

EDV & Multimedia

Game Development

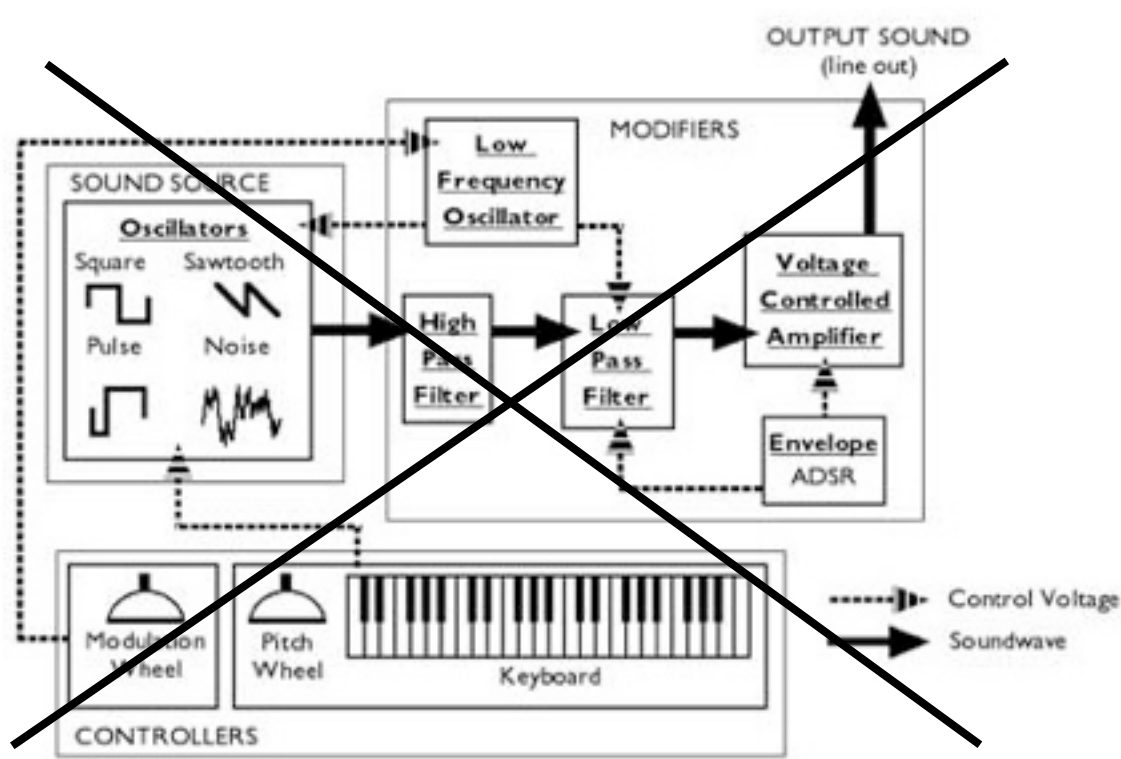
Sound in Unity

Prof. Dr. Jochen Koubek

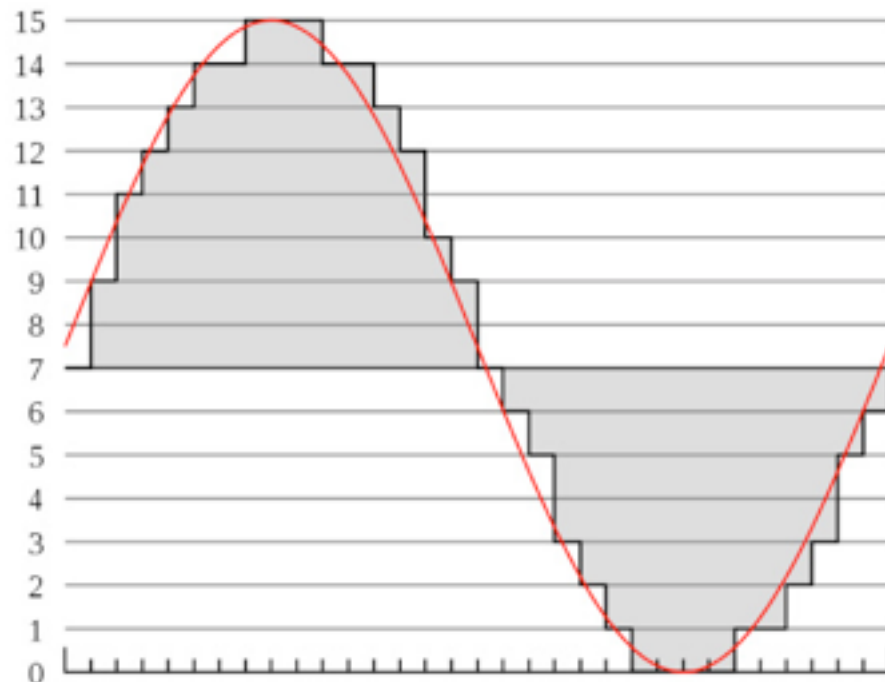


Ton-Techniken

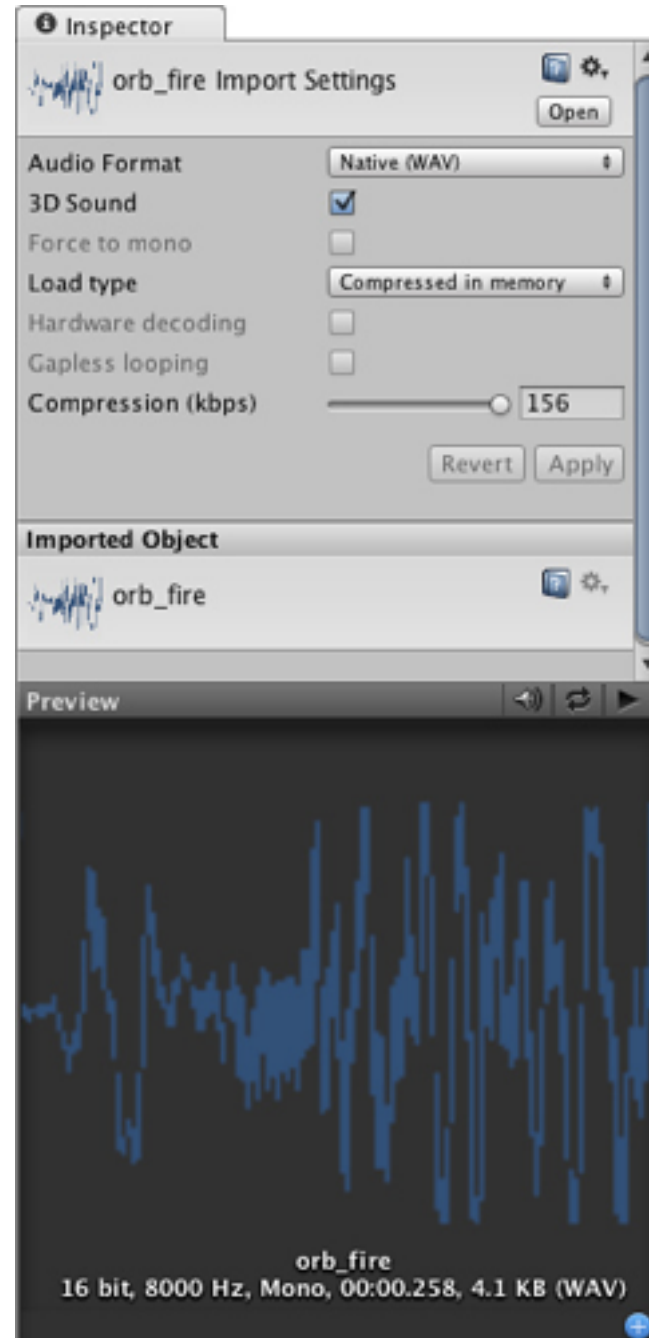
The audio file formats that Unity can import are **.aif**, **.wav**, **.mp3**, and **.ogg**.



Unity enthält keinen Synthesizer



Each digitized sample of audio is assigned a value that corresponds to the amplitude of the analog wave.



Erzeugung

Beeper (PC)
Synthese
Sample (Wavetable)
Red Book (CD)

