Attachment Two:
Frequency Clock Project Description

THE FREQUENCY CLOCK

The Frequency Clock is a collaborative interdisciplinary project rediscovering and enlarging the spectrum of radio art, and encouraging interactive and participatory models of cross-cultural and cross-artform exchange. ***The Frequency Clock* comprises an installation, a web project, and a networked broadcast system.** *The Frequency Clock* primarily addresses the new media art form, **net.radio**, and its interaction with other artform areas, such as sound art, communications art, installation and hypermedia. *The Frequency Clock* engages diverse sites in its presentation, simultaneously located on the web, in the gallery and in radiospace. It is highly collaborative, involving no less than 12 artist contributors and key collaborators, from across Australia and around the world.

The project brings together net.radio projects located in separate geographical locations, and relays their transmissions into the gallery, onto the web, and onto the airwaves. *The Frequency Clock* creates aural portals into the creative spaces of the contributors: if we can witness transmissions created within the radiospace of another timezone, we can observe and interact with another culture without having to traverse physical and temporal barriers. *The Frequency Clock* recontextualises net.radio within an inventive exhibition environment and allows gallery audiences to explore net.radio spatially. Radio and net.radio overlap, the functions of both dissolve into each other.

Thread 1 - An installation and web project

A prototype of the installation and web components of *The Frequency Clock* were demonstrated at **Ars Electronica** in September of this year, and encompassed a series of mini-FM transmitters attached to computers relaying audio art and net.radio material. We have applied to the New Media Arts Fund and ARTS SA for funding to develop this installation for presentation in Adelaide at the **Experimental Art Foundation** in 1999, as part of their *UNIVERSE* project, and possibly at other venues.

The proposed installation will comprise a chain of computers all broadcasting different net.radio streams via mini-FM. Each net.radio stream is from a different part of Australia, or the world. There are 12 computers, representing the 12 points on an analogue clock. Each link in the chain is intended to be a physical representation of a discrete step in global time zones, the space between transmitters, representing the transition between time zones. By traversing this space while wearing an FM radio receiver headset tuned to the mini-FM broadcast frequency, the audience participant becomes part of a global net.radio tuning mechanism. Their physical movement literally tunes the radio machine. Thus, *The Frequency Clock* is a cybernetic tuner. The organic part of the mechanism is the autonomous tuning agent (the audience participant). The inorganic part is the associated hardware (computer, transmitter etc). The output of the whole is determined by the relationship of the parts, their interaction forming the basis of a cybernetic machine. Like the vital role a crystal plays in tuning the traditional radio into different radio stations, the audience participant in the cybernetic tuner, moving through localised radiospace, tunes *The Frequency Clock* into different net.radio stations (net.audio time zones).

The **web project** acts as an ancillary tuning apparatus. It switches between net.radio stations, illustrating distinct phases of time, and providing an aural portal into *The Frequency Clock* locations. The computer monitors in the installation will all be displaying the website, allowing for audiences to switch between audio sources, experimenting with the culturally and artistically diverse array of material developed for the project by r a d i o q u a l i a and our collaborators.

The installation comments on the nature of net.radio and radio within a closed environment. It is an enclosed exploration of radio. The steps between the transmitters are regular, representing discrete, equal steps in timezones. The transmissions can be summarily traversed by simply walking from one end of the gallery to the other. It is like a scale model of a world map. Its purpose is to establish a representative model of time that allows us to momentarily observe parallel events in net.radio. The listener in this situation is the observer, able to interact and witness the remote events of the global net.radio communities.

Thread 2 - An experimental narrowcast network

In addition to this 'microcosmic' analysis of radiospace, r a d i o q u a l i a have also been investigating a 'macro' perspective of these principals. These investigations have led r a d i o q u a l i a to develop an experimental broadcast component to the project: the establishment of **a network of low-powered transmitters** placed in communities located around the world. This 'narrowcast' FM network will be connected to the internet. An automated web interface will enable net.radio programs to be shared and broadcast over the FM network, as well as through existing online networks. This unique network will not only be a world first for narrowcast FM radio, but will also be one of the first examples of net.radio art infiltrating the airwaves, greatly diversifying and complexifying the nature of net.radio, and the range of audiences it is accessible to. The web interface will also allow geographically remote participants of the project, and casual users of the internet, to collaboratively develop programs for transmission, deconstructing traditional broadcast roles, and introducing significant elements of interactivity into the practice of broadcasting. As with examples of communications art from the 60s, 70s and 80s, *The Frequency Clock* network complicates notions of transmission and communication, allowing for constantly changing constellations and connections between the participating radio stations, internet users and the physical sites. r a d i o q u a l i a will research and develop this unprecedented radio network and have a branch operational in Adelaide early in April 99, with further annexes being established elsewhere in the following months.

