Endangered Sounds: a sound project

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***Endangered Sounds* is a project that focuses on the exploration of Sound Marks[1] (trade-marked sounds). The initial stage of this project was funded by Arts Victoria, and comprised legal searches that resulted in the listings of Sound Marks registered in Australasia and the United States of America. This list was published on the Internet[2] with a call for volunteers to collect samples of the listed sounds internationally. The volunteer was sent a specimen tube with label and cap, and asked to collect the sound by placing the specimen tube close to the source (thereby capturing the air through which the sound travelled), securing the cap and then completing the label, documenting the time, place and nature of the sound (Sound Mark Reg. No., Sound Mark Description, Time of Capture, Date of Capture, Location, etc.). These specimen tubes were collected and displayed in chemistry racks in the exhibition in the Biennale of Electronic Arts, Perth in 2004, illustrating the frequency and diversity of the environment into which these 'private', protected sounds have been released. The exhibition project consisted of:**

(1) A Web portal listing all the Sound Marks listed in Australasia and the USA, and negotiations are underway to expand that to include the EU.
(2) A collection of Sound Marks in specimen tubes with caps and labels gathered internationally by people who volunteered to *collect* samples of Sound Marks in their environment.
(3) A number of glass vacuum desiccator vessels containing a small loudspeaker and sound reproduction chip suspended in a vacuum, reproducing Sound Marks in the vacuum, notionally breaking the law, but as sound does not travel in a vacuum the gallery visitor hears no sound – what then is the jurisdiction of the Sound Mark?
(4) A card index register of Lost and Deceased sounds.

This project questions the legitimacy of privatising and protecting sounds that are released at random in public spaces. If I own a multi-million dollar penthouse in a city, and work night shifts, I have no recourse against the loud Harley Davidson or Australian Football League (AFL) siren that wakes me from my precious sleep – both sounds are privately protected, making their recording, reproduction and broadcast illegal.

While there are legal mechanisms for protection against repeat offenders, and many of us are committed to a culturally conditioned moral obligation[3] re sound dispersion, there are no legal limits – I can call the police, but the football siren is already within legal standards and still permeates the private domain of city dwellings. The noise abatement legislation is only applicable to regular breaches of the law, and takes some time to sort out, but it does not apply to singular occurrences which, although within legislated limits, still disturb. Additionally, the laws are based on amplitude and do not really address the issue of propagation. The ownership of the sound is not addressed in these legislative mechanisms – it should be; if the sound is an emblem of corporate identity, we should be able to choose not to be exposed to it, in the same way that we can place a 'No Junk Mail' sign on our letter boxes. Acknowledgement of the private domain is sacrosanct in other areas of legislation, in fact heavily policed, but not addressed in discussions of the acoustic environment beyond amplitude limitations.

1. INTRODUCTION

In early 2001, NASA announced they had captured an echo of the Big Bang!![4] I have in my head an image of a wind-beaten astronaut hanging out of a porthole of a distant spaceship, specimen tube in hand, swinging madly at arms length to capture a sample of the echo, an invisible artefact identifiable only by sophisticated sensors onboard. Once gathered, this sample is corked, labelled and safely archived. Of course this is a phantasmic vision, but it was my initial response, and stands as the inspiration for the *Endangered Sounds* project. Of course the Wilkinson Microwave

[1]Please note, the use of the words Sound Mark in this article refers to the legal trademark mechanism associated sonic signatures, and not to the concept of sound mark as defined by Murray Schafer (1993). Most conventions and national statutory provisions provide a definition of a trademark that either encompasses sound as a trademark, or does not expressly exclude sound as a trademark. Sound Marks are controlled by the Madrid Agreement and the Madrid Protocol, both of which are administered by the World Intellectual Property Organisation (WIPO), the Paris Convention for the Protection of Industrial Property, in addition to individual national statutory provisions, and are subject to international classification under the Nice Agreement.

[2]http://www.activatedspace.com/Installations/endangeredsounds/ (cited 21 January 2005).

[3]Schafer (1993: 186–8) provides interesting figures on reported noise complaints that illustrate the environmental and cultural influences on conditioned sensitivities.

[4]http://map.gsfc.nasa.gov/m_mm/ob_tech1.html (cited 25 February 2005).

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Anisotropy Probe (WMAP) was a highly sophisticated, and un-manned probe, designed to measure cosmic background radiation:

> Microwave radiation from two spots on the sky roughly 140° apart [are fed] to 10 separate differential receivers that sit in an assembly directly underneath the optics. Large 'elephant ear' radiators provide cooling for the sensitive amplifiers in the receiver assembly. The bottom half of the spacecraft provides the services necessary to carry out the mission including command and data collection electronics, attitude (pointing) control and determination, power services and a hydrazine propulsion system. The entire observatory is kept in continuous shade by a large deployable sun shield that also supports the solar panels. (NASA 2001)

This NASA discovery caused me to think about all the sounds that have become extinct. In defining 'extinct' sounds one immediately starts collating a list of long-forgotten sonic artefacts, the sound of milk bottles clinking, horses pulling carriages through the streets, the speaking of lost languages, to name but a few, but there is another less obvious category which deals with all the sounds that have been in essence removed from the public domain through the securing of Sound Marks. The Endangered Sounds project started at this point, by seeking to define how many sounds had been defined as Sound Marks, and what kind of sounds they were. In collaboration with Media Arts Lawyers in Melbourne, a list of Sound Marks in Australasia and the USA was collated and published on the project Website[5] in 2003.

The echo of the Big Bang also caused me to think about 'sonic residue', the sounds that continuously surround us, which we subconsciously filter out. Selective hearing is an important human psychoacoustics skill, allowing us to focus on points of interest in the modern noise-ridden environment. But, selective hearing also means that we don't often analyse or question the sounds that make up our aural environment (Schafer 1986), we don't question the introduction or removal of sounds from that environment (Schafer 1993), and we don't consider our right to control the aural environment, or the rights of others to influence the shared aural environment.

NASA explained the echo of the Big Bang as a detailed soup of noise that we hear all the time. It is the noise we hear when in a very quiet room, the ringing in the ears that like a maternal spirit, envelopes even the sound of our body operating; our breath, our heartbeat, our eyes blinking . . . it is inescapable, but never consciously heard. It is a sound we can't escape. Of course this is popular science, because in actual fact the sonic memory is in the microwave bandwidth, well beyond the range of human hearing, but perhaps not beyond the hearing range of other animals that inhabit the earth, in which case, what do they hear?

