### **Audio in games:**

- Atmosphere
- Music
- UI sounds
- Player feedback sounds (for example, picking up items)
- Voice

# Options for audio APIs (all of them cross-platform):

## PortAudio:

- Simple API for audio I/O.
- License detailed here: <a href="http://portaudio.com/license.html">http://portaudio.com/license.html</a>

#### Link:

http://portaudio.com/

## OpenAL:

- Similar to OpenGL in terms of usage, so might be easier to learn.
- Unclear what license it's under. It seems that OpenAL is proprietary but there is another version known as OpenAL Soft that is under the LGPL license (<a href="https://www.gnu.org/licenses/lgpl-3.0.en.html">https://www.gnu.org/licenses/lgpl-3.0.en.html</a>).

#### Links:

https://www.openal.org/ https://www.openal-soft.org/

## SDL:

- Can handle audio, video and user input (mouse, keyboard, joystick).
- License zlib (for version 2.0 and higher).

#### Link:

https://wiki.libsdl.org/

### SFML:

- "Objected-oriented SDL", so similar to SDL but written in C++. Both will work with C++.
- License zlib.

### Link:

https://www.sfml-dev.org/