MINEATON

Audio Design Document

MIROSLAW SIENKIEWICZ

Abertay University Dundee

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1. Outline

1.1 Overview

The style of audio used for the game oscillates around retro-future sci-fi movies from 60's - 80's with characteristic for those times type of sound design but with use of modern techniques and sounds that was developed during last few years. It's mixture of both retro and modern sound. Mood for audio is also a mix of seriousness and humour, not too abstract keeping in mind that casual gamer is the target. SFX samples will complement alien universe and will be relevant to the world.

1.2 Music

- Music will change depending on the events during the game. For game menu and strategic elements of the game, music will be calm, slower and mysterious. Game is based on "waves" of attacking enemies and every next wave have to be associated with progression in the music. For a gameplay music have to be dynamic and action based.
- Music is made with electronic instruments like synthesizers, drum machines and samplers. Including sampled Orchestra.
- Style of the music is a combination of electronic music and orchestra. Mostly inspired by music theme of animated tv series like 'Futurama', 'Rick and Morty' and 'Powerpuff Girls'. Cartoonish type of music which is dynamic but not aggressive.

1.3 Sound

- Sound Effects in the game will also be a mix of sounds known from retro and modern technology. As game is mostly focused on humans sfx will be recognisable as sounds typical for human technology.
- UI: sound is focused on retro-futuristic UI/HUD with sonic analogies to sounds that became part of sci-fi universe like exaggerated noises, bleeps and bloops.

1.4 Additional

- Topic of Trailer and other promotional materials was not discussed yet, so topic is open to consideration.

2. Research

2.1 Inspiration

- **Worms Armageddon (Team17):** Classic video game for single or more players. Created in 1999 is still playable today 18 years later. Cartoonish 2D graphics, sounds and very addictive gameplay makes this game timeless. It's the main inspiration for UI sounds and voice overs for aliens.
- **Alien Isolation (Creative Assembly):** Survival Horror Game from 2014. Based on Aliens film from 1986 features 'lo-fi' vision of the future from 70's and 80's. Retro-futuristic sound design may work as inspiration for the sound effects.
- **Ambient/Electronic/New-Age Music:** These genres created by legendary groups and composers like Tangerine Dream, Vangelis and Brian Eno took big part in sci-fi universe and was inspiration for many film and video games directors. It's also inspiration for music in video game for menu/setup and calm sections of the game.
- **Glitch/Dubstep:** Two genres of music that are closely related to sci-fi world. Could be heard in movies and video games, mostly in scenes that took place in clubs. It's modern approach to music that match world of science fiction and aliens. It's also great extension to Ambient Music.
- **Rick and Morty:** adult animated s-f sitcom. Even if it's considered as adults show it is still recognizable by teenagers. Music theme is very popular and recognizable. It uses 'Theremin' sound together with Orchestra and Electronic music. Match very well style of the game.
- **Powerpuff Girls:** animated s-f tv series aired between 1995 and 2005. Oriented for kids and teenagers it became a very successful show. Music theme belong to well known music genre 'Drum and Bass' and 'Jungle'. Electronic music which is very dynamic and action-driven. May be a good source for gameplay music.
- **Futurama:** another animated s-f sitcom. Created by Matt Groening author of one of the most popular animated tv series in the world 'The Simpsons'. Similar like in Powerpuff Girls series here music theme is also in Jungle/Drum'n'Bass style.

2.2 Background Research

- For sound effects mobile video games like: 'Alien Cleaner', 'Astronest The Beginning' were checked
- For music mobile games like: 'Galaxy Reavers', 'Battle Supremacy Evolution', 'Evolution: Battle of Utopia' were checked
- To learn more about sound design (weapons, spaceships, UI) these websites were checked, and articles were read and are bookmarked for further reference: 'www.asoundeffect.com'
- A lot of video tutorials on YouTube tagged 'sci fi sound design' were watched and are bookmarked for further use
- To learn about pre-production of audio for games video have been watched: 'Mastering Audio for Games - Episode 27 | The Mastering Show Podcast'
- Playing and testing 'Attack of the Earthlings'
- Games mentioned in Brief: The Simpsons: 'Tapped Out', 'Adventure Capitalist', 'Fallout Shelter', 'Brass'
- Music theme from animated s-f tv series was analysed and conclusions led to follow this type of music for game's theme and gameplay music.

2.3 Experimentation

- Ambient music for Intro / Menu was created following scales and sounds typical for sci-fi / UFO type of movies and games like Mixed Major/Minor A scale.
- Variation of Menu Music was created with Electronic Drums to boost creative thinking of gamer during strategic periods of the game
- Fast Dynamic track was created for action based parts of the game, like attack of the aliens. With typical for sci-fi/UFO Theremin sound to make it sound more fun
- A bit of experimentation with retro music led to track based on cheesy sci-fi/horror movie 'The Critters' was created but it ends up as backup and not will be implemented in the game in the first place.