The thought that this sonic imprint dates back to the very origin of our universe is rather profound. It is fundamental to the vibration patterns of all perceivable matter.

> Giant sound waves propagated through the blazing hot matter that filled the universe shortly after the big bang. These squeezed and stretched matter, heating the compressed regions and cooling the rarefied ones. Even though the universe has been expanding and cooling ever since, the sound waves have left their imprint as temperature variations on the afterglow of the big bang fireball, the so-called cosmic microwave background. (Chown 2003)

So, is there no Silence? Murray Schafer (1986) mentions that:

> In the past there were musted sanctuaries where anyone suffering from sound fatigue could go into retirement for recomposure of the psyche. It might be in the woods, or out at sea, or on a snowy mountainside in winter. One would look up at the stars or the soundless soaring of birdcraft and be at peace.

He has an unshakable commitment to humans having an inalienable right to stillness as part of an unwritten code of human rights. There is a great deal of anecdotal evidence that the sonic environment is an essential part of our experience of the world, and crucial to our health and well-being (Schafer 1969). This is of course hardly news to any of us as we use our aural skills every day of our lives, depending on them for our survival; however, the readership of this esteemed journal are unlikely to be depending on their hearing skills in the same way that our distant ancestors might have – to find food within the thick ground cover of a forest, or high up in the tree canopies, to avoid enemies or predict danger – but the sonic environment, although given less privilege in our modern world than the visual, is inarguably a major and concrete part of our life experience.

There has been much academic discourse around the issues of soundscape – the sounds that formulate the sonic environment we inhabit – whether the source is natural (a bird call, the wind whistling through a yacht mast or rustling the leaves, the sound of a brook or waves on the beach) or artificial, man-made (Attali 1997), and the issue of a resulting Schizophonia (Schafer 1993). The artificial sounds formulate the majority of those we can bring to mind and often draw pejorative comment. Attali (*ibid.*) was convinced that the very sonic representation of industry was a marker for a new economic rationale. Schafer (1993) cites Alain-Fournier's description of the 'economic acoustics' of the French countryside, and the way in with the introduction of the whistle to the flour mills

[5]See http://www.activatedspace.com/Installations/endangeredsounds/ (cited 25 February 2005).

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restructured the notion of time in the late 1800s, and the constant noise of the blacksmiths shop, later moved to the outskirts of the town in an attempt to control the acoustic environment; in fact 'Noise Equals Power' for Schafer (*ibid.*).

All sounds are ephemeral – they occur only for an instant, and are experienced more through our recollection than in the moment. This ephemerality leads to a lack of custodial awareness, nonchalance with regard to change, to degradation, an indifference to the rising intensity of noise and sonic interference in our environment. We all agree that a quiet country ambience – the brook, the bird call (no crows for me though), the bees and insects and crickets – calms us, makes us feel connected to both ourselves and the earth, proffering up a holistic, perhaps healing environment. A commercial industry has grown around packaging these soundscapes as meditation aids, transporting the experience of these peaceful rural experiences to the headphones of a commuting worker in Tokyo, London, Sydney or New York, or the executive, the merchant banker driving home on the expressway, shedding the day's tensions.

In search of an understanding of silence and the inherent qualities of sound, John Cage had himself locked in an anechoic chamber (a room with special acoustic treatment to minimise reverberation). He heard two sounds, one low in frequency and one high:

> When I described them to the engineer in charge, he informed me that the high one was my own nervous system in operation, the low one my blood circulating.

Cage concluded:

> There is no such thing as silence. Something is always happening that makes a sound. (Cage 1968)

Physics tells us that sound consists of vibrations. These vibrations freely permeate the built environment, filtered by the materials of construction, but with little regard to the desires of its inhabitants. The idea that sounds common in the public domain may be contained, compartmentalised and owned is therefore a very dubious proposal. However, many sounds related to product branding and its associated marketing are being trade marked or protected through Sound Marks.

Examples of Sound Marks include:

- the sound of the famous Tarzan yell (Edgar Rice Burroughs, Inc.),
- the spoken letters 'AT & T' (AT&T Corp.),
- the melody 'Sweet Georgia Brown' (Harlem Globetrotters International, Inc.),
- a series of five musical notes written on the Treble clef in the key of C major (Deutsche Telekom AG),
- recorded sound of the liberty bell ringing (Bulletin Company),
- exhaust sound of Harley-Davidson motorcycles, produced by V-Twin (Harley-Davidson, Inc.), and
- the sound of a thunderclap (Beacon Broadcasting Corporation).

In Australia, some examples are:

- the words 'Ah McCain' followed by a 'ping' followed by the words 'you've done it again' (McCain Foods (Aus.) P/L),
- the sound of the word Yahoo sung in a yodelling style (Yahoo! Inc.), and
- the AFL siren (Australian Football League).

It seems absurd to register as trademarks a phenomenon that can only exist in the public domain, and which propagates beyond its immediate surroundings into the greater public realm. Furthermore, these sounds are legally excluded from mechanical recording and reproduction, so even though they pass through a public medium, air, and of their own accord make their way to my microphone, I am not allowed to replay the recorded sound image, as it simulates a privatised, protected sonic entity. This level of control is not even applied to the photographing of public figures and celebrities in public spaces.

It could be argued that these Sound Marks simply provide the same protection afforded by the copyright laws to any musical or other artwork; however, the way in which 'artworks' are distributed is highly controlled. By contrast, a Harley Davidson may be ridden through virtually any community in any country of the world, at any time of the day. The resultant exhaust noise may be welcome or unwelcome; nonetheless it will intrude on the public domain in a way that is beyond the control of those present. Similarly, with the right wind blowing, the AFL siren at any major football ground in Australia will travel well into the city. It will enter the private domain of city residencies as well as public space, and it does so as a protected entity that, through its branding, promotes its owner. The question as to how these sounds can be defined and sanctioned, when representing only a small entity in a greater aural environment, requires exploration.