Rather than feed into current trends of globalisation, the narrowcast network is more about opening up small portals between geographically dispersed communities. The limited broadcast radius of each transmitter means that each annex of the network will only be transmitting to small parts of their own community. As contributor to the project **Luka Frelih** (Ljubljana Digital Media Lab) puts it: *"I think more about 'patches' in the map than big areas"*. The idea is to create a matrix of small windows opening out onto culturally and aesthetically diverse communities - small pockets of collective radiospace across the world map. All participating nodes of the network will be relayed, at one time or other, to all other nodes. At times when the network is not transmitting shared programs, or net.radio content programmed by users of the automated web interface, individual nodes may choose to broadcast their own material to their local community. This way each transmitter becomes a community resource and an outlet for cultural expression for each operator.

The establishment of a network of narrowcast transmitters also severs a philosophical reliance on the kind of commercial / governmental / regulated institutions that are predominantly associated with FM radio. A geographically dispersed independent network of net.radio stations, creating and transmitting content on autonomously owned FM transmitters, challenges these kind of organisations, encouraging a rethinking of existing broadcast paradigms and the incorporation of more open systems for determining content. In this model there is space to develop a radically open-ended system of content coordination, putting the capacity to collaboratively develop radio programs in the hands of diverse array of geographically and structurally distinct artists or groups. This model necessitates the formulation of a programming system able to be manipulated by all contributors. In collaboration with other artists and technicians, r a d i o q u a l i a will develop an online system to achieve this.

The establishment of a new network does not not preclude, or replace, collusion with existing radio and new media entities. In fact the ideas explored within a narrowcast FM network expand the scope for experimentation across a range of different forms of radio, opening up dialogue between discrete types of communications media, preparing the way for partnerships between art and industry communities. In this way, collaborations with existing radio and media entities, and the development of a new mini FM network are two parts of the same idea.

The collaborative narrowcast FM network will be initially be realised in **Adelaide, Australia**; **Ljubljana, Slovenia**; **London, UK**; and **Riga, Latvia**. Other international participants in the narrowcast network will be confirmed after the project has been seeded and beta-tested.

The narrowcast network system realises, in a very real sense, the principles that are hypothesised by the gallery installation. The narrowcast network is an open system, transmitted beyond the walls of a gallery. The distances between transmitters are irregular, its timezones are not equal discrete steps, and it is impossible to traverse the broadcast areas with ease. It is not a model, but a realisation of the possibilities of the dialogue between net.radio and radio. Listeners / audiences are participants in the events which are contained within the boundaries of the broadcast area. Their lives / culture / community are permutated by the transmission.

Felix Guattari once spoke of radio in the context of transmission, transversal and molecular revolution. Quiet voices, small actions. We are interested in permitting the local region to speak louder, loudest. In the structure of the FM network, the voices in each individual zone are invited openly and programmed into a shared timetable as supreme noise particles.

The Frequency Clock is about expanding the specialised environment of radio into a larger space for interaction and collaboration, across artforms and across cultures. It draws together artists from different artforms areas, creates a forum for experimentation with new technologies and fosters a forum for cross-cultural dialogue. *The Frequency Clock* aims to create a new series of metaphors for the critical investigation of radio, and play with these ideas in the divergent environments of the gallery, the web and global radiospace.

CONTRIBUTORS
The Frequency Clock is a highly collaborative project involving participation by many artists from different art areas. The project will primarily comprise of sound artwork by r a d i o q u a l i a, and will include contributions by the following sound sound artists and musicians:
• **Matthew Thomas (SA)**
A musician and sound artist who has performed as part of the mesm.eon sound collective, under the name Aquila and under his given name. He has released on Undefined Recordings, and Dorobo. Matthew will be contributing sound art to *The Frequency Clock* installation.
• **Teeming Void - Mitchell Whitelaw (NSW): http://www.spin.net.au/~mitchellw/**
A musician, technician and writer. He will contribute sound art to the installation, and assist with programming of the web component of the FM network.
• **Minut - Jasmine Guffond and Torbin Tilly (NSW)**
Artists and musicians who are two of the key participants of the *Sound Particle* series in Sydney. They have released music independently and through the Zonar Recording label. They will be contributing music to the installation.
• **Eyespine- Greg Peterkin (SA)**
An electronic musician who creates languid soundscapes fusing the aesthetics of ambient and experimental genres. He has released CDs independently and through the Zonar Recordings label. He will be contributing music to the installation.

