

((aura))
sonic augmented reality

the stuff around
the stuff
around you



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Artist's Statement

As an artist, working exclusively with technology, I have an ongoing fascination into the role of rule systems within a Fine Art context. Through the aura project I applied this interest to explore mediating the experience of a place through located sound.

The embodied experience of aura is characterised by actively exploring an augmented reality during which the user creates a personal map of the space in conjunction with the sounds and real world experiences they encounter; typically this is followed by a shared re-mapping as they compare their experience with that of other users.

This shared experience will be amplified in two forthcoming multi-user installations; a first where the audience will create a sonic landscape directly from their movement in relation to others and secondly where a shared sonic landscape is eroded by individual movement thus creating a system of sonic value and consumption.

Steve Symons

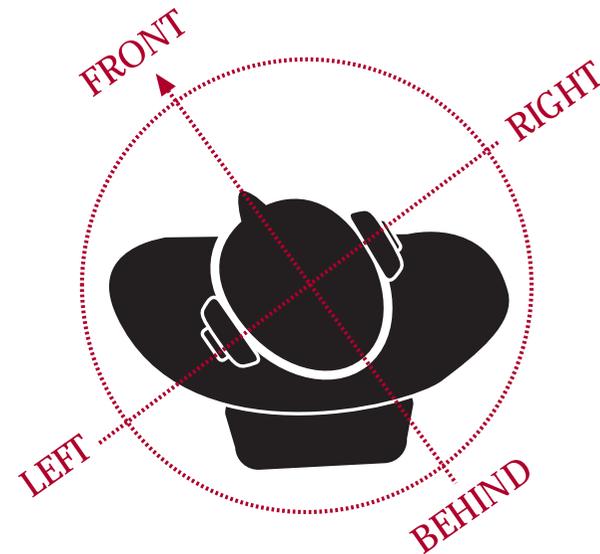
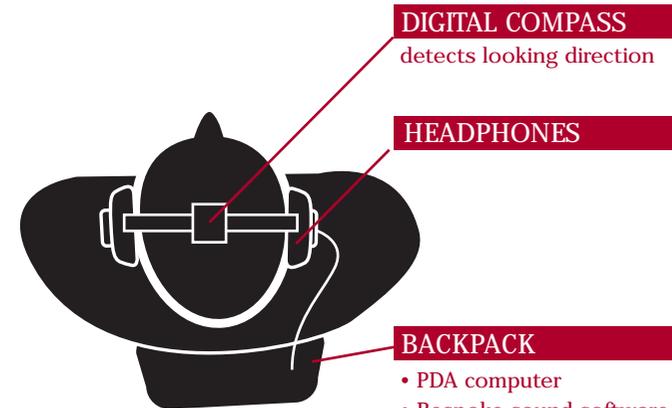


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aura is a sonic multi-user augmented reality that allows users to effect a personal audio landscape through their actions within a defined space, and in doing so, they also alter the vista for other users. By focusing on physical dialogues and non verbal communication, participants are encouraged to work together to create sonic tapestries through their relative movements.

INFO: AURA BACKPACKS

Users don a lightweight backpack that contains the aura system. Bespoke hardware and software created by the artist delivers audio depending on the user's location and the direction they are facing.



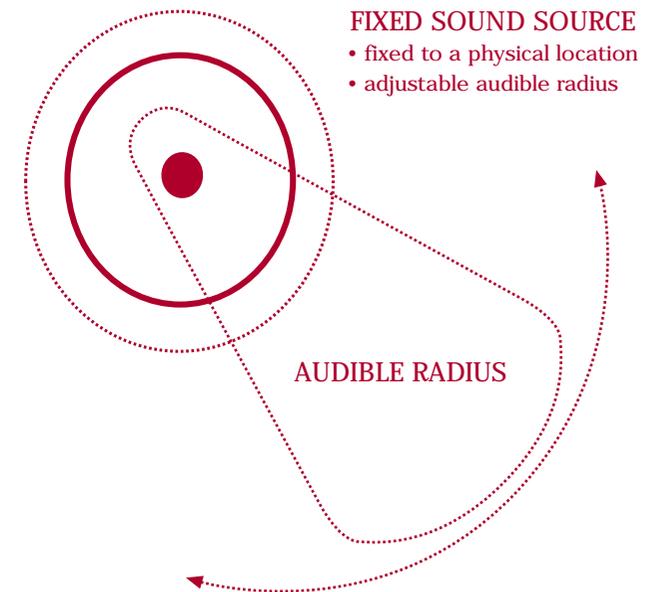
3D stereo sound based on looking direction

