

Abertay University

Audio Design Document

AUD311 Sound & Music for Games

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Audio Design Document AUD311/312

Pillar

A portal-esque first person puzzle game.

Game Description

The game is a first-person puzzle game with heavy emphasis on player interaction within the map through objects. These purely interactable objects are cubes, a circular pressure button and a squared switch that activate only when there's a cube in its socket. Halfway through the stage, the player acquires the harpoon gun, a necessary upgrade that makes possible the solution of the last two puzzles, otherwise impossible to solve. This tool also let the player interact with the environment and puzzle components in a brand-new way.

From a gameplay prospective, the first three rooms (included the starting one) introduce the puzzle mechanic gradually, while also teaching the player to think ahead instead of acting on impulse. After acquiring the harpoon gun, the game tests the knowledge the player has built in the first half of the stage, while also bringing a more reactive environment.

Design Pillars

- Portal like experience and soundscape.
- Cathartic experience.
- Heavy focus on interaction with objects, heavy use of Foley sounds with sci-fi synthetic sounds to compensate lack of specific foley props.
- Music and dialogue kept at a minimum to keep the cathartic experience at its maximum.
- Player has very limited agency due to the solutions of the various puzzles.

Reference Material

For reference I chose ten first-person puzzle games or walking simulators with similar aesthetic and/or similar theme, and the list down below is ranked from importance of reference. Because of the amount of the materials, I chose to explain only the first three.

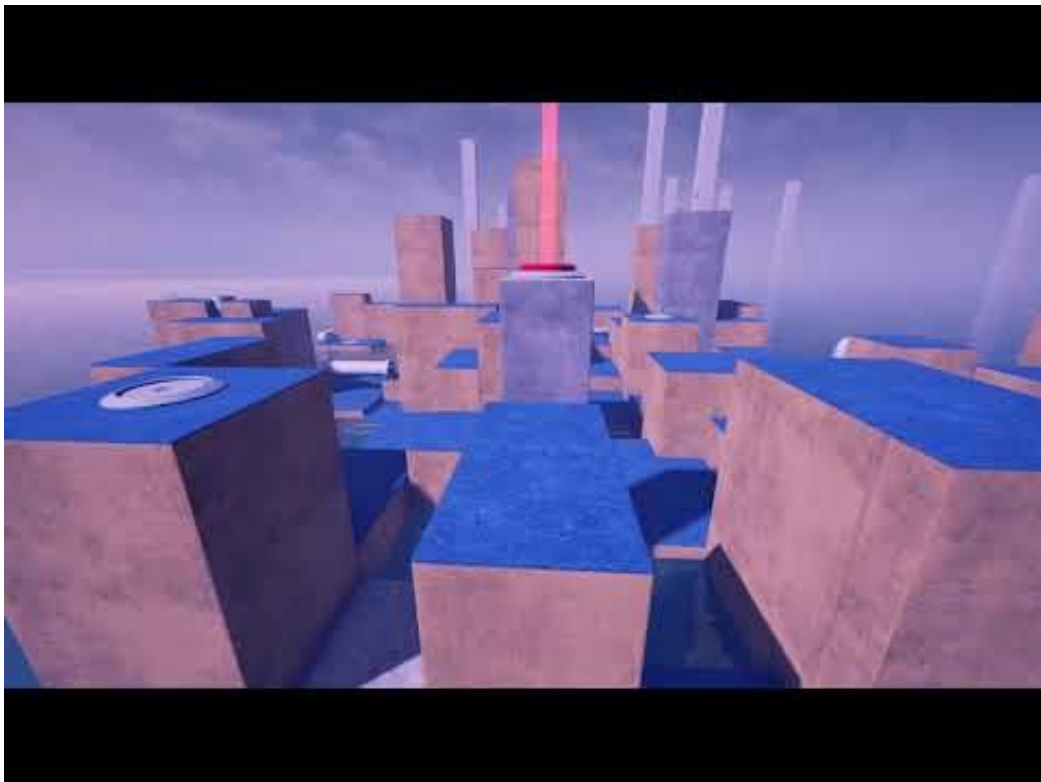
- I. Portal
- II. Refunct
- III. The Witness
- IV. The Talos Principles
- V. QUBE
- VI. QUBE 2
- VII. Stanley parable
- VIII. Gone home
- IX. Dear Esther

