SoundItem

position : vec3f
orientation : vec3f
num_src : int
num_mics : int
freq_bands : int
time_bins : int
hist_res : int
num_rays : int
sbt : OptixShaderBindingTable
traversable : OptixTraversableHandle
pipeline : OptixPipeline

+ SoundItem()
+ SoundItem(position : vec3f,
orientation : vec3f)
+ updateSBT(sbt :
OptixShaderBindingTable)
+ updateTraversable(traversable :
OptixTraversableHandle)
+ updatePipeline(pipeline :
OptixPipeline)

SoundSource

- m_local_histogram: LaunchData*
- d_local_histogram: LaunchData*
- m_buffered_input: float*
- d_buffered_input: float*
- m_buffer_size: size_t
- m_microphones: vector<Microphone>
- m_histogram: vector<float*>
- m_irs: vector<float*>
- d_irs: vector<float*>
- scene_change: bool
- m_stream: cudaStream_t

+ SoundSource()
+ SoundSource(pos: vec3f)
+ SoundSource(pos: vec3f,
orientation: vec3f)
+ add_mic(mic: Microphone&) : void
+ trace(): void
+ compute_ir(): void
+ add_buffer(input: float*)
+ convolve_file(input_file: string,
output_file: string, mic_no: int): void

Microphone

- m_output: float*

+ Microphone()
+ Microphone(pos: vec3f)
+ Microphone(pos: vec3f,
orientation: vec3f)
+ attach_output(output: float*): void
+ zero_output(): void
+ get_output(): float*