((aura)) : aura sound world sonic augmented reality

Augmented reality involves the overlaying of digital information onto real space. By moving through the real environment users experience the digital information at the location to which it refers. aura rejects physical interfaces (mouse, keyboard, screen) in favour of directional augmented reality to create a seamless naturalistic experience. The aura project takes this a stage further through the full sonic augmentation of real space. Walking through the designated space wearing headphones and carrying an aura roving unit (Personal Digital Assistant (PDA) augmented to access user location and heading) provides full spatial listening that encourages the creation of “sculptures of the mind”.

INFO: FIXED SOUND SOURCES

Fixed sound sources are associated with physical locations in the environment. Each sound remains mapped on it's location and acts as if physically there. Volume increases if the listener approaches the sound's source. If a user passes it the sound pans accordingly and if the listener looks in the direction of the sound then it centers.



((aura)) : single user

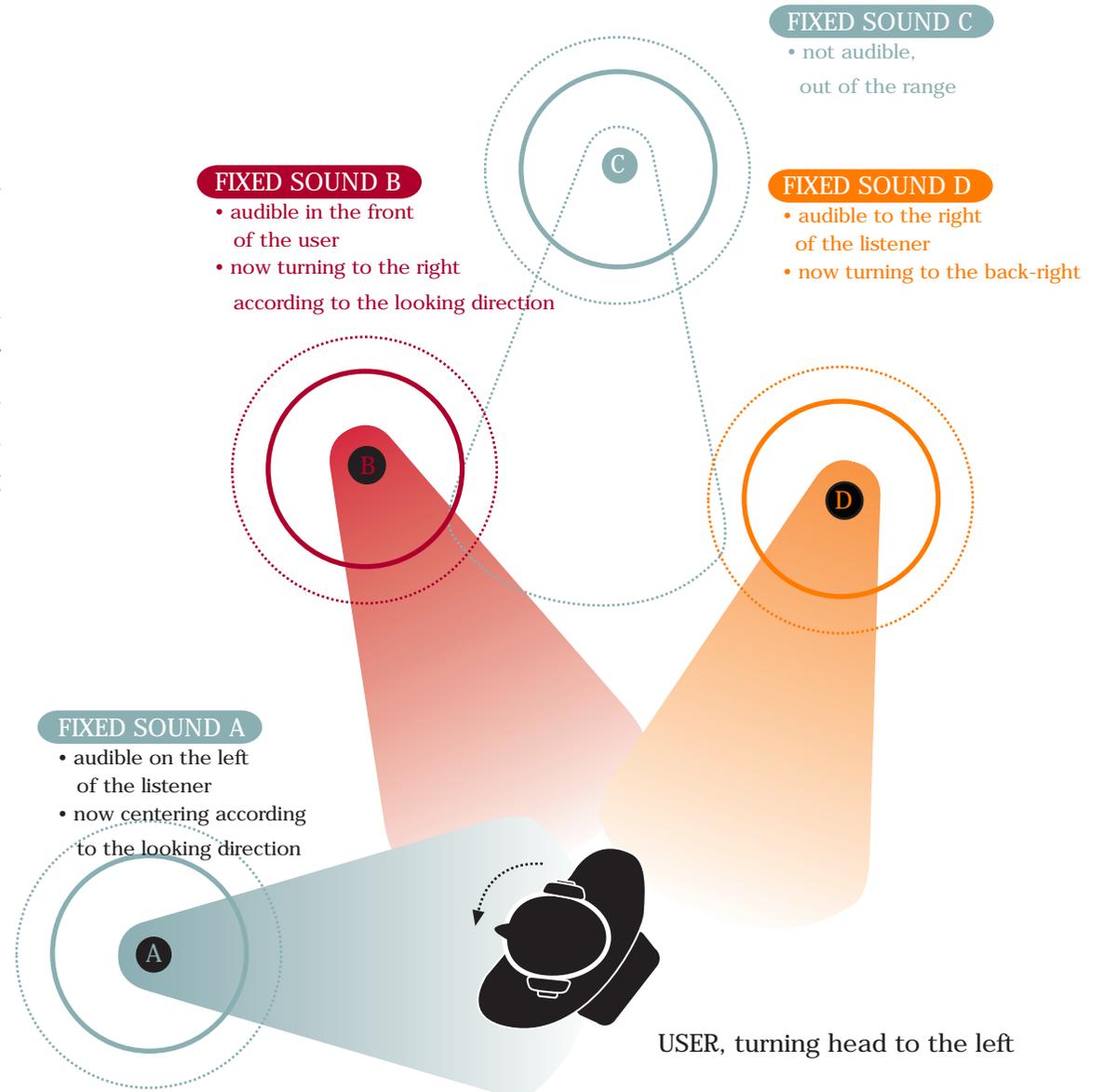
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Using audio loops abstracted from bird song, the first public presentation of the aura system (Futursonic04, Manchester, UK), went beyond the conventional approach within much locative media where information is overlaid onto real space without accounting for user heading (the direction a user is facing). Although such work can successfully set up a cultural tension between media and the location at which it is received, by using direction the aura system taps further into our expectations of the real world and thus amplifies the relative physicality of the experience.