The first reference is Refunct, is a first-person game with some emphasis on puzzle elements but still emphasised the player movement and exploration of the relatively small map. The relaxing music

leads the player in a serene experience where the interactions are kept at a minimum. The interactable objects in Refunct are kept at a minimum to further relax and calm the player, without hindering the gameplay and overall experience. Sound effects for the objects are simple yet diverse enough to have character. The music starts calm with a single piano, rising to a crescendo that reaches a peak, but still managing to remain quite serene and relaxing. Ambience is not present in this game at all, probably due to the nature of the game, an indie title developed by a single person with no background in music and audio.

List of objects in Refunct used as reference for the project:

- button you can press while standing on it
- Pipes you can slide in and out
- Red glowing cubes
- Rising platform
- Walls that surface from water
- Relaxing music
- Minimalist approach to sound

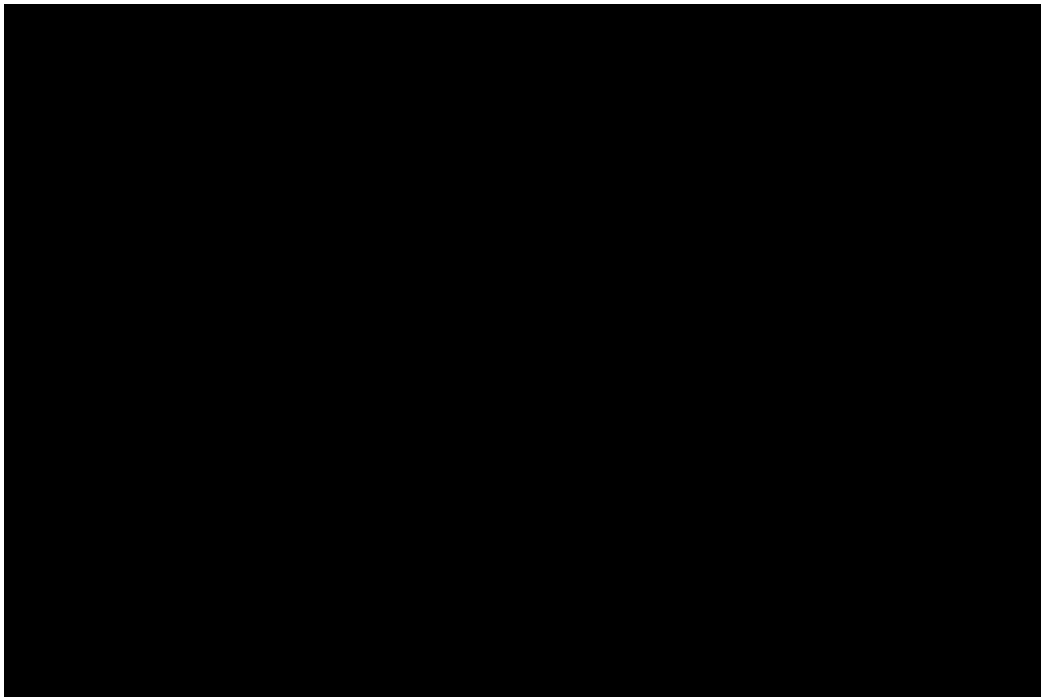


Here's a quick video showing the soundscape of Refunct.

The second reference is Portal 2, a first-person puzzle game developed by Valve. Portal 2 has a very interesting sound design. Footsteps and fall sounds are realistic, while the sounds from the interactions with items are stylized and instantly recognizable. This component is a pretty big inspiration for my work. Sounds effects are robotic with an almost industrial quality and complexity. Ambience is dense and far from being sparse because of its diversity from room to room, with a rich background and foreground. The music is used to support, setting up the mood and gameplay sequence while also driving the player. Dialogue is delivered solely through NPC.

