

Participant Consent Form

RIGHT TO REFUSE OR WITHDRAW

If you volunteer/opt-in to participate in this study, you have the right to withdraw before the study commences, during the study, and after your participation has finished. If you decide to withdraw during the study, this can be simply relayed to the researcher at that time, while pre- and post-withdrawal can be relayed by contacting the researchers or the supervisors, either anonymously or via email. Please note that you must be aged 18 or over to participate in this study.

TUS Students Only: Note that this study has no connection with your academic studies at TUS, therefore your decision to participate, not participate, or withdraw from this study bears no influence, benefits, or penalisations with regards to your academic studies at TUS. Please note must aged 18 or over participate studv. again that you be to in this

RIGHT TO ASK QUESTIONS OR REPORT CONCERNS

You have the right to ask questions or report any concerns that you may have in relation to this research study. You may contact the researcher, the supervisor, or the non-affiliated third party, using the details provided on the information sheet.

DATA PROTECTION AND CONFIDENTIALITY

Data will be in a digital form and stored in an encrypted directory, for up to seven years, with limited access to only the researchers directly involved. No data that is attributable to individuals will be published or presented, only anonymised, aggregate results will be utilised for these purposes.

Your identity will not be gathered or associated with any data retrieved from the software programme.

You will be directed to the user-study programme upon completion of this form.

Please confirm the following to proceed to the user-study.

I confirm that I am willing to take part in this research study

I confirm that I am aged 18 years or above



Information Sheet for User-Study Participants

WHAT ARE THE AIMS OF THE STUDY?

- To identify sensory constraints on human short-term memory performance related to auditory salience and long-term memory feedback.
- To inform techniques for multimodal information delivery that are conducive to optimal cognitive function by developing representative framework for application interface designers.
- To test the integration of theories integrated in a psychophysical model designed by the researcher, including:
 - Short-Term Memory (Baddeley and Hitch, 1974)
 - Long-Term Memory (Squire, 1992)
 - Working Memory (Baddeley, 2012)
 - Bottom-Up Auditory Attention (Kaya and Elhilali, 2014)
 - Theories of Selective Attention (Broadbent, 1958; Kuyper, 1971; Arons, 1992; Driver, 2001; Knusden, 2007).

WHAT DO YOU HAVE TO DO?

Should you decide to participate in this user-study, you will be asked to complete the following:

- Navigate to the user-study app, using the URL provided.
- Confirm that you have read the website privacy statement.
 - Upon confirming, you will be brought to the next study page.
 - If you decide to not confirm, you will exit the process and we thank you for your consideration to partake in the study.

Note that the privacy statement is to confirm that we will not ask you for any private identifiable information and that we do not install cookies and do not employ any IP tracking/identification.

- Confirm that you are 18 years-of-age or older and are in a position to give independent consent to partake in the study.
 - If you are under the age of 18 and/or unable to give independent consent, you will need to exit the process and we thank you for your consideration to partake in the study.
 - $\circ~$ If you are over 18 and in a position to give independent consent, you will be brought to the next study page.
- Confirm that you opt-in to partake in the study.
 - If you reject, you will exit the process and we thank you for your consideration to partake in the study.
 - If you accept, you will be brought to the next study page.

Note that you have the right to withdraw your participation at any point during the study process, up to and including submitting your final responses after completing the entire study.

- You will then be presented with the study instructions.
- You will then be presented with an audio calibration file to allow you to adjust your system volume until it is at a safe comfortable level for you. We ask that you keep the volume level uniform throughout your participation.
- Within the application, you will then be guided through a series of short-term memory tasks.
- Memory tasks will involve paying close attention to a series of numbers which will be presented to you one at a time. You will then be tasked with remembering their order and typing them into a recall prompt within the application.
- During some recall tasks, you may hear a sound file playing in your headphones/earphones or speakers. We do not ask that you attempt to recall these stimuli, however it is important that you keep the audio level at a reasonable volume regardless of any distraction they may cause.
- After you complete a user-study phase, you will also be asked to complete a NASA TLX questionnaire to give us feedback on how easy or difficult you found these tasks.
- The total estimated time for this study will be 15 minutes.

WHAT ARE THE BENEFITS IN PARTICIPATING?

By participating in this study, you will be contributing to important research related to working memory, auditory salience, and audio design standards. Specifically, your assistance will help the researcher to gather data that informs the design of a framework for audio design within industrial applications.

Participating in this study will also allow you to gain an insight into some active postgraduate research in the Department of Digital Arts and Media in the Technological University of the Shannon: Midwest (Limerick, Ireland).

During the user-study, you will also be navigating through a software application designed by a graduate of the Music Technology & Production course in TUS, and you will gain some insight into how course content such as programming languages can be used to build user interfaces. You will also learn about Task Load Index questionnaires, and how NASA's TLX design allows researchers to determine the intensity of workload of specific tasks.

WHAT ARE THE HEALTH AND SAFETY RISKS?

There are no health or safety risks to you. The researcher will conduct the study in a professional and ethical manner, and has passed the institution's comprehensive ethical approval process prior to this recruitment call. Equipment required for this study comprises your own standard personal computer or mobile device, your standard internet connection, and your own standard headphones. No personal or tracking IP data from individual participants will be gathered. Your name and contact details will not be requested, and the data gathered from the computer and software during the tasks will not include your IP address or any other identifiable user and/or machine information. You will not be requested to send study data via email, as this is an obvious identifier. Instead, data only directly relevant to the study will be sent through the study's anonymised channels.

WHAT HAPPENS TO THE DATA?

Anonymous data will be in a digital format and stored in an encrypted directory, for up to a maximum of seven years and for a minimum for which the data is required to complete the researcher's PhD programme. Access to these data is limited only to the researcher and her PhD supervisors (detailed

below). No data that is attributable to individuals will be published or presented. Only anonymised, aggregate results will be utilised for these purposes. Participants who volunteer their responses for this research project will have no identifiable link (either personal or machine/device derived) to the data submitted.

WHO IS TAKING PART?

Post-Graduate Researcher: Ms. Rokaia Jedir Principal Supervisor: Dr. Flaithrí Neff Secondary Supervisor: Mr. David Murphy

CONTACT INFORMATION.		
Postgraduate Researcher:	Principal Supervisor:	Non-Affiliated Third Party:
Rokaia Jedir	Flaithrí Neff	Patrick Duffy
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