The recording of the *echo of the Big Bang* should ring some bells for us; the very sounds currently legally protected by the Sound Mark mechanism may also be recorded as echoes in thousands of years' time, part of the ephemeral lattice of past existence. To return to physics and cosmology, the Omega Point theory, devised by Frank J. Tipler (Taub and Tipler 1980; Barrow and Tipler 1986) explains the universe as an information processing system, one of finite space and resolution. In this context, every piece of energy placed into the universe is processed and remembered. The second condition of Tipler's theory is that 'The

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amount of information processed along the curve between now and the c-boundary is infinite. (Life evolves forever)'. The c-boundary is defined as 'the set of points which are not the pasts of any points or the future of any point in space-time (essentially the 'edges' of space-time)'.[6]

We should be asking ourselves how then the sounds we release into the environment attribute to the degradation of the sonic environment that Murray Schafer sees as so important to our psyche. Are we generating an increasingly complex silence (Cage 1968)? Are the sounds collecting into a timbral lattice that will become more and more intense, making it increasingly hard to find the peace and quiet that Schafer sees as part of an unwritten code of human rights? Schafer's discussion of *audioanalgesia* points towards a use of sound to 'mask unpleasant distractions' (Schafer 1993), *Muzak* being a common example, a phenomenon the UNESCO Musical Council strongly denounced as early as 1969. And perhaps more importantly, if the universe is an information processing system, how are the sonic utterances of the current generations determining the evolution of the universe itself? These larger questions are the subject of current research in collaboration with physicists and mathematicians, and I hope to come back to them in a future paper.

2. EXPERIENCING SOUND

In line with these questions, and as the *Endangered Sounds* project is examining the importance of the freedom of sound, its cultural, geographical and architectural influences, its increasing privatisation, and the lack of contemplation around the long-term effects of this trend, I would like to put forward a couple of thoughts and personal references about sonic experience.

When watching the film *Russian Ark* (Sokurov 2002), in a scene in which a formal diplomatic ceremony is taking place – the long hall is lined on each side by three rows of soldiers resplendently dressed in formal regalia; on what was an invisible signal to me, they all drew their swords – one synchronised metallic swish rang out through the reverberant, marble, granite-lined hall – this is not a sound I hear in my everyday life. It may not have been a sound familiar to the commoners of the Russian society; in fact it may have been familiar only to a certain strata of Russian elite – perhaps even for them it was associated with a particular season of formal events, part of a larger context and almost certainly not cause for particular comment within their ranks.

[6]http://www.aleph.se/Trans/Global/Omega/omeg_term.html#C-BOUNDARY

Another interesting reference appears in the children's book, *The Phantom Tollbooth* (Juster 1962), in which a small boy Milo, with his companions Tock (a dog with a large clock on his back) and the Humbug, experience a number of sonic environments on their journey, from a market for purchasing the words for future communications, which after some meddling closes down (removing speech from the local inhabitants), to an experience in the Valley of Sight, where they encounter an enormous orchestra, a sonic generator of the colour in the world. The orchestra is conducted by the great Chroma, who says:

> But what pleasure to lead my violins in a serenade of spring green or hear my trumpets blare out the blue sea and then watch the oboes tint it all in warm yellow sunshine. And rainbows are best of all – and blazing neon signs, and taxicabs with stripes, and the soft, muted tones of a foggy day. We play then all. (*ibid.*)

They pass on through the Valley of Sight to the Valley of Sound, in the foothills of the Mountains of Ignorance, just north of Expectation. Here in the Valley of Sound, the over-zealous creation of noise as a cure-all by Kakofonous A. Dischord, Dr of Dissonance, causes a backlash from local inhabitants, specifically the Sound-Keeper who gathers up all sounds so that the valley falls silent. When Milo and friends drive into the Valley of Sound they realise something has changed:

> . . . suddenly he [Milo] realised what it was, for Tock was no longer ticking and the Humbug, although happily singing, was doing so in complete silence. The wind no longer rustled the leaves, the car no longer squeaked, and the insects no longer buzzed in the fields. Not the slightest thing could be heard, and it felt as if, in some mysterious way, a switch had been thrown and all the sound in the world had been turned off at the same instant. (*ibid.*)

The reason why this silence had befallen the valley points to some interesting corollaries with this investigation into the privatising of sounds through Sound Marks:

> At a place not far from here, . . . where the echoes used to gather and the winds came to rest, there is a great stone fortress, and in it lives the Sound-Keeper, who rules this land. When the old kind Wisdom drove the demons into the distant mountains, he appointed her guardian of all sounds and noises, past and present, and future.
>
> For years she ruled as a wise and beloved monarch, each morning at sunrise releasing the day's new sounds, to be borne by the winds through the kingdom, and each night at moonset gathering in the old sounds, to be catalogued and filed in the vast storage vaults below. (*ibid.*)

The scribe providing this explanation (for his speech has been silenced), goes on to explain how more and more people came to settle in the valley and

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LOCATION OF CAPTURE	Sound Mark Reg. No. -
Street Address -	Sound Mark Description -
Suburb -	
State/Territory -	Time of Capture -
Country -	Date of Capture -

Figure 1. The label issued for documentation of Sound Mark collection.

> brought with them new ways and new sounds . . . But everyone was too busy with the things that had to be done that they scarcely had time to listen at all. And, as you know, a sound which is not heard disappears for ever and is not to be found again . . . Then Dr Dischord appeared in the valley . . . and promised to cure everyone . . . [but] he cured everybody of everything but noise. The sound-Keeper became furious. She chased him from the valley for ever and then issued the following decree:
>
> FROM THIS DAY FORWARD THE VALLEY OF SOUND SHALL BE SILENT. SINCE SOUND IS NO LONGER APPRECIATED, I HEREBY ABOLISH IT. PLEASE RETURN ALL UNUSED AMOUNTS TO THE FORTRESS IMMEDIATELY. (*ibid.*)

Although this is a children's story, it raises some interesting ideas, and if we think about the medium of transmission, we realise a few salient facts:

(1) The air carries all sounds.
(2) There is no way to isolate one sound from another – to protect some people or environments from particular sounds or deliver specific sounds to individuals (with the exception of headphones or hearing aids).
(3) This common carrier, the air, is public property – it moves globally and is not therefore controlled by national or factional boundaries.
(4) The producers of sound are not bound by caveats on the use of the air.
(5) Discussion and laws relating to noise pollution look at the symptom, the noise, and not at the carrier, the air.

The above considerations raise interesting questions with regard to the concept of privatised sonic entities – this conundrum forms the central point of interrogation in the *Endangered Sounds* Project.

