TECHNICAL DETAILS OF ANDØYA *OPEN FORM PAVILION OF AIR* & IMPLEMENTATION

1. Function of the Echoes app, sound, materials and the sound's relation to site:
The Echoes app works directly with GPS co-ordinates. These relate to shapes that are drawn by the creator (me) onto a developer version of the app's map to create zones (in this case circles). Each zone is called an 'echo' on the app. When a user enters an echo this triggers a pre-determined sound assigned to that zone. So, as the user walks across the site, walking into each echo triggers a sound via GPS and is heard in the headphones. The sound fades in from the edges and becomes louder towards the centre. Entering an overlapping echo triggers an additional sound that is mixed in together. Entering multiple/overlapping echoes creates multiple possible compositions, sounding together and across one another.

The sounds created for each echo are designed to work with the adjacent and overlapping echoes to create a coherent composition and cross-modulation between them. That is, each echo changes (modulates) the sound of each overlapping echo. The sounds also have a correlation to an overall architectural design – be it a relational series of rising and falling parabolic shapes (like a circus tent) that fit together to create a coherent architectural form. The sound elements utilize a custom-made tuning as the basis for multiple sliding sine-tones that through their interaction sonically ascribe planes, be they linear or non-linear such as a hyperbolic paraboloid.

The hyperbolic paraboloid was popularised by the development and use of form concrete in the 1930-40s leading to mass-use in the 1960s and in this project draws from: Hansen's concepts for pavilions for Stockholm, Izmir & Sao Paolo* ; through to furthering elements of (in a similar but different way) Xennakis' Philips Pavilion with Le Corbusier & by extension his Metastasis piece; and finally the idea of making a pavillon without walls, a roof that lets through sound, relates to the Climata project I enacted in 15 of James Turrell's Skyspaces*.
*see right hand side https://www.recordedfields.net/installations/andoya-open-form-pavilion-of-air/

The GPS in the Echoes app works best outdoors and away from buildings. Buildings can distort the GPS signal and cause the position of the listener on the app to vary (depending on the level of interference from any large structures), so creating the design away from buildings is ideal. The larger the site the more room listeners have to move and notice the subtle but sizeable interaction between their movement and the sounds as well as the movement between and across multiple sounds in overlapping zones. Designs usually have areas of between 2 to 6 overlapping echoes. An open area of min. 10m up to 20-40m is ideal.

2. Implementation:
No physical infrastructure is built as part of the Pavilion process. No costs for infrastructure are incurred.
Once a site is chosen, the Pavilion design, as a logo/map, is devised to fit the site and sound is developed for the elements/echoes that best interacts with the location-sound and produces a sonically coherent movement between echoes. Testing is undertaken to check for interference to GPS from nearby structures. The Pavilion functions by downloading the Echoes app from https://echoes.xyz/ and opening the audiowork in the app using a link or QR code provided and listening via headphones. The audiowork is GPS locked to the site and can only be heard at the specified site. Displaying the QR code on-site is ideal via a plate/sticker/poster plus print programme &/or website eg https://www.instagram.com/p/CjAqtDaMdc4/

3. Talk:
A talk tailored to general public, specialist, novice etc can be presented that relates work's concepts and how it relates to my work in general. These talks have been delivered to a range of audiences from general public, festival audiences to university and conservatorium students. Details on my approach to delivering such lectures/talks at this private link https://www.recordedfields.net/live/physical-sound-workshop/

4. Further technical information:
Sounds for the echoes/pieces are created using sine-tones generated within free audio software (such as Audacity) using custom-designed tuning and simple linear portmenteau/sliding transformations to each sound; these are uploaded to the creator interface of the Echoes app as M4A files and heard on-site in the app via headphones for clarity directly to the participant's ears (especially against background sound and any possible speaker distortion produced by a smartphone's speaker).