

## Privacy Notice

Name of Research Project: SOVRA: Subjective orientation in VR audio

### Description of Project:

This work is a collaborative research project to deliver the following aims:  
This research project will involve establishing a method for capturing listeners' experiences of spatial audio in VR. Whilst wearing a Head Mounted Display (HMD), sounds will be presented to listeners who will be asked to indicate the relative position in both orientation and depth. This information will provide an insight into how effective existing Head Related Function Transfers (HRTFs) are for binaural presentation, as well as help assist in identifying approaches that are effective for communicating auditory spatial cues. A VR testing environment and an initial method has already been developed in Japan by Dr Julian Villegas from the University of Aizu, and this funding would be used to establish the approach's reliability and extend the technique further in preparation for a joint grant application. Traditional methods of capturing spatial listening experiences have focused on physical anatomy, in the erroneous belief that hearing is identical to listening. There are many factors that affect auditory spatial perception, from levels of listening, reproduction hardware, noise floor, presbycusis, general health, cognitive load, levels of distraction, type of content and even the choice of task, amongst many others. Having the ability to identify where listeners perceive a sound emanating from can also be utilised for diagnosing hearing impairments as well as head injuries. The technique could be important in emergency situations where spatial identification of sound sources is essential such as in the case of firefighting, or other evolving life-threatening scenarios where orientation is key. Both VR simulations and AR support systems could be tested under different cognitive loads to develop novel forms of sonification to improve reaction times, spatial orientation, and navigation.

Data Controller	Edinburgh Napier University
Purposes for collection/processing	Population description for research into establishing a reliable method of capturing end users' experiences of spatial audio within a Virtual Reality environment.
Legal basis	<p>Art 6(1)(e), performance of a task in the public interest/exercise of official duty vested in the Controller by Statutory Instrument No. 557 (S76) of 1993 as amended, e.g., for education and research purposes.</p> <p>Whilst we are not intending to collect either any personally identifiable data or special category (sensitive) personal data and ask that you don't provide any, it is possible that your response may include some and therefore where special category (sensitive) personal data is being processed the additional bases from Article 9 is: Art 9(2)(j) for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes.</p> <p>The use of data is proportionate to the aim pursued as we are collecting the minimum personal and other data</p>

	necessary for the purpose of the research. We have also taken suitable and specific measures in the choice of survey tool and data collected to reduce the potential for collecting personal data.
Whose information is being collected	Members of the public with an interest in VR.
What type/classes/fields of information are collected	Age, gender, hearing abilities, familiarity with VR audio.
Who is the information being collected from	Directly from the data subject.
How is the information being collected	In person
Is personal data shared with externally	Anonymised summarised data is being shared with Professor Julian Villegas from the University of Aizu in Japan.
How secure is the information	For services provided locally by Information Services, information is stored on servers located in secure University datacentres. These datacentres are resilient and feature access controls, environmental monitoring, backup power supplies and redundant hardware. Information on these servers is backed up regularly. The University has various data protection and information security policies and procedures to ensure that appropriate organisational and technical measures are in place to protect the privacy or your personal data. The University makes use of a number of third party, including “cloud”, services for information storage and processing. Through procurement and contract management procedures the University ensures that these services have appropriate organisational and technical measures to comply with data protection legislation. The University is <a href="#">Cyber Essentials Plus</a> accredited.
Who keeps the information updated	Dr Iain McGregor
How long is the information kept for	Anonymised data is kept for 10 years following completion of the study (expected February 2023).
Will the data be used for any automated decision making	No
Is information transferred to a third country? Outside the EEA and not included in the adequate countries list.	No
<p>You can access all the University’s privacy notices using the following link:  <a href="https://staff.napier.ac.uk/services/governance-compliance/governance/DataProtection/Pages/statement.aspx">https://staff.napier.ac.uk/services/governance-compliance/governance/DataProtection/Pages/statement.aspx</a>  You have a number of rights available to you with regards to what personal data of yours is held by the University and how it is processed – to find out more about your rights, how to make a request and who to contact if you have any further queries about Data Protection please see the information online using the following URL:  <a href="https://staff.napier.ac.uk/services/governance-compliance/governance/DataProtection/Pages/default.aspx">https://staff.napier.ac.uk/services/governance-compliance/governance/DataProtection/Pages/default.aspx</a></p>	