

Audio Augmented Reality Final Evaluation

The aim of this evaluation is to investigate the usability of an audio augmented reality app for conveying the weather through 3D spatialised audio effects and measuring how two different kinds of audio headset affect the experience of the app. The result will be used in a dissertation paper for my level 4 project.

After filling out the first section, you will be asked to perform some small tasks and get to know the app using a pair of headphones fitted with motion sensors and a pair of smart audio glasses.

Please remember that it is the system being evaluated, not your ability to use it! If an aspect of the app is not usable, then knowing this can help us improve the app in the future.

All responses are anonymous.

You may withdraw from this experiment at any time and for any reason. If you have any questions please get in touch at 2467245h@student.gla.ac.uk.

If you wish to take part in the experiment, please continue with the questionnaire.

* Required

1. Do you consent to take part in this questionnaire? *

Mark only one oval.

☐ Yes

☐ No *Skip to section 9 (Completion and Debrief)*

Demographic Information and Previous Experience

2. What is your age range? *

Mark only one oval.

☐ 18-24

☐ 25-34

☐ 35-44

☐ 45-54

☐ 55-64

☐ 65+

3. Do you consider yourself 'tech savvy'? *

Mark only one oval.

☐ Yes

☐ No

4. What is your experience with 'traditional' Augmented Reality equipment that uses both audio and visuals (i.e. Microsoft Hololens)? *

Mark only one oval.

☐ I own an augmented reality headset

☐ I do not own an augmented reality headset, but I have used one

☐ I have never tried traditional AR

5. What is your previous experience with Audio-only augmented reality equipment? *
(i.e. Bose Frames)

Mark only one oval.

- ☐ I own an audio-only AR device
- ☐ I don't own an audio-only AR device, but I have used one
- ☐ I have never used an audio-only AR device

6. What is your previous experience with augmented reality apps or games (i.e. Pokemon Go)? *

Mark only one oval.

- ☐ I regularly use AR apps
- ☐ I occasionally use AR apps
- ☐ I used to use AR apps, but don't anymore
- ☐ I have never used an AR app
- ☐ I tried an AR app once

7. How likely would you be to integrate an audio augmented reality app into your daily life? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not At All Likely

Please continue this questionnaire after trying out the app

Using the App (Headphones)

Please do not continue the questionnaire until you have used the app

This part of the survey refers **only** to your experience using **the headphones**.

8. The accuracy of the head tracking was... *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Good

9. How easy was it to determine where in 3D space a sound was coming from? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Hard

10. Before changing the settings, the 'Look Up' gesture triggered... *

Mark only one oval.

- ☐ At a comfortable height
- ☐ Too low
- ☐ Too high

11. Before changing the settings, the weather effect turned off... *

Mark only one oval.

- ☐ When my head returned to a natural resting angle
- ☐ Too early
- ☐ Too late

12. How easy was it to successfully perform the gesture to toggle the forecast mode on and off? *

On the headphones, this gesture is tapping and holding on the front of the right earcup.

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Difficult

13. How responsive was the app to your gestures? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Responsive

14. How did you feel while walking and using the app? *

Mark only one oval.

	1	2	3	4	5	
Not	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Comfortable

15. How would you feel using the app with Headphones in a public space? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Confident

16. Do you have any other feedback about using this app with headphones?

Using the App (Glasses)

This part of the survey refers **only** to your experience using **the smart glasses**.

17. How clear was the sound from the headset? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unclear

18. How easy was it to determine where in 3D space a sound was coming from? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Hard

19. Before changing the settings, the 'Look Up' gesture triggered... *

Mark only one oval.

- ☐ At a comfortable height
☐ Too low
☐ Too high

20. Before changing the settings, the weather effect turned off... *

Mark only one oval.

- ☐ When my head returned to a natural resting angle
☐ Too early
☐ Too late

21. How easy was it to successfully perform the gesture to toggle the forecast mode on and off? *

On the glasses, this gesture is firmly double tapping the right leg of the glasses.

Mark only one oval.

1 2 3 4 5

Very ☐ ☐ ☐ ☐ ☐ Very Difficult

22. How responsive was the app to your gestures? *

Mark only one oval.

1 2 3 4 5

Very ☐ ☐ ☐ ☐ ☐ Very Responsive

23. How did you feel while walking and using the app? *

Mark only one oval.

	1	2	3	4	5	
Not	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Comfortable

24. How would you feel using the app with Smart Glasses in a public space? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Confident

25. Do you have any other feedback about using the app with the Smart Glasses?

Forecast View

26. How easy was it to pinpoint where different sounds were coming from? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Easy

27. How useful do you believe this function would be in practice? *

Mark only one oval.

	1	2	3	4	5	
Not	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Useful

Using The App (General)

This section refers to your experience across **both** headset devices

28. Which headset did you prefer using? *

Mark only one oval.

- ☐ Headphones
- ☐ Glasses
- ☐ No Preference

29. Why do you have this preference? *

30. In general, navigation of the app interface was ... *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very difficult

31. Did you use the help menu during your time with the app? *

Mark only one oval.

- ☐ Yes, I did use the help menu
- ☐ No, I did not need help
- ☐ No, I did not use the help menu but I would have benefitted from it

32. If the help menu was used, how helpful was the information?

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unhelpful

Sounds

33. In general, how did each sound convey its respective weather condition? *

Mark only one oval.

	1	2	3	4	5	
Very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Unclearly

34. Which sound was the most effective at conveying its respective weather condition? Why?

*

35. Which sound was the least effective at conveying its respective weather condition? Why?

*

36. What other weather conditions should be represented in this app?

Final Section

37. Do you have any additional feedback on the usability of the app?

38. How likely would you be to integrate an audio augmented reality app into your daily life? *

Mark only one oval.

1 2 3 4 5

Very ☐ ☐ ☐ ☐ ☐ Not At All Likely

Completion and Debrief

Complete!

The data collected from this experiment will be used to determine how the app could be improved, as well as how the different headsets impact the user's experience.

Your response will form an important part of my final paper on this subject.

Thank you for taking part!

Please contact me at 2467256h@student.gla.ac.uk if you have any questions!

Press submit to finish

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