• **Heath Bunting (Banff, Canada): http://www.irational.org/radio/banff/**
Heath Bunting is a net.artist, activist and new media practitioner with a long history of involvement with free radio. He is currently employed at **Banff New Media Centre** in Canada, where he coordinates a free radio station incorporating material programmed from net.radio artists. He calls this 'cellular radio'. Heath will be contributing audio material to the FM network and acting as a engineering and conceptual consultant for the development of the narrowcast network.
• **convex tv. (Berlin, Germany): http://www.art-bag.net/convextv**
convex tv. are a broadcasting art project experimenting with the interface between digital and analogue radio. They run a regular live FM radio show and manage a comprehensive archive of net.radio material ranging from sound art and music programs, to interviews and discussion with artists, theorists, and activists. r a d i o q u a l i a will be working with artist / musician **Martin Conrads**, who was one of the founding members of German electronic sound group, **Oval**. convex tv. will participate in the installation component of the project.
• **Pararadio (Budapest, Hungary): http://www.c3.hu/para**
Pararadio is a radio project associated with C3 - the Centre for Culture and Communications. It is a youth focussed radio station aimed at giving a voice to local Hungarian culture. Pararadio are committed to community access, providing on-air / online forums for marginalised groups and indigenous cultures, such as Hungarian gypsies. r a d i o q u a l i a will work with artists / DJs / coordinators, **Szabó Sándor** (aka Jinx) and **Molnar Daniel** (aka B2Men). Pararadio will provide radio art and other recorded material for the installation.

KEY COLLABORATORS
The Frequency Clock is also a collaboration with a number of innovators of radio culture. International artists groups and new media projects will be contributing to the installation by providing access to their sound art archives and live net.radio programs. They will also act as key collaborators and consultants for the engineering and programming of the FM narrowcast network. Some of these groups will also be developing their own FM transmission systems and will be providing resources in-kind for establishing local annexes of the narrowcast network.
• **Zina Kaye - L'Audible (NSW): http://www.laudanum.net/ldbl**
Zina Kaye is a new media artist and writer who uses communications technologies, and in particular the internet, to muse on the nature of metaphysical boundaries and the secret life of the airwaves. Zina coordinates, L'Audible, an online archive of Australian and New Zealand sound art. Zina is a key collaborator of the project and will contribute sound art to the exhibition and assist with the development of the FM network project.
• **Ljudmila - Ljubljana Digital Media Lab (Ljubljana, Slovenia): http://www.ljudmila.org**
Ljudmila is an open-access media laboratory which supports education, research and work into the internet, digital video, electronic arts, digital and analogue radio, communications, hardware production and interdisciplinary integration. Ljudmila are a key partner of the *The Frequency Clock* project, and r a d i o q u a l i a will work closely with artist, programmer and technician, **Luka Frelih** on the development of the narrowcast network. Ljudmila will provide hardware and labour in-kind for the development of a locally based FM transmission system (see Budget). **Marko Peljhan** (who participated in the 1997 ANAT initiative *CODE RED*, presenting in Sydney, Hobart and Adelaide), and net.artist **Vuk Kosic** will provide specialised advice and consultancy for the project.
• **Backspace Radio (London, UK): http://www.backspace.org/radio/**
Backspace Radio is an initiative of **Backspace**, an open access internet space, aiming to provide community-based training and access to computers and networking technologies. Backspace Radio aims to provide a forum for local youth and street communities in London, and regularly hosts performances by artists, DJs, and MCs. Backspace radio experiments with the internet as an interactive model for radio programming, and aims to critically contextualise net.radio within contemporary art and new media settings. r a d i o q u a l i a will work with artists, **Rachel Baker** and **Giovanni D'Angelo** on the conception and development of all components of *The Frequency Clock*.
• **Radio OZOne (Riga, Latvia): http://ozone.re-lab.net/**
Radio OZOne is the net.radio component of **Re-Lab**, a networking and project office for cultural and social non-profit projects in the field of digital and networked media. Re-Lab work with computer mediated communication, and interactive multimedia both within Latvia, as well as on an international plane. Re-Lab also coordinate the **Xchange** net.radio community. Radio OZOne emerged from Re-Lab's evening seminar series "Open Zone", which presented critical accents and innovative ideas about culture and new technologies. r a d i o q u a l i a will be working closely with the coordinators of Re-Lab / Radio OZOne, **Rasa Smite** and **Raitis Smits** on the realisation of all aspects of *The Frequency Clock*.
• **ORFKunstradio (Vienna, Austria): http:/thing.at/orfkunstradio**
Kunstradio is arguably one of the most significant resources and exponents of radio art in the world. Originally a weekly radio-art program on **ORF** (Austrian national radio), it soon expanded into a much wider field of radio-art activities, encompassing an on-air gallery, exploring radio as the site, the content and the context of art. Kunstradio acts as: an interface, providing international artists of various backgrounds and traditions with access to the means of production, expertise and broadcasting available in public radio; an agency for the realisation of artistic projects connecting radio to other material and immaterial public art spaces; one of the nodes in the international network of the **Ars Acustica** experts group of the **EBU (European Broadcasting Union)**; an organiser of international lectures and symposia on the theory of art in the electronic space; a producer of CDs and catalogues. r a d i o q u a l i a will be consulting with one of Europe's foremost pioneers of radio art, **Heidi Grundmann**, administrator of Kunstradio, **Elisabeth Zimmermann**, and renowned communications artist, **Robert Adrian X**.