Another point to note is that in the game there are two main spaces, (the old labs and the new one) and each one of them have different sounds effects and different ambiences. This is noted by the player with every sense in its use. This results in the use of different materials with completely different sounds. If the materials are used in both spaces, the player can notice that in the older part the materials will have some connotation of decaying and deteriorating both visually and auditory.

Below is a video that showcase a vertical slice of the soundscape.



The third reference is The Witness, a first-person puzzle game designed by Jonathan Blow

The sounds effects in The Witness are kept at a minimum, being only used for player movement and interactions with puzzles. One small batch of puzzle is focused on sound, or rather, the solution is given to the player through the sound as the player enters the solution. Other sounds effects are absent in the title. Music and soundtracks are strange in The Witness, as in it's not traditionally implemented, but used through multiples compositions throughout the game. Dialogues are found all over the island; they all have different topics and are narrated by different people. Ambience is superb, not too sparse neither too dense, thanks to the field recording made by Andrew Lackey.

Below there's a video in which I explore around the map to give a vertical slice in the soundscape of the game.



Who is this for?

The Audio Design Document is intended for internal use only, in this case, being a single person with no group but just me. The structure of the document is made to remind me of the decisions about the mood, ambience, and soundscape. The purpose of this document is to be a constant reminder of what I'm working on and the decisions I made regarding direction and design, avoiding the risk of making a bad decision or an incoherent one.

Sound Design

Style/Aesthetic

The overall style and aesthetic will try to complement the game in its intention, following reasonably the design pillar established at the beginning of the document. The sounds are going to be grounded and not too exhausting for listener, due to the possible fatigue they could be suffering due to the nature of the game. The soundscape is realistic with light sci-fi sound effect to give the portal-esque feeling. Music will be used as furniture, rather than being a central pillar to the experience

Player Movement Sounds

The design direction for the player movement is quite simple, with realistic sounds that one would find/create in a laboratory or some sort of testing facility. Recording will be made in the university studio using the Foley method. Different versions of player movement sounds will be needed, to achieve a sparse enough listening experience to not break immersion for the player. An example for diverse sound for each one category would be that for footstep like carpet, gravel, etc... the projected footstep sounds needed is 4/5, just enough to cover all the different kind of pavement that there are in the level.

Once these sounds are split and polished, the least amount of effects possible will be implemented, since the sounds should be as close to reality as they can be. Workflow of SFX will be explained in more details in the homonymous graph.

Player-World Feedback Sounds

Player-world feedback sounds will be mainly Foley with realistic sounding sounds. They will be mainly recorded in one session and then tweaked in post. The philosophy of using real sound over synth will be respected, but due to lack of specific prop or oversight, a couple of these sounds are going to be made in post.

Tool/Item Sounds

Tools and items sound will be recorded as much as possible with Foley, but if the quality or the sound won't be deemed worthy, I'll have to create them in a synthetic way, making sure that they are coherent and will match the overall soundscape. Due to the nature of these sounds, more post-effect will be needed, but as always, I'll try to have as many natural sounds as possible.

Ambience

Ambience will be very minimalistic and realistic, with a simple machine humming in the background, some blows from the wind and slightly different hums in different rooms. There will also be some diageitic music in a room to compliment the ambience. The base of the ambience will be made synthetically, upon which some Foley sounds will be added to give a realistic effect and sound.

Eight variations of the ambience will be needed, seven for the seven rooms plus one for the "radio" in one of the rooms.

The workflow for the ambience will matches the workflow for the SFX, with the sole added step of adding Foley sounds to the track before tweaking it.

Music

The music implementation for the game is going to be simple, there will be music playing at the beginning of the game, until the end of the game. It will change every few rooms

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There are going to be two separate tracks, both are going to be loopable and quite compared to the rest of the game. As for hierarchy of sounds, music will be the second last in order of importance, with ambience below and player interaction above it. Given these information and the relaxed mood of the game, the music I'll compose will be relaxed with a jazzy feeling, evoking similar feeling to elevator music, blending with the background noise without being precepted or given too much thought. Almost every track is going to be composed with a piano, while the first one is going to be a cello picked, to relax even further the player. It's going to use a vertical structure.

