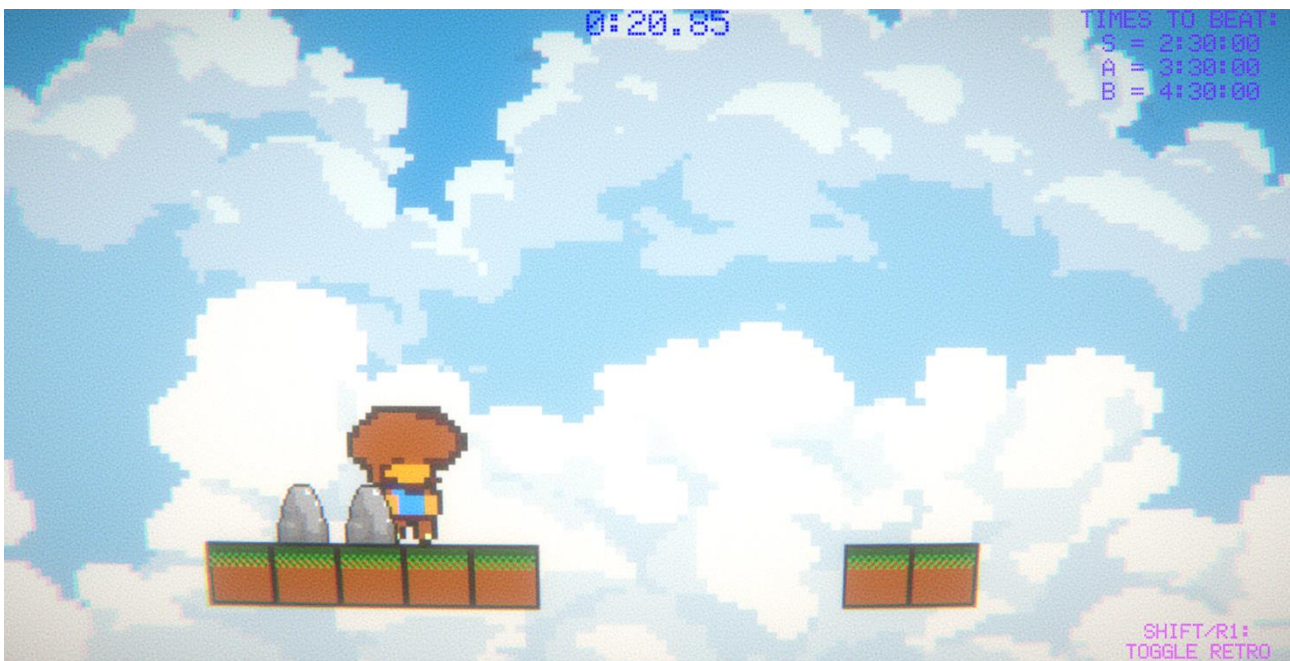


Figure 2: Screenshot showing the prototype in 2D orthographic view.

attempted this with sections that incorporate art styles or music akin to the past, however, there are many possibilities for these transformations to take place that have yet to be properly explored.

To investigate this area, this project examines aspects of the retro aesthetic and how these can be replicated using modern software. Multiple products were reviewed to form an understanding of how these transformations can occur. Following this, a prototype was created in Unity (see Figure 1), which

provides transitions between 3D and 2D perspectives. The camera view pivots and provides a transition between perspective and orthographic views. Post processing is used to emulate a vintage CRT screen, whilst also modifying the soundtrack to be provide an 8-bit version using bit-crushing. The transition is interwoven with the gameplay, so that certain areas of the game can only be passed using the 2D mode, and others require use of the 3D mode. The prototype was then evaluated using user testing to gain feedback on the user experience.

4. SUMMARY

The outcome of this project is a game that enables the player to seamlessly alternate between two versions of the same game: one that cleaves visual, auditory, and gameplay elements from retro experiences viewed from a 2D perspective, and one that draws inspiration from modern games viewed from a 3D perspective.

5. REFERENCES

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