3. INVESTIGATION PROCESS – METHODOLOGY

The *Endangered Sounds* project includes three forms of symbolism, and involved an international cast of volunteers in its creation. It was first exhibited at the Biennale of Electronic Art in Perth, Australia (BEAP) in 2004, and at that time included the following elements:

(1) A web portal listing all the Sound Marks listed in Australasia and the USA (negotiations are under way to expand this to include the EU).[7]
(2) A collection of Sound Marks in specimen tubes with caps and labels gathered internationally by people who volunteer to *collect* samples of Sound Marks in their environment (see figures 1 and 2).
(3) A number of custom-designed glass vacuum desiccator vessels containing a small loudspeaker and sound reproduction chip suspended in a vacuum, reproducing Sound Marks in the vacuum, notionally breaking the law, but as sound does not travel in a vacuum the gallery visitors do not hear the sound – What then is the jurisdiction of the Sound Mark (see figures 3 and 4)?[8]
(4) A register of Lost and Deceased Sounds – sounds that have become extinct in the last decade (see figure 5). The card index was accompanied by the text shown in figure 6.

The work attracted good reviews,[9] interestingly coloured with the possibility that the entire work might be a hoax – never the intention, and without



Figure 2. Some of the Sound Marks collected by volunteers on exhibition in Perth in BEAP, 2004.

[7] http://www.activatedspace.com/Installations/endangeredsounds/
[8] See Appendix 1 for the listing of sounds that were contained in the vacuum desiccators during the BEAP exhibition.
[9] http://www.realtimearts.net/beap/ (cited 20 January 2005)

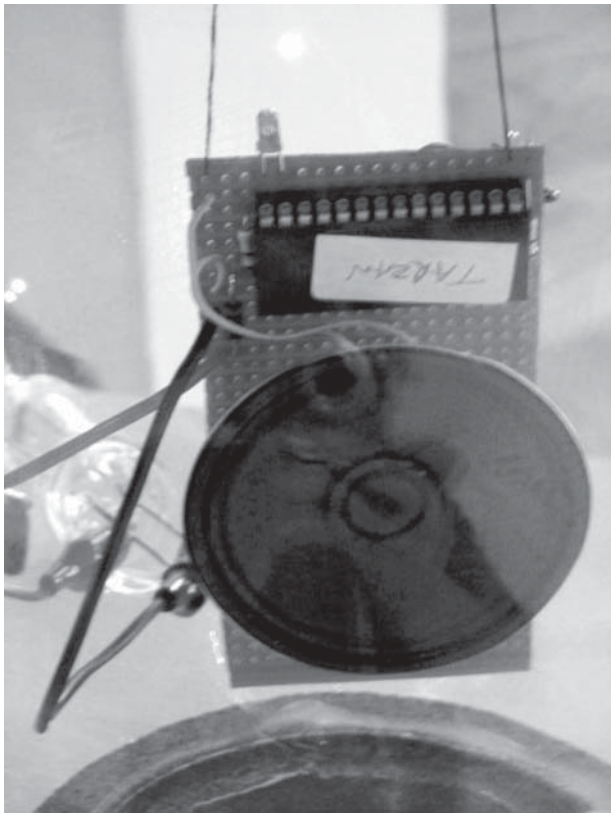
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Figures 3. The glass vacuum desiccators installed at BEAP.



Figure 5. The Lost and Deceased sounds index at BEAP04.



Figures 4. Detail of the sound circuit reproducing the 'Tarzan' Sound Mark within a vacuum.

substance. In fact great effort was put into listing official online trademark databases,[10] to present the Nice classification for International Trademark Class Headings[11] and links to the World Intellectual Property Organisation.[12] This attitude of disbelief was also apparent within the World Forum for Acoustic Ecology community who were reticent to volunteer to collect sounds, instead asking – How do you capture a sound in a specimen tube? It can't be done! *Endangered Sounds* does, however, document the presence of the sound in public space, much like the World Soundscape Project;[13] it indicates the prevalence of these sounds, archiving each sonic event by documenting the place, time and date of capture (see figure 1). It also captures the air through which the sound has travelled, the molecules of which quite possibly retain a memory of that encounter (Barrow and Tipler 1986). The project engages with these sonic events in a very real manner, seeking to expose the tyrannical use of the trademark laws to protect sonic material that fundamentally requires a public resource (air) to exist and for diffusion.

4. OUTCOMES

4.1. Specimen tube collection

Apart from the initial stage of legal searches, the *Endangered Sounds* project did not receive any funding support. The process of calling for volunteers to collect sounds internationally posed a significant problem; the cost of airmail delivery of specimen tubes overseas was substantial, but posting the empty specimen tubes to international destinations proved a very difficult task for other reasons altogether. Whilst the customs declaration in Australia simply declared 'empty specimen tube', it still required a written declaration, proof of identity, and a customs clearance procedure before the specimen tube could be shipped overseas. The overseas authorities clearly also found

[10]http://www.activatedspace.com/Installations/endangeredsounds/Online%20Databases.html (cited 20 January 2005)
[11]http://www.activatedspace.com/Installations/endangeredsounds/Nice%20Classification.html (cited 20 January 2005)

[12]http://www.wipo.int/ (cited 20 January 2005)
[13]http://www.sfu.ca/~truax/wsp.html (cited 27 February 2005)

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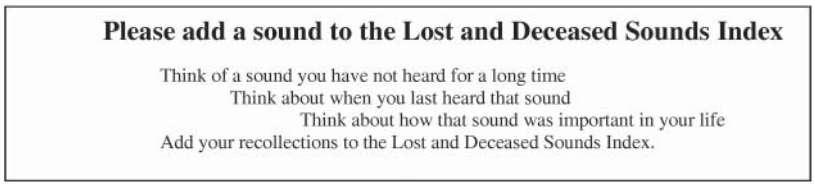


Figure 6. The instruction text for the Lost and Deceased sounds index at BEAP04.

the shipment of an empty specimen tube problematic, with many of them being substantially delayed, and on return, covered with numerous stickers indicating that they had been opened, inspected and cleared by both customs and anti-terrorist teams. In the current international climate I guess this is to be expected as the reason for shipment of an empty specimen tube would probably rarely be as stated; however, from an innocent beginning, the project quickly took on a much more serious face:

> the vial has just arrived!!?? what shall i do now
> as obviously way too late for show unfortunately
> it has been inspected by customs/government +. . .?
>
> think terrorism and deadly nerve stuff – very interesting
> at least the news is something to add to the show . . . ?
> (Private communication with Paul Lewis, 11 September 2004)

I became a little nervous when, after taking several dozen specimen tubes to be posted at the local post office over a two-week period, the postmistress ceased asking me to fill out the multiple declarations associated with each specimen tube I posted, and simply began writing on the customs declarations 'known to staff'.