Dialogue

- **In game character dialogue:**

-The protagonist has no lines or dialogue, it remains silent throughout the entire experience, being just an avatar that lets the player express its will in the limited agency that the game let him have.

- The only dialogue in the game is a Reactive announcer with a female voice, named “Director”. She communicates with the player through a telephone and remarks what the player is doing or how it’s doing. Her constant remark ends when the player goes to sleep finishing the experience. It’s not clear if the director is a robot/Artificial intelligence or an emotionless woman reading from a script, clueless as much as the player is about the why and the how of the surroundings. This will increase further the uneasiness of the game and drive home once again the feeling that something is wrong with the experiment, but it can’t quite place why. There are four different types of the Directors dialogue, as shown in the tab below.

Start game dialogue (e.g. “You know the drill, let’s do this”)	Puzzle rooms dialogue (e.g.” Very Nice”)	Pick up harpoon dialogue (e.g. “Let’s get you a new toy”)	End game dialogue (e.g. “Thanks for your participation”)
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-One person needed for the “director”. I require a female voice actress in her twenties with a serious tone and possibly an emotionless delivery for the lines.

-Voiceover will be added once the quality of the performance from the actress will be deemed right.

- **Narration dialogue**

-There will be no narration in the game.

Lines of dialogue that needs to be recorded:

Ok, you know the drill, let’s do this
Getting the hang out of it, I see
Getting the hang of it, I see
You were fast!
Let’s get you a new toy
This new tool will help you in the next couple of puzzles
Tricky
Very nice
Now you deserve some sleep
Not so easy, uh?
Thanks for your participation as always, test subject nineninenineninenine overflow error
Encouragement phrase with happy tone
Just a few rooms left, congratulation

Technology

The tools used for this project are:

- 1) Reaper Version 5.983/x64 (updated to Reaper Version 5.99/x64 on the 29th November 2019)
 - a) I chose to use Reaper as my DAW due to the fact that it is very user friendly, easy enough to use overall and the learning curve isn't as steep as other DAWs in the market. Another reason to use Reaper is the flexibility and the near endless plug-in, without mentioning the fact that you can set it up as you see fit for your needs. With its monstrous customization and flexibility, it was a no brainer for me to choose it.

- 2) Unity Version 2019.2.8f1
 - a) Unity was chosen as the game engine because the assessment for the other module of Game Audio Implementation was delivered only as a Unity build.

- 3) Wwise Version 2019.1.2.7018
 - a) The reason I chose Wwise as the middleware was because it's the middleware that I learnt this semester, making me feel confident enough to use it for this Assessment. Also, it's one of the most used middleware in the game industry.

- 4) Ableton Live 10 Trial Version 10.1.5
 - a) Ableton Live 10 was the first choice to produce the soundtrack for the game. For what I'll use the program, the trial license should suffice. Getting acquaintance with this software was quite lengthy and tricky, but I'm satisfied about the result produced given the amount of time at my disposal.

- 5) BoscaCeoil Version 2.0
 - a) BoscaCeoil is the second program to compose music that I used. The strongest suit of BoscaCeoil is that it is easy to use to compose almost effortlessly some catchy music. BoscaCeoil is going to be used for more stylized jingle and music, rather than the more detailed and realistic tracks made in Ableton Live 10.