Raumklang

Mono
Stereo
3D (Audio Point-of-View)
Multichannel

Speicherung

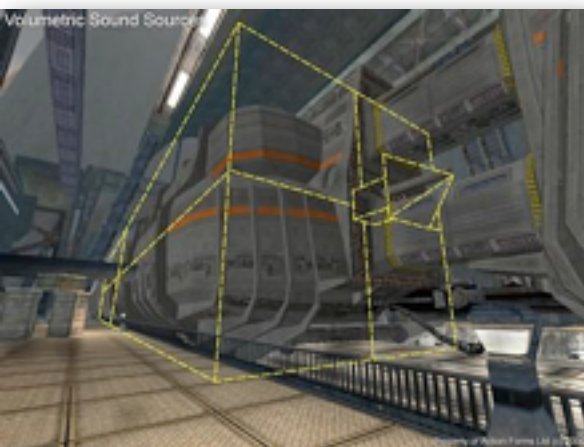
Synthese-Parameter
MIDI
Prozeduren

Samples (.wav, .aiff)
CD
MP3, WMA

Audio Point-of-View



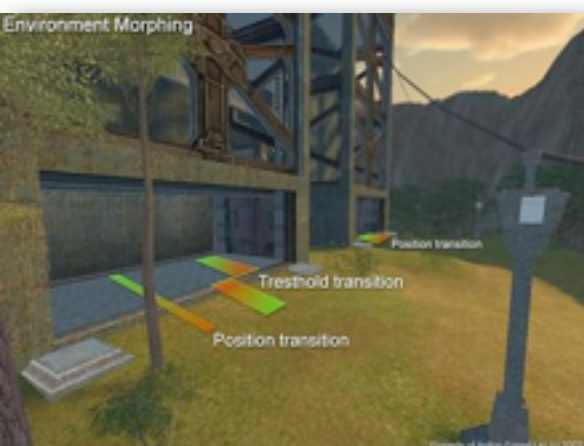
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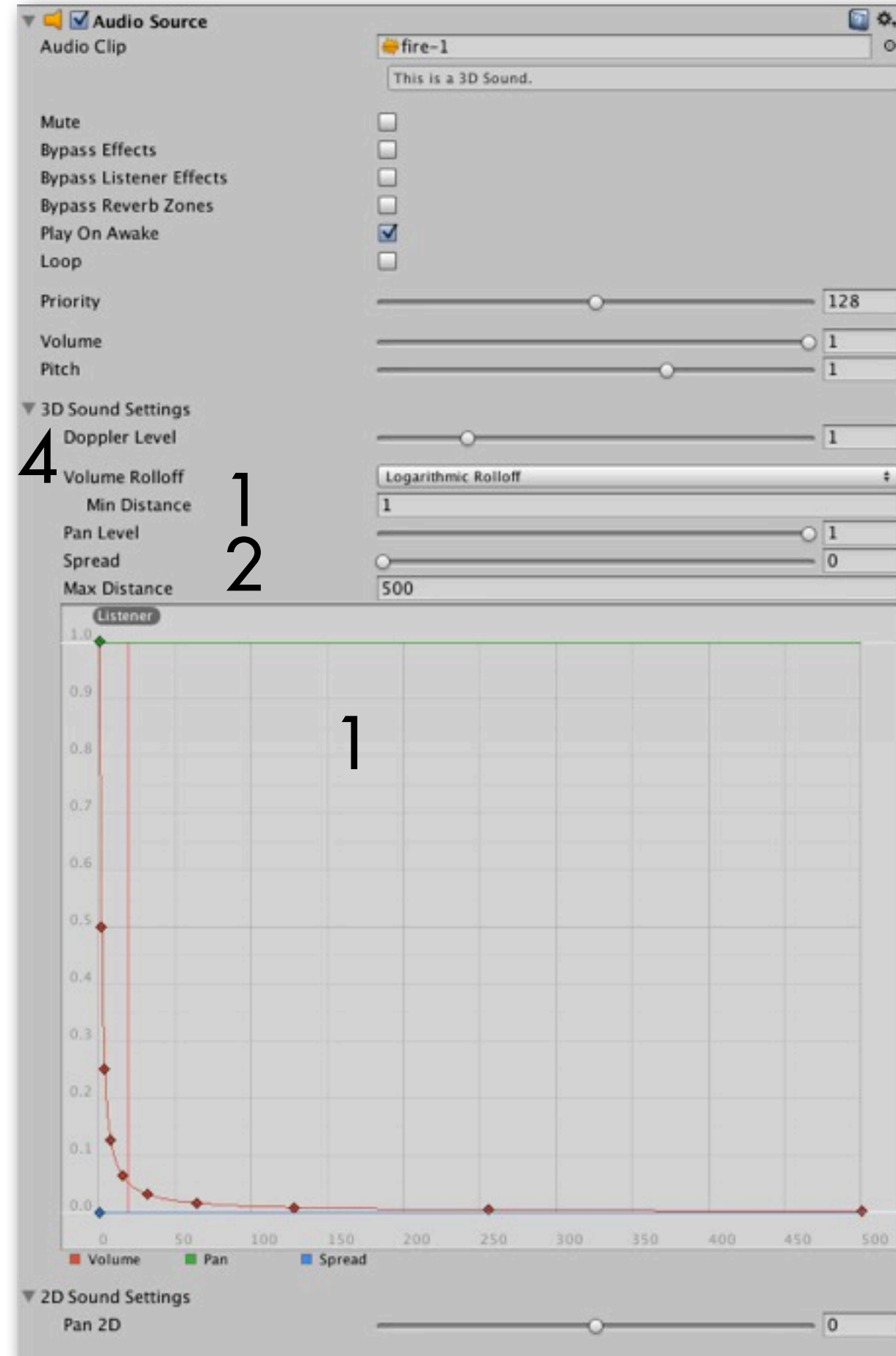
3



