

Meetings Document

Sorama Acoustic Playroom, VR sound visualization

Sorama

Eindhoven

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Author	:	Rick van Ham



VERSION

Version	Date	Author(s)	Amendments	Status
0.1	4/25/2022	Rick van Ham	Initial document layout	Structure
1	6/14/2022	Rick van Ham	Final submission	Content, Update

Communication

Version	Date	To

WEEK 3 JARNO:

- Focus first on Beamforming, then later we can see if I can implement NAH.
- Make sure the buffer is also of power 2.
- Jarno has some code that he can give, but he must convert it to C#.

WEEK 4 JARNO:

- Prepare for a Plan B
- Use C# (Unity) since the company's shifting towards that language
- VR shouldn't be a must

MEETING NOTES WEEK 5 JARNO AND MINA:

- Haven't seen V3 of the project plan yet.
- Will approve later to send it to canvas.
- Jarno was in another meeting, so he was late.
- Project is a multi-project. Handed out by different interns to work on.
- As long as sound can be visualized in a virtual environment, the project is completed.
- Do get Jarno out of other meetings if he has one with me and Fontys.

WEEK 6 JARNO:

- If there is a library for it, I'm freely allowed to use it.
- For FFT, knowing the basics is already good enough.
- Do ask about the importance before researching it.
- Ask Willemijn more about the project and the progress.

WEEK 7 WILLEMIJN:

- Improve current raycast with a "Targetting system" for the camera for spectrum
- Have tried looking into a spectrogram, but it's difficult to find a good one.
- Try looking for the not 100% perfect scenarios and make it still work. (Example, place a wall in between sound source and microphone and make it still work.
- Investigated headsets but not using devkits.

- Try asking Eitan for the 3D scan of the Acoustic Camera.

WEEK 8 JARNO:

- Investigate beamforming since that is important for the application
- Don't think of too many rooms, just work out the ones I already have.

WEEK 9 JARNO:

- Don't worry about textures, just use free assets, and upgrade them later on.
- Fix the mouse sensitivity since it is a bit high.
- People would be amazed if you could twist the valves and a leak would appear.

WEEK 11 JARNO:

- Beamforming is easy to explain, but hard to practice
- Since you know most of the information already, it shouldn't be hard to implement
- If the complex Math doesn't function, try to impress with the beautiful Visuals
- Set up a step-by-step plan for the beamforming
- Focus on very simple things, don't implement reflection.

WEEK 12 JARNO:

- Ask Job to turn the dependencies into one package to use for Beamforming
- The middle point of the microphone array and Target points have to be the same.
- The Hologram (WxH) (Targetpoints) should be the same as the output buffer[W, H] to make the heatmap image.
- For the Heatmap, with the output, we use an RGB, Transparency, and Threshold.

WEEK 14 JARNO:

- There was an issue with the input not responding with the output, turns out I kept using the wrong button
- Begin focusing on the beamforming the upcoming week.

WEEK 15 JARNO:

- Using the actual beamforming algorithm into Unity is time-consuming and more of a graduation project.

- There are more target points than microphones
- Use the Mock version of the heatmap and spectrum for the project
- Have other people test out and give feedback
- Focus for now on the Pipe System Interaction

WEEK 16 MINA:

- Likes the structure of the portfolio
- Make the link to the documentation public
- Add Advice and personal reflection to portfolio
- Makes sure the portfolio and presentation have a nice flow, from problem to solution
- For the documents on website, give a small explanation and conclusion
- Explain more about the Concept in Design
- Make sure the portfolio is understandable to someone who doesn't know about the project
- You can't add stuff after submission but can include it in the presentation
- You don't have too, but you are allowed to include unused content

WEEK 18: JARNO

- The project looks amazing, just add a few more things and its finished
- Make sure that there is a link between the sound source and intensity of the heatmap.
- Try to stop the blinking of the heatmap shader.
- Send Jarno the assessment form to give advice during the second company visit.
- Send the portfolio abstract as well to get the signature.