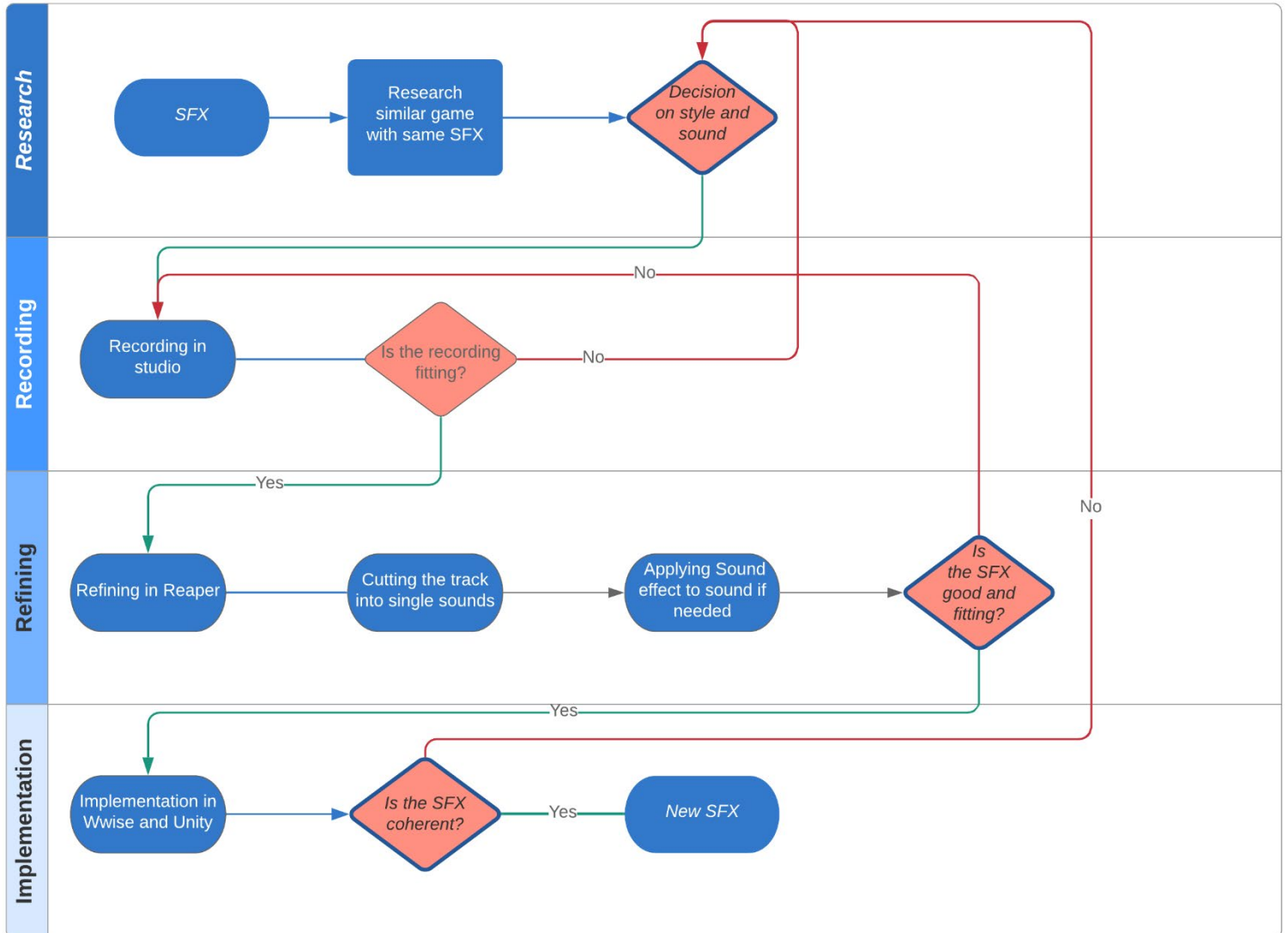
- 6) Audacity Version 2.33
 - a) Audacity wasn't really used, but I feel the need to include it since it was the program I used before I familiarized with Reaper. It was used mainly in the first few weeks as the comfort program I could fall on, if I couldn't do something in Reaper.

Workflow

The workflow I decided to use is quite agile and lets me check multiple times if the sound is consistent and coherent with the proposed soundscape of the game. As it can be easily deduced by the previous sentences, the keyword for this workflow is verify and confirm, a natural redundancy to make sure that the soundscape is consistent to achieve the maximum possible result.