INFO: A RICH LAYERED SOUND WORLD

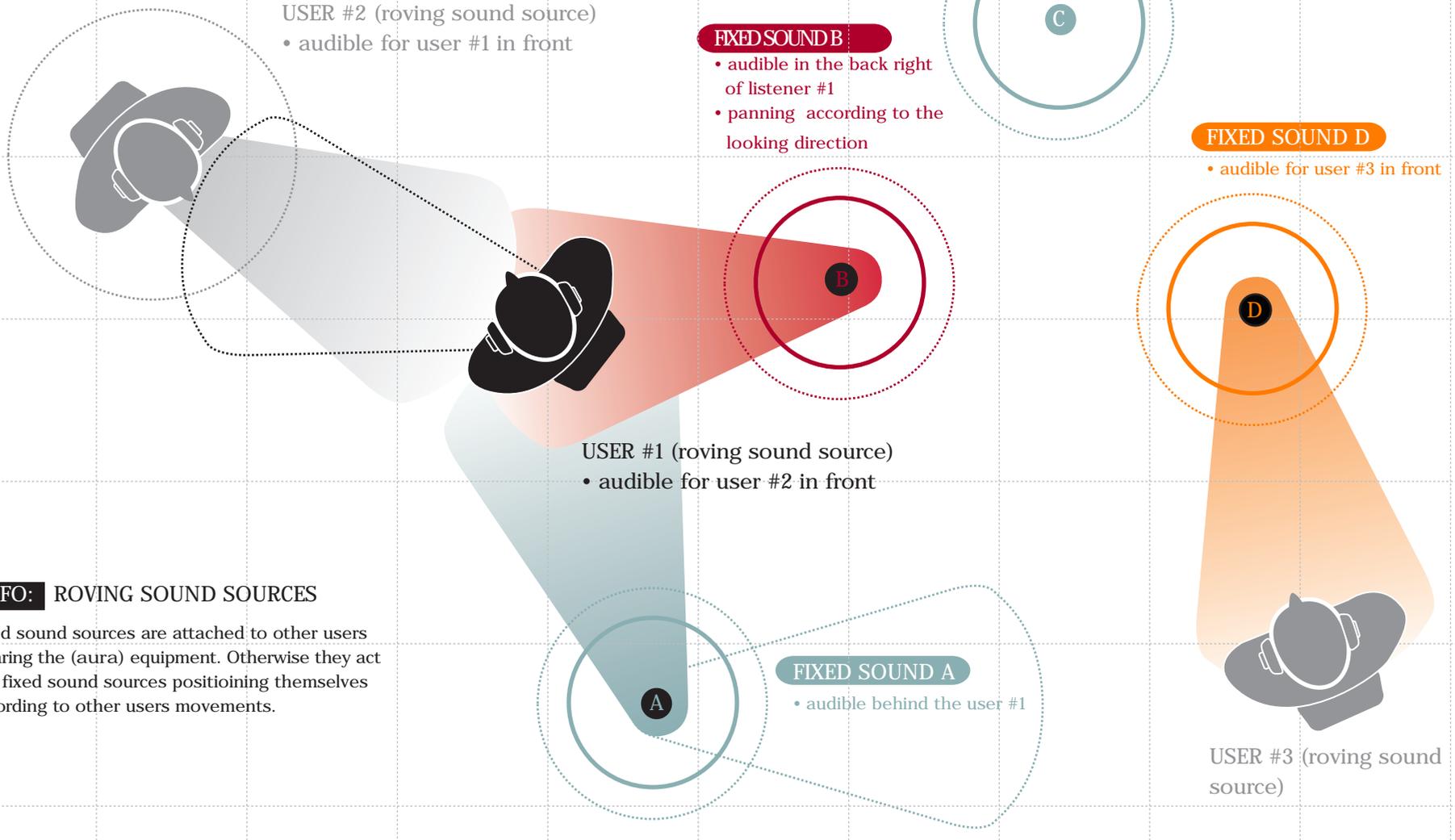
As users move through the real world they also navigate the aura sound world. Multiple fixed sound sources combine to create a rich layered soundscape that shifts as the user explores the space.