- Experimentation with sound design for UI. Few assets were created but UI must be defined first before further creation of this particular type of sound will (or if) be implemented
- Experimentation with sound design led to creation of few environment/background noises that may be used for Mining Solution Platform (Drill) this also include sound of drilling into the ground.
- Music from 'Rick and Morty' sitcom have been inspiration for gameplay music. Variations for first three waves have been created. Project is open to be extended for additional variation

3. Implementation

- Audio will be implemented directly in Unity 2017.1.0f3.
- No middleware
- Trello for project management https://trello.com/b/DhSQCH4o/project-mineaton
- Slack for team communication https://teamjunkfish.slack.com
- Naming structure follow this standardization: 'subject_event_variation number' for example: alien_slime_squash_01
- Audio Files will have clear self-explanatory folder structure
- Additional 'Audio Asset List' Document is created with structure explaining assignation of audio assets to events with description and additional informations
- Respository on Github is created under https://github.com/matt360/TrashKittens and additional Branch for audio is named: miro.
- Github Respository is controlled by: SourceTree application
- In Unity scene all audio assets and audio-related scripts are kept under folder: Assets\Audio
- To test and add assets new scene was created named 'AudioTestScene' which can be find in folder: \TrashKittens_Miro\Assets\Prototype\Scenes. New scenes can be created.
- Audio assets are created in music software like DAW: Steinberg Cubase Pro 9.5, Steinberg Wavelab 9 Essentials including 3rd party plugins and external hardware devices (Roland JP-08 and Roland JV1080).
- Foley sounds are recorded with portable recorder Tascam DR-05
- Additional Foley will be recorded in Abertay University Studio
- Original format of audio is 96kHz 24bit which will be reduced to match game needs like smaller size. Original high-quality files must be archived.
- Short sound effects will be rendered to WAV 16bit 44.1kHz file format
- Music will be rendered to OggVorbis (and/or) MP3 which is compressed lossy audio format, to minimize size of file
- Because it's small mobile video game in most cases every event will have one sound assigned without multiple audio samples variations. Variations itself may be edited in Unity like change of pitch or levels.

- Sound of event when enemies will be killed will have variations because this event will be repeat multiple times in short period of time.

Workflow:

THURSDAY: Team meeting and discussion of what assets are needed → FRIDAY: Teamwork. Implementation of assets into the Game → SATURDAY to MONDAY: Recording and producing audio assets → TUESDAY: Feedback → WEDNESDAY: Changes to audio assets after feedback

4. Asset list

4.1 Music

    4.1.1   Launch and Main Menu

    4.1.2   Menu during pause in-game

    4.1.3   Shop music

    4.1.4   In-Game

    4.1.5   Win/lose

4.2 SFX

    4.2.1   UI sounds

    4.2.2   In-Game Sounds

    4.2.3   Drill sounds

    4.2.4   Aliens sounds

    4.2.5   Shop

    4.2.6   Ambient and environment sounds

4.3 Additional (Promotion, Marketing)

    4.3.1   Trailer

Example of 'Audio Asset List' document structure (Full document available separately):

EVENT	DESCRIPTION	VARIATIONS	LOOP	SPOKEN	CHECK LIST	IMPLEMENTED	FILE NAME	STRUCTURE
UI	User Interface							
UI Tap	Tapping a Menu Button	5			x		UI_Tap_(x)	audio\ui\
In Game	During the gameplay							
Victory	Player wins the wave	1			x		wave_end_victory_01	audio\ingame\
Drill	Drill: Minning Solution Platform							
Explosion	Drill Death Drilling sound at work	2			x		Explosion_A(x)	audio\drill\
Drill Sound		1	x		x		drill_low_01	audio\drill\

5. Schedule

5.1 Week 1 to 5:

o Research and experimentation following incoming assets from artists and game designers.

o Audio reference moodboards

o Discuss audio equipment

o Decide with middleware to choose

o Learn Source Control

5.2 Week 6:

o Create first experimental assets as concept audio and audio samples for Pitch Presentation on Week 7

5.3 Week 7:

o Pitch presentation: add Audio Section to PowerPoint presentation

o Prepare Audio Design Document

o Get clear vision of mood and style of audio

5.4 Week 8 to34 (Semester 2):

o Implementation of audio assets in Unity scene

o Updates to Level 1 Music

o Additional audio sound effects when requested