Media Management
By Gabe Lapingcao

## Introduction

This document describes a variety of use cases pertaining to media in relation to Isekai Castle Crusaders. For this type of game genre (and most other games in general), assets such animated sprites, cutscenes, sound effects, and background music are some of the most common forms of media integrated into the game.

## Integrating Animated Sprites

Sprites in general can be considered the bread and butter of media integrations into video games. Without visual feedback to show to a player what's happening, it can be hard to understand what's going on.

In most modern game engines, sprites and animated sprites are simple to import and use. A classic approach to integrating sprite-based animations is by exporting animations into a spritesheet, defining coordinates and the size of each frame in that spritesheet, and then panning through a cutout of that spritesheet as an animation.

To extend this technique, game engines also incorporate animation trees which are really more so a finite state machine implemented as a graph where nodes represent animations and directional edges represent transitions from one animation to another.

## Integrating Raycasted Audio

This technique is actually fairly new, but I wanted to introduce it as I believe it'll be the future to how audio is implemented within games. Raycasting is a technique often associated with graphics, rendering, and detection rather than audio and sound effects. The idea is to "cast" rays into a direction and wait for them to bounce back; information such as the material that collides with the ray or how far away the collision occurs helps determine things such as a player's perspective of the area.

Raycasted audio is a new technique that takes the idea of raycasting into the audio world. Now, we can use rays to tell us about the direction sound came from, how muffled a sound is, how much echo a sound produces, and how much material a sound can permeate through.

## Summary

In my game, Isekai Castle Crusaders, I'll be integrating animations using a spritesheet and animation tree. However, raycasted audio is currently a paid plugin, so I do not have the ability (or technical prowess) to integrate this into any of my games. I believe it'd be a cool feature to add in the future. For now, using audio sources will suffice for my game.

## Sources

[1] https://altugi.wordpress.com/articles/the-video-game-as-a-medium/

[2] https://www.openxcell.com/blog/common-types-game-assets/

[3] https://wow-how.com/assets-design-modeling#:~:text=3D%20Modeling%20services-,Types%20of%20game%20dev%20assets,sound%20effects%20and%20music.

[4] https://youtu.be/iElHZhOxGYA?si=A9WMGtDsOcbd0iwU

[5] https://youtu.be/u6EuAUjq92k?si=oZKKIX8Fe3c_kG62

## AI Usage

N/A