4



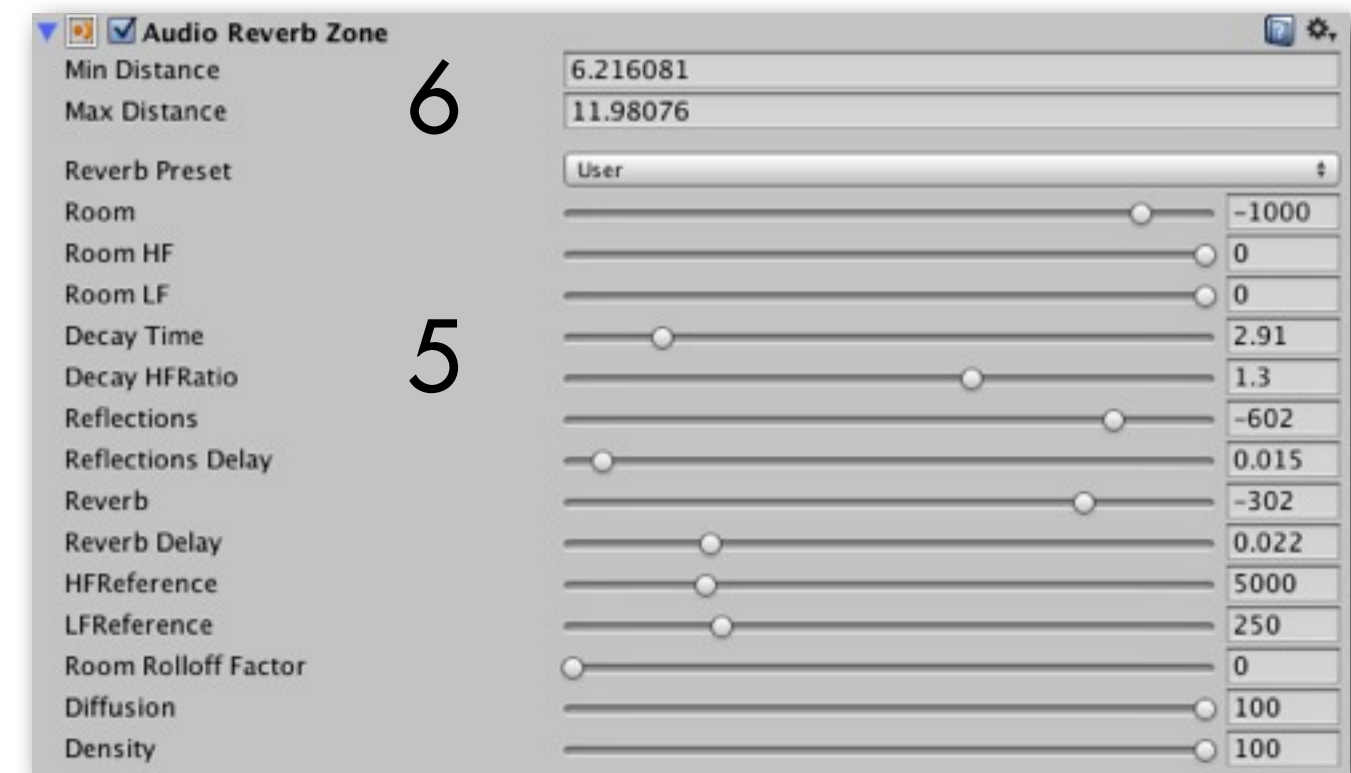
6



4

1
2

1



6

5

Entfernung: Lautstärke (1)

Position: Stereo, 3D, Multichannel, Surround (2)

