

Sound Effects



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IRRKLANG

- In our game we are using irrklang sound library. irrklang supports C++ and it has lots of built-in file format decoders (wav and mp3 are ones we used in our game). It provides Doppler Effect for 3D sounds or 2D effects like echo, reverb and distortion.



CODING STEPS

- We started with writing a console application to test the irrklang library capabilities.
- After that we wrote a test class to adjust sound effects to 3D models.
- Then we started to write the actual sound code.
 - We firstly put background music. There are three of them. One is for the IntroState, second one is for the PlayersSelectionState and the last one is for the Level1, where the game is actually played.
 - Then we added cybug and weapon sounds. There are three types of cybug sounds.
 - Cybug sounds need to be 3D (their volume changes by the distance). We specified 3D world position and volume of the sound.
 - Some sounds were loud and some sounds were not audible. So we adjusted a number of sounds and prioritized some of them like screams of cybugs when they are dying.
 - Then we added PlayerSelectionState beeps.

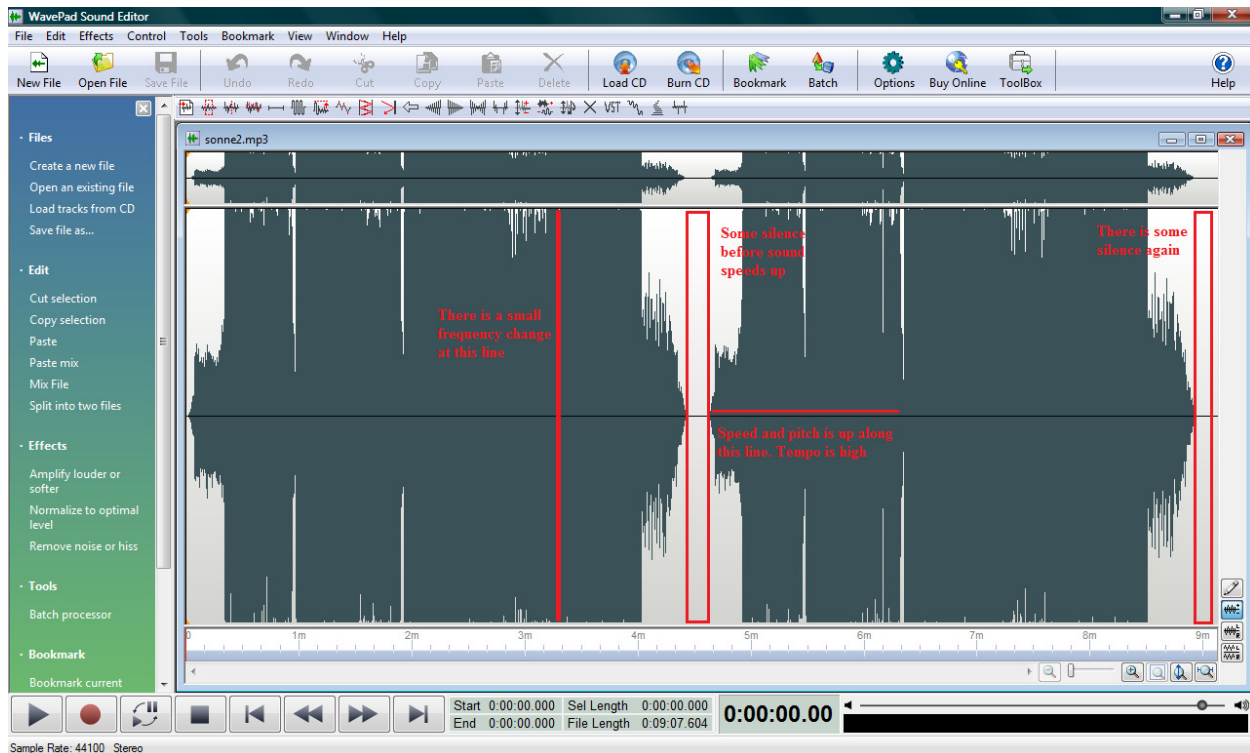
WAVEPAD

- WavePad Sound Editor has many sound editing functions include cut, copy, paste, delete, insert, silence, auto trim and more.
- It has audio effects like amplify, normalize, equalizer, envelope, reverb, echo, reverse, sample rate conversion etc. In our game we used trim, insert silence, amplify, normalize, fade in, speed change and pitch change functions of it.



SOUND EFFECTS

- Small frequency changes to get rid of monotony during the game.
- Pitch and speed ups in some parts of the game. This helps us to give a rhythm and excitement to the game.
- Silence in some parts provides a moment for reflection.



ELIMINATED SOUND

- There are some eliminated bug sounds. Some of them were too peaceful like cricket sounds and some of them were like lion roars. However we needed cybug sounds.
- Some background music candidates are also eliminated. “Death Of The Landmark” was too slow for our concept.
- “Mehter” is a general name for Ottoman battle songs. We tried to add one of these songs’ metal remix version by Pentagram. But it was too upbeat.

SOUNDS AND MUSIC USED

- “open_the_gate.mp3”
- “sonne2.mp3” (Instrumental version of Rammstein’s song)
- “buchdich.mp3” (Instrumental version of Rammstein’s song)
- Scream, bug and beep sounds.

SOURCES

http://www.shockwave-sound.com/sound-effects/scream_sounds.html

<http://www.soundsnap.com/taxonomy/term/75/alpha?page=15>

<http://www.ars.usda.gov/sp2UserFiles/person/3559/soundlibrary.html>

<http://www.soundsnap.com/>

<http://www.findsounds.com/types.html>

REFERENCES

<http://www.nch.com.au/wavepad/index.html>

<http://www.ambiera.com/irrklang/>