legends: Orange (Medium Priority), Red (Critical/High Priority), Blue (Info), Green (Good work!)

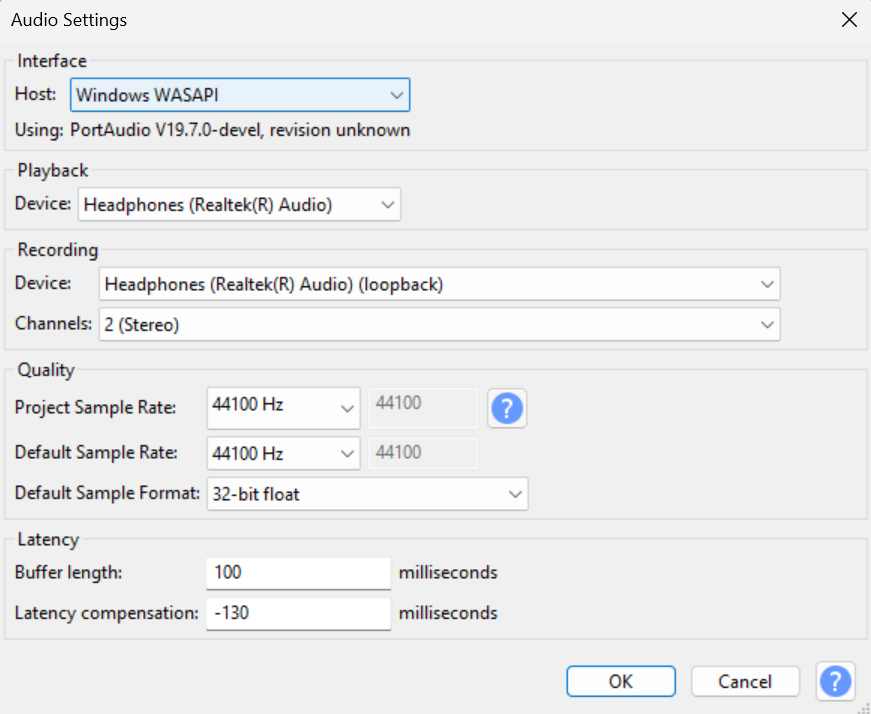
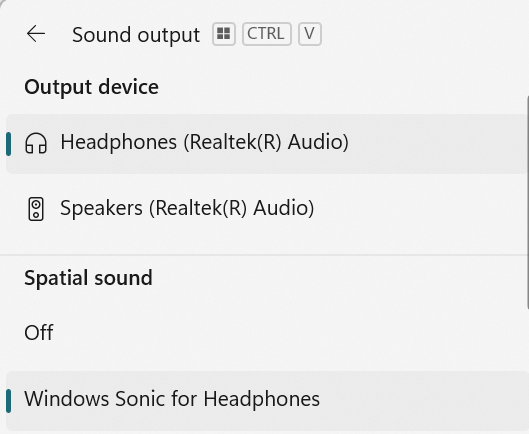
Done, Important

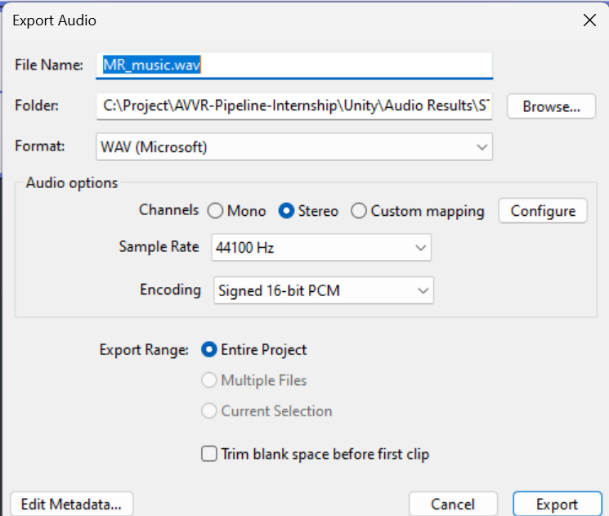
# Monday, 22 July 2024

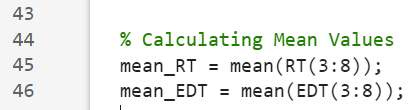
Morning started with Midway Development Day talks etc. Thus, real work started afternoon after lunch lol.

## **UPDATED TODO:**

1. Confirm steam audio setting and standardize/clean project directory to be less convoluted and organised (Mona gave her project as reference)
   1. automate baking with 1 button to streamline
   2. Add lighting indicator for when steam audio is working
2. Generate all audio
3. Do analysis using provided matlab, have proper report and findings for meeting.
4. Create unity scenes for all scenes and its category (VRDemo, nonVRDemo)
5. Add Rachel and Joao for Demo for more immersive VR demo , and probably have more audio cue. otw
6. Continue monodepth optimisation using enhance360debug.py
7. Remove docker clutter automatically
8. Remove LiDAR from LFS, and use separate cloud service to download that, or use MeshLab to optimize it.

For Eval scenes, record at least 30 sec after sound stop to be safe (to make sure get all reverb/reflections). Thus, disable loop and start record earlier (before pressing play, make sure no other sound). Recording using Audacity with following setup on Sony WH1000-XM4, at 50% Windows volume with Spatial Audio, make sure it is stereo. There is concern regarding audio quality and compression of using external software instead of directly through Unity but unfortunately there’s no simple way with Steam Audio compared to Google Resonance. (Need to confirm with Dr. Hansung if this is acceptable)

Audio export with following setting.

Matlab changes on octave band from 2:6 to 3:8 to follow previous paper methodology (as advised by Mona). To analyse the sound, just change directory definition and run the Main file (Main\_Immersive\_EDT\_RT60.m)

To get the RIR file for analysis, run the .ipynb coded by Mona in respective scene folders.

Honestly my brain kinda fried alr today so will continue tomorrow instead.

# Tuesday, 23 July 2024

Interesting to note, one of the most important factor for room reverb properties is its size, and the material properties inside it, imo the furniture shape etc is not as they only serve purpose to make room smaller (less echo) and depending on type of furniture/objects.

Another interesting thing to note, is that sometimes the reverb effect is not applied for first few second when game is play (for example, speech on ST), especially apparent when there supposed to be strong reverb. So using loop and having very long silence at the end might be needed.