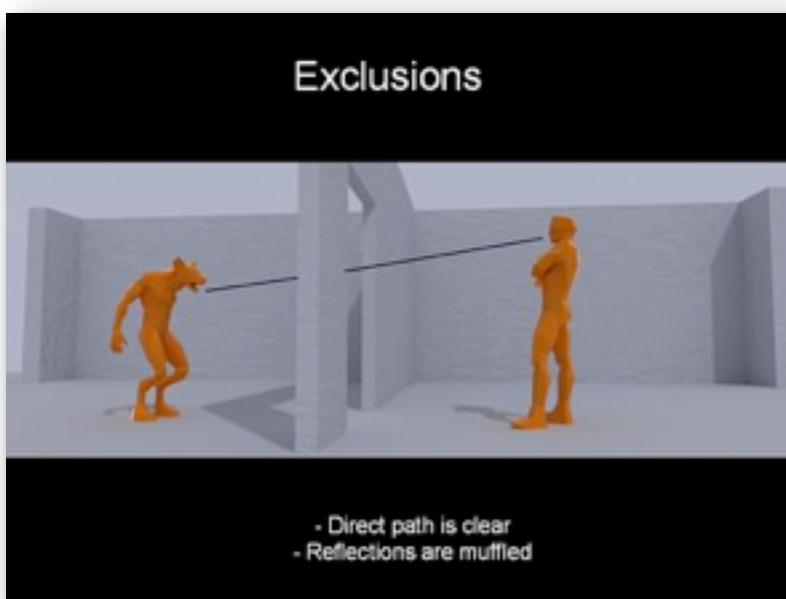
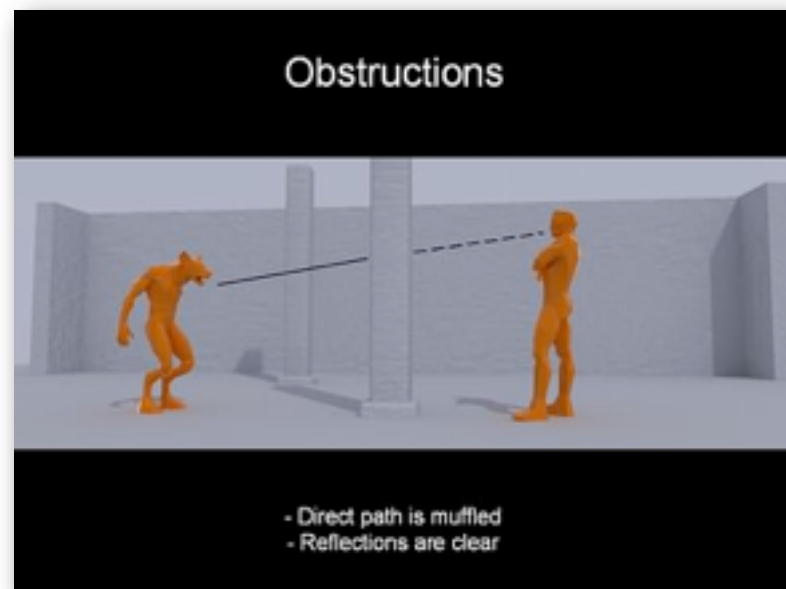
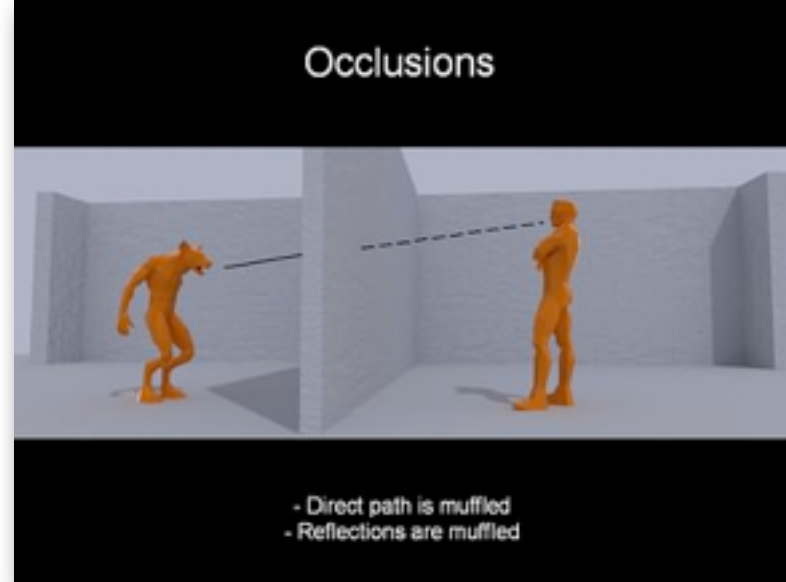
Körper: Volumetrischer Sound (3)

Bewegung: Dopplereffekte (4)

Verdeckung: Filter (5)

Effekte (Pro Only)

Umgebung: Environment Morphing (6)



Effekte (Pro Only)

Nicht zu verwechseln mit diegetischer Reaktion auf Spielerhandlungen (s.u.)