A total of twenty-four specimen tubes were returned prior to the opening of the exhibition at the Biennale of Electronic Arts in Perth. Volunteers returned samples from Germany, Britain, Canada, America, France, and across Australia. The most common sounds collected appear in Appendix 2. Personally, I focused on collecting the McCain Foods (Australia) Pty Ltd registration number 759707, Sound Mark, described as:

> The words 'Ah McCain' followed by a 'ping' sound, being a high-pitched ping sound of short duration, followed by the words 'you've done it again'.

I ended up with ten additional samples in specimen tubes from accidental exposure to television. I did not seek to capture these sounds, simply document them when I was exposed as a passive listener. In addition to these specimen tubes, people volunteered to collect trade-marked sounds during the exhibition in Perth, adding another eight specimen tubes to the collection.

One of the things that interested me in the returned samples was that a number of people chose to 're-enact' the Sound Mark in their own voice; the *Tarzan Yell*, *Sweet Georgia Brown* tune, and Sound Marks such as *Sproing* and *Cha Ching* were vocalised, or played on instruments. I had assumed volunteers would collect the authentic original version of the Sound Mark, as most did; however, it is of course also illegal to recreate or perform the trade-marked sound, and as such this collecting of personal renditions was an appropriate additional facet of the project that I had not contemplated originally.

Another interesting angle was brought to my attention by volunteer Jeff Hannam:

> Hi Garth, I have a technical query with the collection of the sounds. How should one best avoid contaminating the endangered sound from the sound emitted from the fixing of the lid/bung or stopper to the specimen tube? My fear is that the integrity of the sample may in fact be compromised by the collection process. (Private communication with Jeff Hannam, 10 September 2004)

Indeed this is a very real issue when one also considers that sound waves travel through the collected air whilst the specimen tube is in transit, especially those on international journeys, the different languages, transportation machinery, etc. . . . these are issues relating to the very nature of sound interacting with air. Perhaps then, one should be looking to store the potential to make the sound rather than the instance of the sound itself? The isolation of the protected Sound Mark from the ambient soundscape is of course a measure of our psychoacoustic skills – those who seek to profit from the dissemination of a sonic identity demand our skills unsolicited.

The specimen tubes where displayed in chemistry racks in the gallery as shown in figures 2 and 4.

4.2. Vacuum desiccators – sound and silence

The issue of jurisdiction and contamination was taken up with the creation of the large glass vacuum desiccators. Illustrated in Figures 3 and 4, they contained the Sound Marks listed in Appendix 1, constantly playing off a single-chip voice record/playback device[14] through a small loudspeaker. The glass desiccators were evacuated to create a substantial vacuum, so that the audio could not be heard. A small red LED

[14]Single-chip voice record/playback device IC, ISD1110P 10 Second REC/replay, 5VDC (cited 4 March 2005).

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was connected across the amplitude output of the audio playback chip providing visual feedback as to when the audio was playing. The purpose of this part of the project was to explore the jurisdiction in which the Sound Mark mechanism applied. I was advised by Media Arts Lawyers that a breach of the law was occurring; mechanical reproduction of the Sound Mark was taking place. The removal of the public medium, air, prevented the sound reaching its target, thereby illustrating the fallacy that sonic events can be extricated from the public domain and defined as private property.

A considerable number of exhibition attendees thought the desiccators were interactive, and explored releasing the vacuum in order to see if they could hear the sound being reproduced within (there was a small glass tap at the top of the desiccator allowing the initial evacuation of the chamber after installing the electronics). Gaining the use of a vacuum pump was difficult, and the renewal of the vacuum within the desiccators was not an easy task. In order to prevent interference, the taps were bound shut with wire.

4.3. Lost and Deceased Sounds Register

In the month of the exhibition at BEAP, eighty-six entries were made in the *Endangered Sounds Project – Lost and Deceased Sounds Register* card index. I was surprised by the response to the index, both in terms of the actual number of entries and their personal nature. The opportunity to record sounds that had been important to individuals was taken very seriously, and people clearly contemplated their response in detail before committing their memory in perpetuity.

A few of the entries in the register are listed in Appendix 3. It is interesting to note the number of the entries that comment on the 'sound of silence', or aspects of childhood, where certain sounds indicated security or comfort. There are a couple of entries that describe the voices of lost siblings or grandparents, and the constant awareness of the fact that this voice is no longer part of their everyday life. These entries in particular are touching, and indicate the importance of unique timbres and how they signify critical relationships in our lives. There are also a number of entries that talk about childbirth, the sound of labour, and the sound of the newborn child's first cry. Those who volunteered these entries noted them as an important indicator of significant, life-changing events in their past.

Word of the *Endangered Sounds* project filtered into the press in Australia and became a catalyst for the Australian Broadcasting Commission's *Life Matters*[15] programme to discuss sound and its importance to us. The programme became a phone-in, where people telephoned in to reveal the sounds that were, or had been important to them. This was unstoppable, and the programme had to record responses and allocated additional airtime to the recorded callers in the following week. In general, people noted the sounds of nature, the prophet of seasonal change, but also sounds that defined important relationships or periods of their life when they felt most happy, secure or content. The importance of sound as a signifier in this way has the potential for a good deal more exploration.

[15]http://www.abc.net.au/rn/talks/lm/ (cited 4 March 2005).

5. CONCLUSION

Harking back to *The Phantom Tollbooth*, the Sound-Keeper from the Valley of Sound had a passion for collecting sounds, but she also understood the need to keep sonic sources identifiable and unique; she comments:

> If we didn't collect them . . . the air would be full of old sounds and noises bouncing around and bumping into things. It would be terribly confusing, because you'd never know whether you were listening to old ones or a new one. (Juster 1962)

The collection, storing and transmission of sound has become a major industry. If we examine the growth of the business surrounding Sound Marks and trademarks, we realise it is directly linked to the invention and increasing prevalence of means of recording, reproduction and broadcast/transmission of sound. The Internet is a new player in this field and is important because of its innate international reach, but television and radio have provided the platform for the definition and growth of Sound Marks for several decades.

Distribution mechanisms for real-time sound have grown almost virus-like internationally. With the aid of an Internet connection, we can listen to any street corner in almost any part of the developed world, seven days a week, twenty-four hours a day. In fact, we could create new hybrid soundscapes consisting of hundreds of streetscapes far around the world in any chosen room, a transposition of the sonic signature of numerous distant environments onto one another, a kind of cross-synthesis, a convolution of time, space and identity. The development of electronic means of sound recording, reproduction and transmission has allowed a cross-pollination of sonic environments to a degree never before imaginable. It goes beyond the audiophile recording of the distant and never-visited land to the real-time transposition of momentary, everyday events; not the rarefied recording of a quiet dawn or dusk, the prepared and protected sonic artefact, where the sound recordist, like the photographer, waits for the right moment to capture the idealised artefact, but a casual, *ad hoc* sonic signature constructed from a complex of the landscape, the architecture and the cultural activity of each site.

