# Final Documentation

## Point and Click Adventure Game

This project is based on Unity’s [Point and Click Adventure Game Tutorial Project](https://assetstore.unity.com/packages/essentials/tutorial-projects/adventure-sample-game-76216). It contains two levels, which provide many opportunities to provide a wide variety of sounds. The project features a high-tech security room level as well as a rustic market level, which contains various collectibles.

## Game Requirements

This project required ambient, dialog, interface, sound effects, as well as a music track. I implemented two ambient events, one per level, some dialog for NPCs, interface sounds for clicks and dialog appearing, an original music composition for the market level, as well as various sound effects, such as bird noises and footsteps.

## Sound Assets Developed

#### Laser

I started with a laser sample and created variations of it in pitched up and down for use in the security room ambience event.

#### Crowd Ambience

I acquired a crowd sound and made it loopable in Reaper. This was used for the market ambience event.

#### Argument Ambience

I acquired an argument sound and made it loopable in Reaper. This was used for the argument event.

#### Snore

I acquired a snoring sound and made it loopable in Reaper. This was used for the snoring event.

#### Dialog Negative

I acquired a notification beeping sound and played back a version of it pitched down an octave at the same time to fill it up. This was used for dialog appearing in a negative context.

#### Footsteps

I acquired various footstep sounds for different ground types and split them up into three variations each for use as footstep sounds for the player in the game.

#### Bird calls

I acquired a bird chirping sound and split it up into three distinct calls for use in the bird cutscene.

#### Glass, water, coffee

I acquired sounds for each of these and split them up into one-shot sound effects for use for their respective events.

## FMOD Development

The events are organized based on the sound type. The folders used include Ambience, Dialogue, Effects, Interface, and Music.

#### MarketAmbience

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | Used a loop region |

#### SecurityRoomAmbience

|  |  |
| --- | --- |
| *Instruments Used* | Scatterer, Multi |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | Used a loop region, increased spawn rate of Scatterer |

#### Argument

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | Used a loop region |

#### Snoring

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | Used a loop region |

#### Bird

|  |  |
| --- | --- |
| *Instruments Used* | Scatterer, Event |
| *Parameters exposed to developer* | N/A |
| *Effects* | Crossfaded Scatterer into Event |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### CollectCoffee

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### CollectCoin

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### CollectFish

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### Footsteps

|  |  |
| --- | --- |
| *Instruments Used* | Scatterer |
| *Parameters exposed to developer* | GroundType |
| *Effects* | N/A |
| *Logic* | Different Scatterer instruments play based on the GroundType parameter |
| *Parameters Set* | Set scatter distance to zero |

#### GlassesDrop

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### SceneTransition

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### Win

|  |  |
| --- | --- |
| *Instruments Used* | Single |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### DialogueAppear

|  |  |
| --- | --- |
| *Instruments Used* | Two Single Instruments |
| *Parameters exposed to developer* | DialogueType |
| *Effects* | N/A |
| *Logic* | Different instrument plays based on the DialogueType parameter |
| *Parameters Set* | N/A |

#### GroundClick

|  |  |
| --- | --- |
| *Instruments Used* | Single Instrument |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | N/A |

#### MarketMusic

|  |  |
| --- | --- |
| *Instruments Used* | Several Single Instruments |
| *Parameters exposed to developer* | MarketMood |
| *Effects* | N/A |
| *Logic* | Horizontal Resequencing using Transition Regions and Loop Regions |
| *Parameters Set* | Quantization Interval of 4 |

#### Paused

|  |  |
| --- | --- |
| *Instruments Used* | Snapshot |
| *Parameters exposed to developer* | N/A |
| *Effects* | N/A |
| *Logic* | N/A |
| *Parameters Set* | Used a loop region |

## Mixing

I spent a lot of time making sure the MarketMusic event was at an appropriate level and settled on lowering it from its initial level. I made group busses for each of the folders mentioned above and brought the interface and music busses down. I also created a mixing snapshot for when the game is paused, which disables Dialogue, Effects, and Interface group busses, and lowers everything else.

## Mastering

I adjusted various tracks and group busses to make sure the integrated LUFS value did not exceed -23. However, after I also observed that the game *Machinarium* tended to have an integrated value of around -19 LUFS. Because of this, I felt comfortable boosting all of the levels to make the game feel a bit fuller, while making sure that the max peak did not exceed -1dB.

## Sources

|  |  |  |
| --- | --- | --- |
| **Asset** | **Original Author** | **Source** |
| beep-\* | Dan Singer | Created from FL Studio |
| laser\_sustained.wav | ledhed2222 | <https://freesound.org/people/ledhed2222/sounds/397280/> |
| Crowd Exterior Large Size, City Voices, Footsteps, Distant Traffic Stereo .wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| argument ambience\_130611.wav | miastodzwiekow | <https://freesound.org/people/miastodzwiekow/sounds/122328/> |
| MaleSnore\_Raw\_bip.wav | passAirmangrace | <https://freesound.org/people/passAirmangrace/sounds/340893/> |
| guitar\_ac\_fx\_006.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| button\_002.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| marimba\_tone\_007.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| org\_short\_R\_to\_L\_002.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| S23 SFX Footsteps Gravel Loafers Loops Walk Normal.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| S23 SFX Footsteps Metal Boots Loop Jogging.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| S23 SFX Footsteps Snow Singles Sequence.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| Coins\_Bottlecaps\_Drop.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| PRB216 Saker Falcon (Tosia) - Call, Squawk Screech Scream Cry, High Nervous - 8060 MF.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| Glass,Plate Glass,Thick,Break,Topple,Schoeps.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| Water\_Pouring\_02.wav | Sonniss | <https://sonniss.com/gameaudiogdc19/> |
| Grinding Beans for Cold Brew Coffee | munyeca | <https://freesound.org/people/munyeca/sounds/348148/> |