<https://docs.unity3d.com/Documentation/Components/class-AudioEffect.html>

Zeit

Echo

Hall

Chorus

Frequenz

EQ

Hochpass

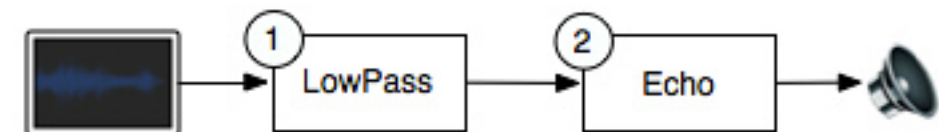
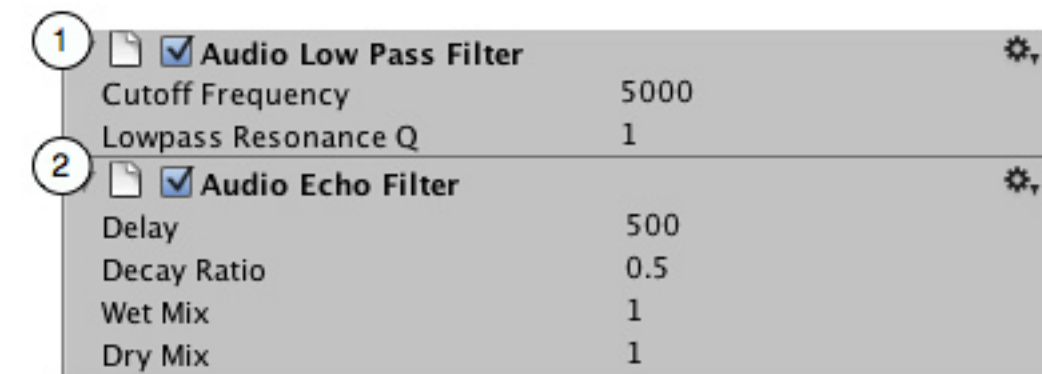
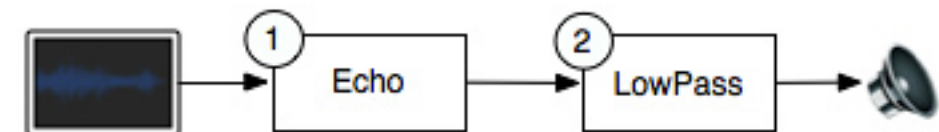
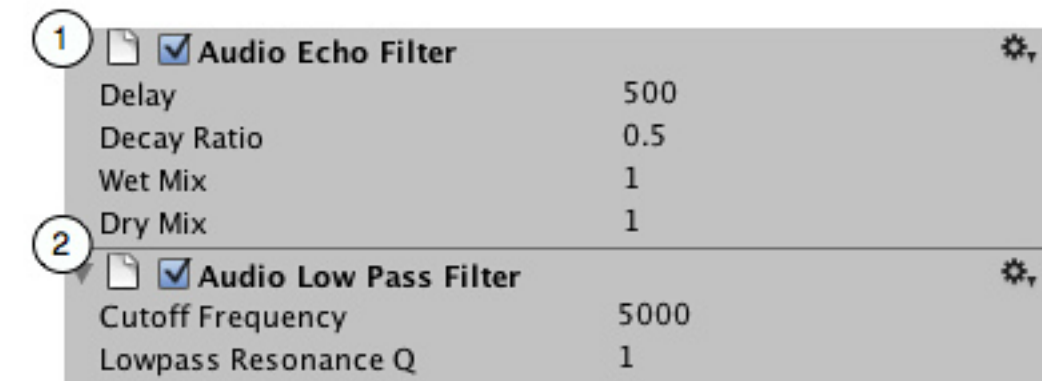
Tiefpass