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What does this mean? It seems to point to a reduction in the authenticity and uniqueness of these sonic encounters, a kind of commodification of the very sonic tapestry in which we are immersed throughout life, the very sonic tapestry illuminated by NASA's *echo of the Big Bang*.

Coming back to the specifics of the Sound Mark, we can see that sound diffusion has taken on a whole additional layer of meaning, and yet the registering of a Sound Mark essentially privatises a sound, elevating it to a protected sonic artefact that can be released by its owners and their licensees (Harley Davidson owners) without control, in any part of the globe. The *Endangered Sounds* project fundamentally seeks to ask questions about why there are no controls. Why is there so little responsibility attached to these privatised sonic artefacts or their retainers? And how is it possible that such a mechanism exists when it is so heavily dependent on human psychoacoustic skills and the public carrier, the air.

I encourage people to add to the Lost and Deceased sounds index, to search the *Endangered Sounds* Website's[16] listings of Sound Marks, and volunteer to collect Sound Marks in their local environment. I have about fifty specimen tubes submitted to date, but have several hundred more awaiting the call. Volunteers are sent a specimen tube, airtight cap and label, asked to place the open specimen tube close to the sound source and seal the cap, thereby capturing the sound event via the label documentation and the air through which it travelled.

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I would like to thank NASA for the recording of the *echo of the Big Bang*, the inspiration for this ongoing journey of enquiry and discovery. I would also like to thank Dr Nigel Helyer (curator of Sonic Difference at BEAP) and Tos Mahoney of Tura New Music for managing the exhibition and BEAP for premiering the exhibition of *Endangered Sounds*.

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APPENDIX 1

Registration No: *759707*
Current Status: *Registered/Protected*
Owner/Applicant: *McCain Foods (Australia) Pty Ltd*
Description: *The words 'Ah McCain' followed by a 'ping' sound, being a high-pitched ping sound of short duration, followed by the words 'you've done it again'.*

Registration No: *738848*
Current Status: *Registered/Protected*
Owner/Applicant: *Pacific Brands Clothing Pty Ltd*
Description: *The mark consists of the sound of the word 'sproing' pronounced such that there is initially a rise in pitch at the 'oi' sound, which is then substantially elongated and pronounced with vibrato on the 'oing' portion of the word, so as to imitate the sound of a spring reverberating on metal. 'Visual Identity Dunlop Springtred Sprroings!'.*

Serial No: *75326989*
Registration No: *2210506*
Current Status: *Registered*
Applicant/Owner: *Edgar Rice Burroughs, Inc.*
Description: *The sound of the famous Tarzan yell. The mark is a yell consisting of a series of approximately ten sounds, alternating between the chest and falsetto registers of the voice, as follow – 1) a semi-long sound in the chest register, 2) a short sound up an interval of one octave plus a fifth from the preceding sound, 3) a short sound down a Major 3rd from the preceding sound, 4) a short sound up a Major 3rd from the preceding sound, 5) a long sound down one octave plus a Major 3rd from the preceding sound, 6) a short sound up one octave from the preceding sound, 7) a short sound up a Major 3rd from the preceding sound, 8) a*

[16]http://www.activatedspace.com/ (cited 4 March 2005).

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short sound down a Major 3rd from the preceding sound, 9) a short sound up a Major 3rd from the preceding sound, 10) a long sound down an octave plus a fifth from the preceding sound.

Serial No: *74485223*
Registration No: *Not available*
Current Status: *Abandoned (after inter parties decision by the Trademark Trial and Appeal Board)*
Owner/Applicant: *Harley-Davidson, Inc.*
Description: *The mark consists of the exhaust sound of applicant's motorcycles, produced by V-Twin, common crankpin motorcycle engines when the goods are in use.*
Commentary: *This is often described as 'potato, potato, potato' by motorcycle enthusiasts, Harley Davidson believes that the sound of its engines has been a distinctive attribute of its motorcycles and therefore believes protection is necessary.*

APPENDIX 2

(Favourite collected sounds)

A lion roaring
Serial No: *73553567*
Registration No: *139550*
Current Status: *s8 and s15 affidavits accepted and acknowledged*
Owner/Applicant: *Metro-Goldwyn-Mayer Corporation*
Goods and/or Services: *Motion picture films and pre-recorded video tapes*
International Class: *9, 41*
Description: *The mark consists of a lion roaring.*

The sound of the famous Tarzan yell
Serial No: *75326989*
Registration No: *2210506*
Current Status: *Registered*
Applicant/Owner: *Edgar Rice Burroughs, Inc.*
Goods and/or Services: *Toy action figures*
International Class: *28*
Description: *The sound of the famous Tarzan yell. The mark is a yell consisting of a series of approximately ten sounds, alternating between the chest and falsetto registers of the voice, as follow – 1) a semi-long sound in the chest register, 2) a short sound up an interval of one octave plus a fifth from the preceding sound, 3) a short sound down a Major 3rd from the preceding sound, 4) a short sound up a Major 3rd from the preceding sound, 5) a long sound down one octave plus a Major 3rd from the preceding sound, 6) a short sound up one octave from the preceding sound, 7) a short sound up a Major 3rd from the preceding sound, 8) a short sound down a Major 3rd from the preceding sound, 9) a short sound up a Major 3rd from the preceding sound, 10) a long sound down an octave plus a fifth from the preceding sound.*

The spoken term 'cha-ching'
Serial No: *74247076*
Registration No: *1795371*
Current Status: *s8 and s15 affidavits accepted and acknowledged*
Owner/Applicant: *Rally's Hamburgers, Inc.*
Goods and/or Services: *Restaurant services*
International Class: *42*
Description: *The mark consists of the spoken term 'cha-ching'.*

The melody 'Sweet Georgia Brown'
Serial No: *74158626*
Registration No: *1700895*
Current Status: *Registration renewed*
Owner/Applicant: *Harlem Globetrotters International, Inc.*
Goods and/or Services: *Entertainment services in the nature of basketball exhibitions*
International Class: *41*
Description: *The mark consists of the melody 'Sweet Georgia Brown'.*