Currently the sound world is built from sound loops abstracted from field recordings. A more fluid process of real time acoustic synthesis is being explored for future installations.



((aura)) : multi user

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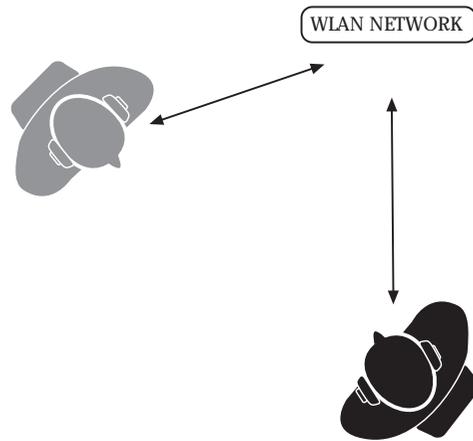


INFO: ROVING SOUND SOURCES

Fixed sound sources are attached to other users wearing the (aura) equipment. Otherwise they act like fixed sound sources positioning themselves according to other users movements.

((aura)) : positioning

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INFO: OUTDOORS

Users' positions are tracked using GPS receivers. Fixed sound sources are mapped to the physical world based on GPS coordinates. Location and direction is shared between different users using a WLAN.

INFO: INDOORS

The users' position is tracked using a tag on the headphones. Fixed sound sources are mapped to virtual locations in relation to the space. Location and direction is shared between different users using a WLAN.

Each user's location and heading is rendered audible to other participants within a 3 dimensional sound-scape that blurs the real world and artistic intervention. Users navigate the aura world by walking and turning. As users move they cause shifts in the sound-scape; pitch, timbre and sample vary in response. Sounds also emanate from other users, causing spatial and mental associations that fluctuate with their relative distance.

The content emerges from the interaction between participants. Actions by one user that may result in a pleasant affect may not carry over to another users' experiences. Through manipulating the sound-scape heard by individual roving units, the work seeks to question assumptions of shared language and cultural references.

((aura)) : installation

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Installation requirements

Generally an open, outdoor, area of at least 50+ by 50+ meters is required.

An appropriate system and personnel to manage the storing, checking in and out (e.g. taking some form of identification) of the technology (PDAs, digital compass, etc) necessary for viewers to experience aura and also to provide basic technical assistance throughout the installation (recharging batteries in between users) will need to be provided. This can be done via an existing information desk. The aura units may need to be activated outside (depending on installation).

The aura system has been designed to be as autonomous as possible, with a clear operating structure that will enable assistance from non-technical personnel. However 5 to 10 minutes training time is recommended.

The host is expected to provide appropriate insurance for the equipment and public liability.

Technical requirements

aura comes 'suitcase ready' with all the base technology in place.

1 x GPS, WIFI enabled Axim30 – acts as a base unit.