Bandpass

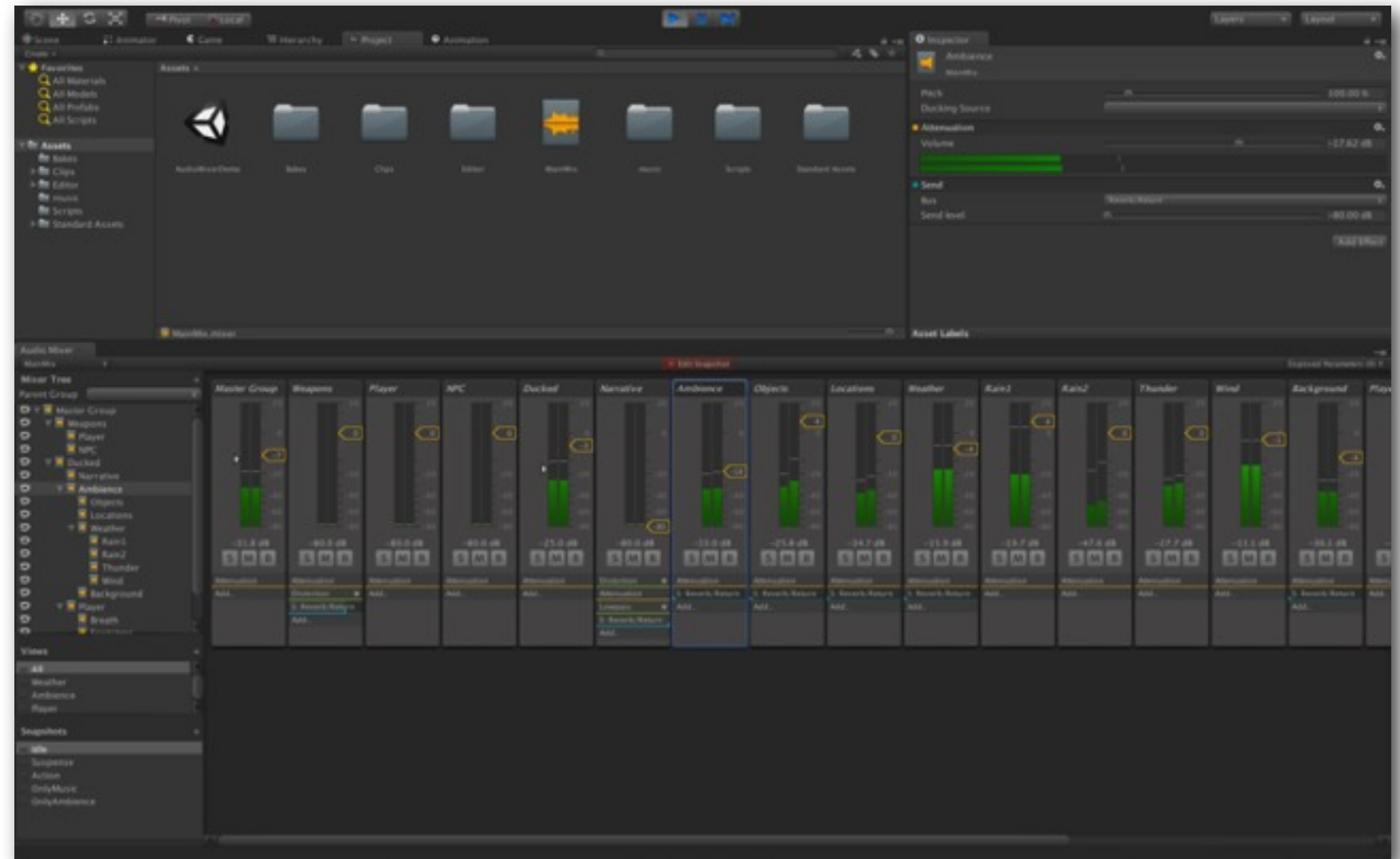
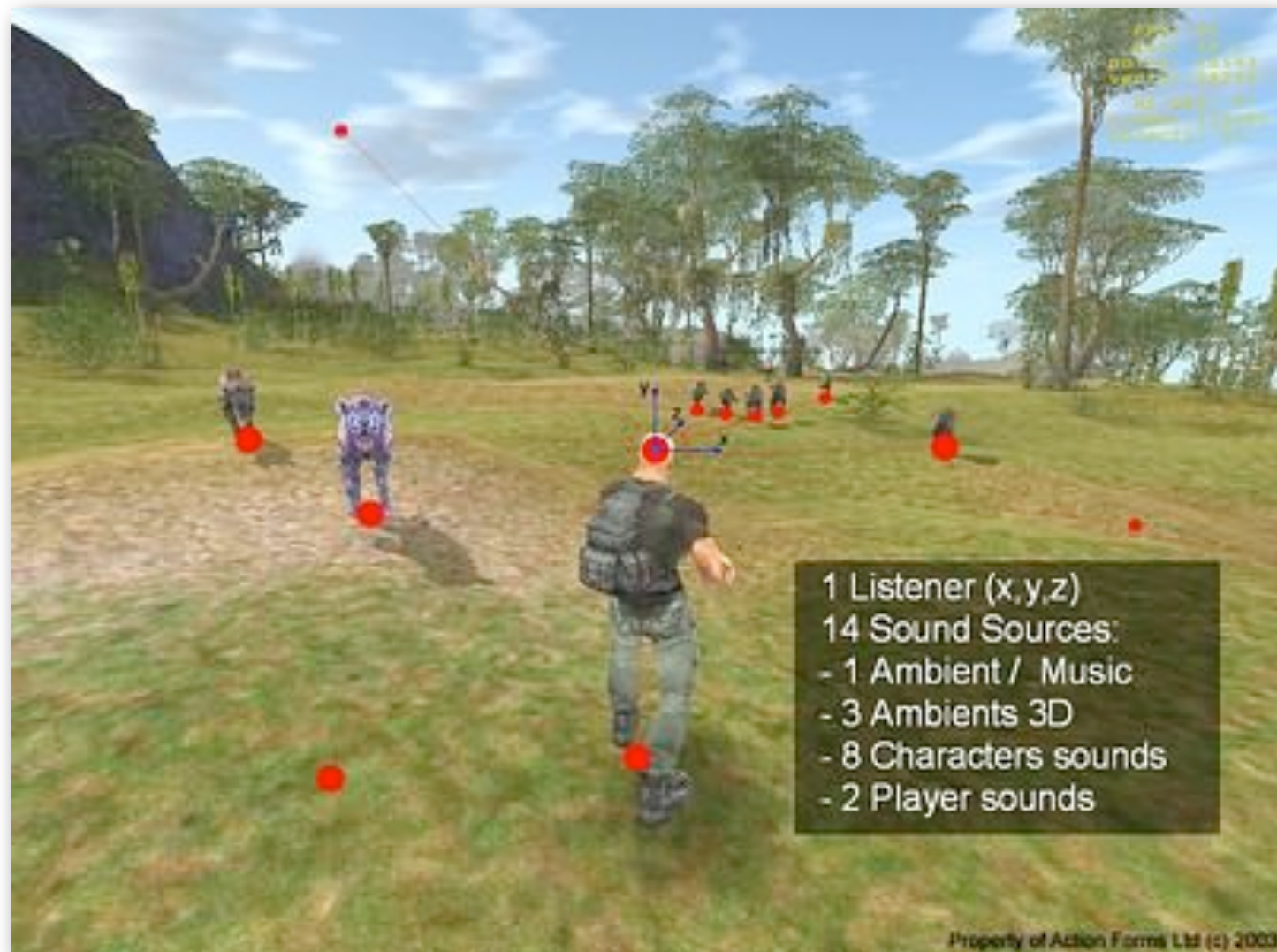
Lautstärke