Workflow flowchart for SFX

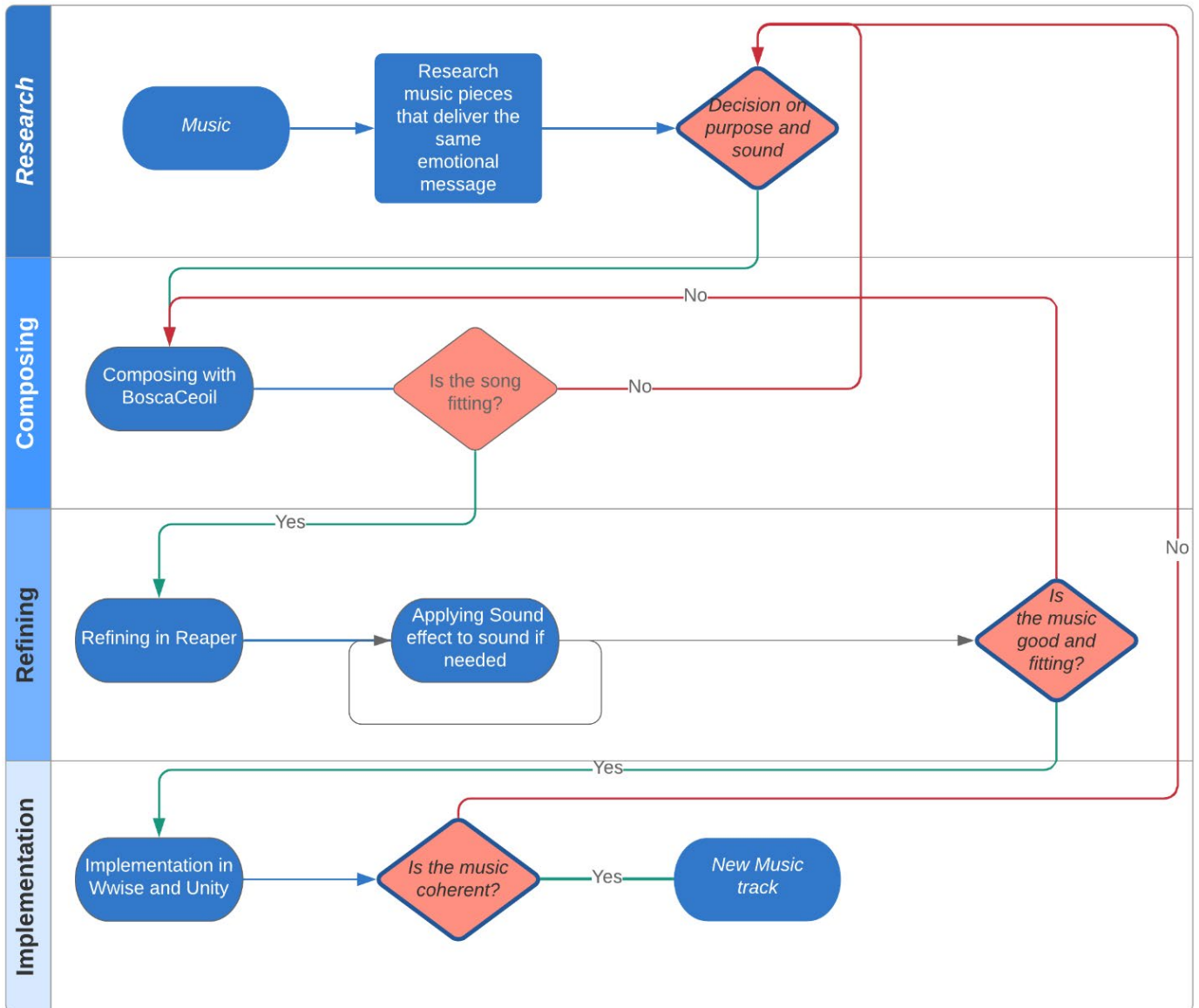
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This workflow is specifically used for SFX. For dialogue and music, the workflow is a little different, as shown in the images below.

Workflow flowchart for Music

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Workflow flowchart for Dialogue

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