3 x GPS, WIFI enabled Pocket PC PDA (e.g. HP IPAQ 5550)

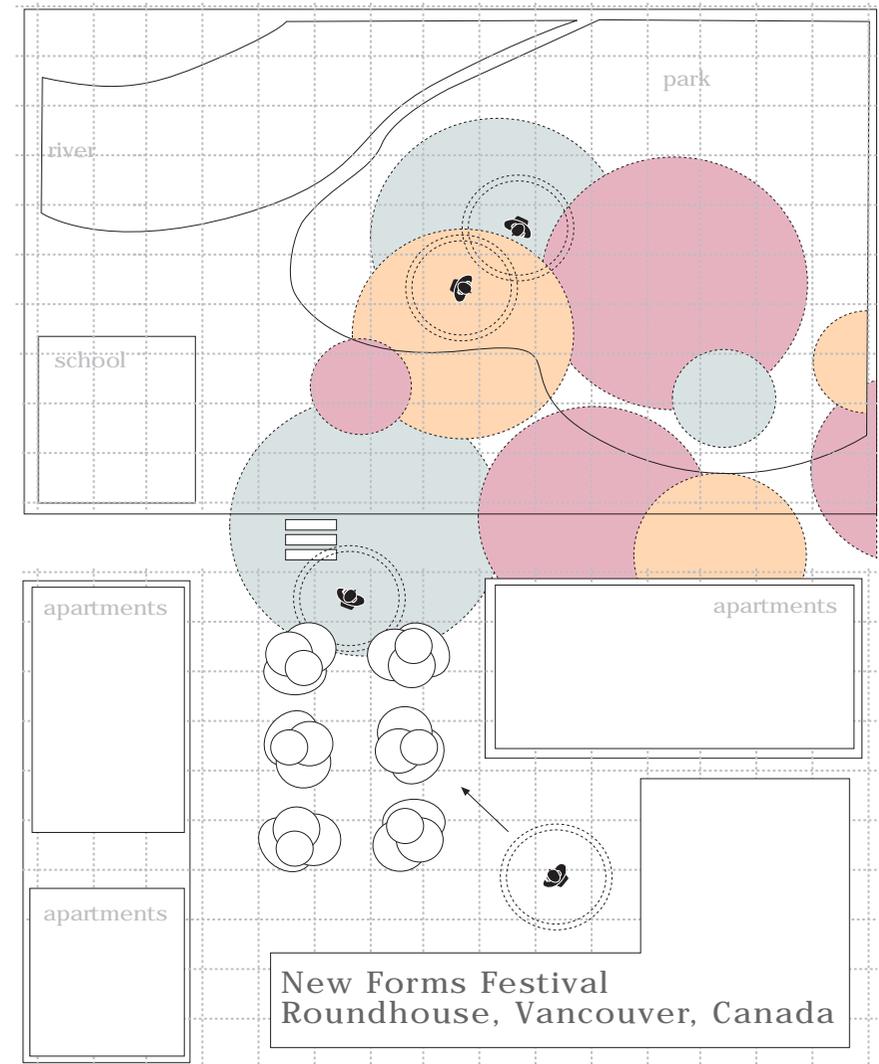
3 x Headphone, digital compass combinations (constructed by muio.org)

3 x Headphones – to allow users to 'go with a friend'

3 x dual headphone adapters

3 x back-packs

1 x WIFI Network Hub. 1 x Ethernet Cable, 1 x PC/Laptop running minimum Windows 98 to act as a communication server



((aura)) : Steve Symons

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In addition to Futuresonic04, Aura has also been exhibited at Deleite, Barcelona, April 2004 and at the New Forms Festival, Vancouver, October 2004.

Steve Symons is a Manchester-based artist who works exclusively with technology as an art medium, exploring open and semi-open systems. He is also a member of pylon and founder of muio.org, an Art, Technology and Interface Research organisation set up to facilitate his artwork and the technology created in its realisation.

Steve's other work includes: -

"Intelligent Installations 4,5,7" 00000001 Exhibit Creative Technology, Manchester, September 1998

"audiostructure", Superstructures, The Cube Gallery, Manchester, September- October 1999

"Gravity makes me sad", a collaborative piece with Graham Clayton Chance, Shift'00, Shifts in Choreography conference, Chisenhale Dance Space, January 2000

"Urban Genome" part of Urban Cycles – National Palace of Culture, Sophia, Bulgaria, September 2000

"neuralMix" a downloadable toolset for the testing and mating of gene based autonomous sonic agents, December 2000

"cadeMix" – installation using neuralMix, Glasgow School of Art, April 2001

"Viral Synthesia" part of Urban Cycles UK – Library Walk, Central Manchester, UK, March 2002

"Urban Cycles" ed Galina Dimitrova, Anneke Pettican, Steve Symons, January 2003, published by International 3, available from Cornerhouse Publishing ISBN 0-9542058-2-0

"p++" November 2003, implementation of neuralMix for internetradiobot

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