Verzerrung

Compressor

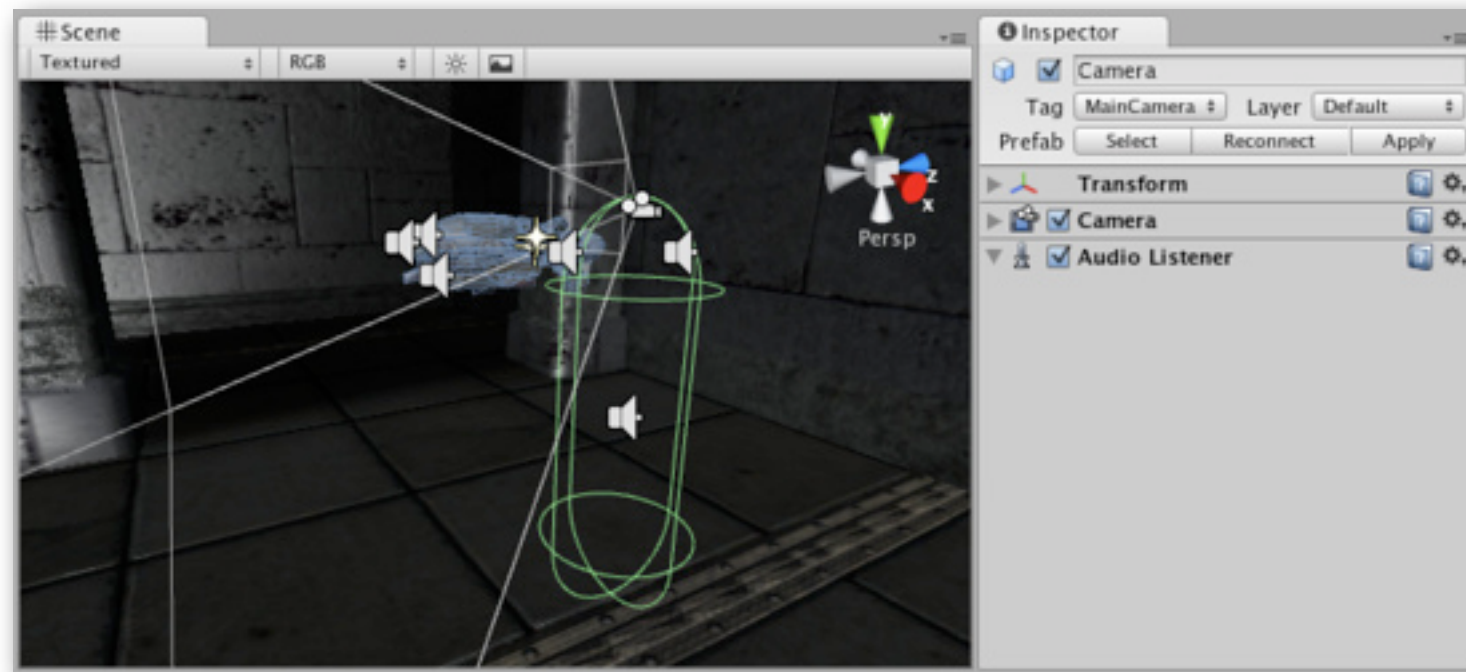


3D-Sound-Mixing (Unity 5)



<http://blogs.unity3d.com/2014/03/18/unity-5/>

Audio Listener



Achtung: Bitte immer nur einen Audio Listener (z.B. in der Camera) in der Szene aktivieren.

Wenn die **Main Camera** zusammen mit einem **Character Controller** in der Szene aktiviert sind, gibt es folgende Fehlermeldung: „There are 2 audio listeners in the scene. Please ensure there is always exactly one audio listener in the scene.“