A 'ping' sound followed by the words 'you've done it again'
Registration No: *759707*
Current Status: *Registered/ Protected*
Owner/Applicant: *McCain Foods (Australia) Pty Ltd*
Goods and/or Services: *Frozen vegetables and fruits including prepared frozen foodstuffs including vegetables, meat, fish, poultry and game. Prepared frozen foods including prepared frozen meals, pizzas, pies and frozen dough and bread products including frozen dough*
International Class: *29, 30*
Description: *The mark comprises the words 'Ah McCain' followed by a 'ping' sound, being a high pitched ping sound of short duration, followed by the words 'you've done it again'.*

The sound of the word 'sproing'
Registration No: *738848*
Current Status: *Registered/ Protected*
Owner/Applicant: *Pacific Brands Clothing Pty Ltd (ACN 098742655)*
Goods and/or Services: *Floor coverings and underlay, including carpet underlay laminates incorporating rubber or rubber substitutes*
International Class: *27*
Description: *The mark consists of the sound of the word 'sproing' pronounced such that there is initially a rise in pitch at the 'oi' sound, which is then substantially elongated and pronounced with vibrato on the 'oing' portion of the word, so as to imitate the sound*

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of a spring reverberating on metal. The sound is recorded on the accompanying tape labelled '26.6.97 Visual Identity Dunlop Springtred Sprroings!'.

The sound of the word Yahoo sung in a yodelling style.
Registration No: *827728*
Current Status: *Registered*
Owner\Applicant: *Yahoo! Inc., a Delaware Corporation*
Goods and\or Services: *Promoting the goods and services of others by placing advertisements and promotional displays in an electronic site accessed through computer networks; online retail and mail order services in the field of general consumer merchandise; directory services to help locate people, places, organisations, phone numbers, home pages, and electronic mail addresses; promoting the websites of others, namely, distributing advertising for others via an online electronic communications network; providing information regarding the goods and services of others in the nature of a buyers' guide by means of a global computer network; promoting the goods and services of others by preparing and conducting promotional contests and sweepstakes via a global computer network; creating indexes of information, sites and other resources available on computer networks*
Communications and telecommunications services, namely, electronic mail services, and electronic mail services rendered via kiosks; telecommunications services rendered via kiosks; providing telephone communications via computer networks; electronic transmission of data, images, and documents via computer terminals and networks; broadcasting and delivery of audio, video, and multimedia content by means of radio, cellular, and wireless communication, television, cable television, closed circuit, electronic communications networks, or computer networks; providing online facilities for real-time interaction with other computer users concerning topics of general interest and for playing games; paging services; and telephony services; providing an online link to news, weather, sports, current events and reference materials

Operating online travel and managing online travel and lodging reservation and booking services

Computer services and online computer services, namely searching and retrieving information, sites, and other resources available on computer networks for others; providing a wide range of general interest information via computer networks; providing multiple-user access to computer networks for the transfer and dissemination of a wide range of information; providing a wide range of general interest information via computer networks; computer bulletin and message boards in the fields of general interest; design, creation, hosting, maintenance, consulting and technical assistance in the fields of designing, creating, hosting, maintaining, operating, managing, advertising, and marketing of online commerce websites; kiosk Internet services; providing Internet access via kiosks; computer programming services; and club services relating to web searching and website information

International Class: *35, 38, 39, 42*
Description: *The mark consists of the sound of the word Yahoo sung in a yodelling style.*
Musical blips on audio tape
Serial No: *73555319*
Registration No: *1413137*
Current Status: *s8 and s15 affidavits accepted and acknowledged*
Owner\Applicant: *Capitol Records, Inc.*
Goods and\or Services: *Pre-recorded audio tapes and phonograph records*
International Class: *9, 41*
Description: *The mark consists of eleven musical notes comprising the notes C2, C3, C4, C5, C6, C7, C8, C9, E9, G#9, and C10*
Commentary: *This mark refers to the string of blips at the beginning or end of their audio tape that is barely noticeable or audible.*

A series of five musical notes
Serial No: *75889012*
Registration No: *2459405*
Current Status: *Registered*
Owner\Applicant: *Deutsche Telekom AG*
Goods and\or Services: *Machine run blank magnetic data carriers; telecommunications equipment, namely, magnetic, electric and optical networks comprising data transmitters and related equipment that transfers data between data terminals; audio, video and data terminals; audio, video and data communications equipment namely, digital and analogue signal transmitters, receivers and converters, and radio and telephone transmitters, receivers and servers; electronic mail hardware for electronic exchange of data, images and messages; automatic vending machines and mechanism for coin operated apparatus; data processing equipment, namely, microcomputers, minicomputers, computer monitors, computer keyboards, computer terminals, computer interface boards, computer laser printers, computer memories, computer impact printers, computer dot matrix printers, computer operating systems, computer modems, computer mouse and mouse pads and computers*

International Class: *9, 16, 25, 35, 36*
Description: *A series of five musical notes written on the Treble clef in the key of C major, comprising a sequence of four joined semiquavers which are the musical three notes C C C and E, followed by a C quarter note*

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Merrie Melodies Theme Song
Serial No: *75934537*
Registration No: *2473248*
Current Status: *Registered*
Owner/Applicant: *Time Warner Entertainment Company, L.P.*
Goods and/or Services: *Entertainment services in the nature of a live-action, comedy, drama and animated television programmes; production of live-action, comedy, drama and animated television programmes; a live-action, comedy, drama and animated motion picture theatrical films; production of live-action, comedy, drama and animated motion picture theatrical films; theatrical performances both animated and live action; internet service providing information via an electronic global computer network in the field of entertainment relating specifically to music, movies, and television; providing general interest news, entertainment, and education information via a global computer network; and providing information for an actual entertainment via electronic global communication network in the nature of live action, comedy, drama and/or animated programmes and production of live-action comedy, action and animated motion films for distribution via a global computer network*

International Class: *41*
Description: *The mark consists of thirty (30) musical notes comprising the notes BFlat4, EFlat4, D4, C4, BFlat3, G3, BFlat3, EFlat4, EFlat4, D4, C4, DFlat4, D4, D4, D4, BFlat3, C4, BFlat3, D4, D4, BFlat3, C4, G3, G3, BFlat3, B3, C4, D4, EFlat, and G4. The mark consists of the Merrie Melodies Theme Song.*

APPENDIX 3

(Entries in the Lost and Deceased sounds register)

Brief sound description: Sheep calling to lambs in the evening
Last time you heard this sound: Twenty years ago
Last place you heard this sound: Bridgeton
What this sound means to you and how it was important in your sonic life: Home, being warm, the rightness of the world

Brief sound description: The sound of an old tube radio at the beginning of the tuning scale
Last time you heard this sound: Twenty-five years ago
Last place you heard this sound: Germany, in my bedroom
What this sound means to you and how it was important in your sonic life: It was a rhythmical, low-pitched sound and I always wondered if there was a message from people living on a distant planet in it somewhere. The sound and the idea fascinated me so much that I started to listen to electronic music and in the end made and still make electronic music using sounds that I pick up from radios tuned in between station.