r a d i o q u a l i a will also be engaging with related experimental network concepts, such as more politically focused projects such as **Marko Peljhan's** *Insular Technologies* project <http://www.factory.org/nettime/archive/2263.html>, and will utilise the ongoing research of the Xchange group.

Attachment Three:
Letter of Support

Geert Lovink. New Media Journalist.

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Concerns: radioqualia

Amsterdam, September 28, 1998

To Whom It May Concern,

it is my intention, and honour, to recommend to you the net.radio
group, radioqualia, which is based in Adelaide.

Let me briefly introduce myself. I am a media theorist and critic,
based in Amsterdam. In the past I have made my radio myself,
organized media festivals (Metaforum/Budapest, Next Five
Minutes/Amsterdam, Ars Electronica/Linz) and started Internet
projects like the freenet The Digital City, art servers and
mailing lists, such a nettime, which is dealing with 'net
criticism'. In november 1997 I have visited Australia for a couple
of months, as a part of the Code Red lecture series. At the moment
I am part of De Waag, the Society for Old and New Media in
Amsterdam, a non-commercial media lab which is focussing on the
political culture of new media from the perspectives of the arts,
design and education. For more information about these project
you can look at http://www.desk.nl/~nettime, http://www.waag.org
and my own textarchive http://thing.desk.nl/bilwet

Being involved in the development of the international network for
independant internet based radio projects called 'xchange'
(www.re-lab.net), it is obvious for all us that radioqualia is one
of the most active and innovative projects in this, still young
and emerging, technological environment. They are broadcasting on
a weekly basis, collaborating with other artists and groups and
also were able to come over to Europe recently, for the net.radio
days in Berlin, and for open-x project at the Ars Electronica
festival. This commitment has intensified and speeded up the
collaboration within the XChange network.

As far as I know, radioqualia are one of the very first art groups
which try to give a sense of the possibilities of net.radio and
radio and I am confident that they will strengthen the new media
arts culture coming from Southern Australia.

Sincerly yours,

Geert Lovink

Support Material

1. self.e x t r a c t i n g.radio CDR

An automated netcast-performance experiment produced for presentation at net.radio days 98, Berlin

2. 'Fragile' CD Album (artwork being printed)

CD Album collaboration with New Zealnd Techno musician Leyton Davies. Artwork still being printed (released on Earthman Records).

3. 'Frequency Shifts' CD compilation

Promotional CD for radioqualia artists, including 4 of my contributions (tracks 2, 6, 8, 11).

4. Recent Performances CD

Live internet performances for the LADA 98 Festival (Rmini, Italy) and a live performance for 'Supermild' (a CACSA event).