Brief sound description: Bells
Last time you heard this sound: 1994
Last place you heard this sound: London
What this sound means to you and how it was important in your sonic life: Time, place, communication, belonging

Brief sound description: Hissing sound of a hurricane pressure lamp
Last time you heard this sound: Africa, 1995, saying where there was no electricity
Last place you heard this sound: 'Ol Maisor'
What this sound means to you and how it was important in your sonic life: Being out in the wild under a huge sky, with bugs flying into the lamplight, FREEDOM

Brief sound description: a Valiant Regal station wagon starting very early in the morning. Often take a couple of attempts
Last time you heard this sound: Nine–nineteen years ago
Last place you heard this sound: The first house I lived in with my parents
What this sound means to you and how it was important in your sonic life: This sound signal to my dad leaving for work, and equated to reliability and diligence and strength and admiration.

Brief sound description: Click, click
Last time you heard this sound: I was talking to a Zulu person, my dad's friend
Last place you heard this sound: On the phone, Mosman Park
What this sound means to you and how it was important in your sonic life: It was pretty crazy; I always remember it but didn't to influence me in any way.

Brief sound description: Clip clop of a horse-drawn milk cart
Last time you heard this sound: The early 1960s
Last place you heard this sound: Melbourne
What this sound means to you and how it was important in your sonic life: A memory of childhood, holidays spent at my grandmother's house

Brief sound description: Rattle, rattle, rattle (glass milk bottles in a crate)
Last time you heard this sound: 1985
Last place you heard this sound: In the dairy section of shops
What this sound means to you and how it was important in your sonic life: The sound of everyday life, lost to a plastic society

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Brief sound description: (Echoing) THUNK ker THUNK ker THUNK ker THUNK ker
Last time you heard this sound: 1968
Last place you heard this sound: My grandmother's house, Newbury, England
What this sound means to you and how it was important in your sonic life: It began everyday as she cleaned the ash from the central heating boiler in the kitchen by sliding the grate back and forward.

Brief sound description: High-pitched, constant tone
Last time you heard this sound: Summer of 1993
Last place you heard this sound: From the outer/inner darkness
What this sound means to you and how it was important in your sonic life: The sound of death [when the blood stops in the brain]

Brief sound description: The old pre-digital phones
Last time you heard this sound: Circa 1988
Last place you heard this sound: Childhood home
What this sound means to you and how it was important in your sonic life: It was something that fascinated me from a young age. I first heard it at my grandmother's house, maybe because we didn't have a phone in the house until I was six.

Brief sound description: A slate pencil written on a slate [scratch, screech]
Last time you heard this sound: 1958
Last place you heard this sound: Heathcote, Victoria, in my classroom
What this sound means to you and how it was important in your sonic life: My classroom was the local Catholic school, and housed the entire school from 'grade babies' to [unsure of the terminology at the time] approximately year eleven. I felt so important labouring over my letters as the bigger kids worked silently. The only sounds to be heard at times were the slates being used. It reminds me of a simple childhood.

Brief sound description: I'm deaf
Last time you heard this sound: Noise
Last place you heard this sound: Everywhere
What this sound means to you and how it was important in your sonic life: Confusion, fascism, visual language is better.

Brief sound description: The sounds of dominoes clicking on concrete tables played by old Russian migrant men
Last time you heard this sound: 1999
Last place you heard this sound: On the tables at the back of the Bondi surf pavilion
What this sound means to you and how it was important in your sonic life: Important because it signified some communal activities which was not part of my life growing up. Important in my sonic life because I will always listen for it again and it associates human bonding with sound.

Brief sound description: Sunday carousel music of the 'Mr Whippy' ice-cream van
Last time you heard this sound: 1987
Last place you heard this sound: At the front of my childhood house
What this sound means to you and how it was important in your sonic life: It meant good times and treats, being with my brothers and childhood friend.

Brief sound description: Pigeon *coooo's* in trees in the house opposite mine
Last time you heard this sound: 1972
Last place you heard this sound: Our family's second house in Omagh, Northern Island
What this sound means to you and how it was important in your sonic life: Always heard lying sick [day of school] in bed, so totally peaceful

Brief sound description: Sound of Concord
Last time you heard this sound: 2003
Last place you heard this sound: London
What this sound means to you and how it was important in your sonic life: Loss of faith in the future

Brief sound description: A deep deep cry, no sound, soundless
Last time you heard this sound: Many years ago – during a war
Last place you heard this sound: A place of war
What this sound means to you and how it was important in your sonic life: I never want to hear it again but it has been blasting out recently.

Brief sound description: A forest whisper from north of Sweden
Last time you heard this sound: September 2003
Last place you heard this sound: Skellefteå, Vasterbotten, Sweden
What this sound means to you and how it was important in your sonic life: It is a source of serenity.

Brief sound description: Sqrreeeech
Last time you heard this sound: 1970
Last place you heard this sound: In our back yard
What this sound means to you and how it was important in your sonic life: The Hills hoist[17] – games of childhood and lost youth

[17]An iconic Australian clothesline, found in previous decades in every back garden. http://products.hills.com.au/Hills.Hills Branded.Website/product?code=a1401or6 (cited 4 March 2005).

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Brief sound description: My brother Jamie's voice
Last time you heard this sound: Nine and a half years ago – in my thoughts
Last place you heard this sound: On the phone – all the time
What this sound means to you and how it was important in your sonic life: It is my connection (along with my visual memories) to my brother whom I miss so much.

Brief sound description: My brother called me *KANG*
Last time you heard this sound: 1992
Last place you heard this sound: Over the phone while I was living in Melbourne
What this sound means to you and how it was important in your sonic life: It means love, I miss him dearly. Only he called me this.

Brief sound description: ~~~~~~~~~~~~~~~~~~~~~~~~~~
Last time you heard this sound: March 11th 1998
Last place you heard this sound: On our farm – the night before we left
What this sound means to you and how it was important in your sonic life: The *sound of silence* – I have not experienced since. Some nights [in suburbia] it comes close, but the drone of human life in the distance breaks through – I really miss the *sound of silence*.

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