

Interview with Adam Hyde of radioqualia

Andrew Clifford

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Interviewed by Andrew Clifford on Feb 21, 2005

AC: Has broadcasting in one shape or other always been an interest? I know it goes back a long way in your career.

AH: Absolutely. I think from when I was studying at the University of Waikato, I started being a DJ volunteer at the local radio station there – Radio Contact – and I did everything there. I started off more or less being the DJ's assistant and then the DJ and then I did some promotional stuff and finally, after a couple of applications, became the manager. So, that strictly after I left university, I then went on to manage 95bFM in Auckland and after that I went to Australia and I started to get into internet radio with Honor Harger, who is the co-founder together with me of radioqualia. So it goes right back to when I was at university.

Internet radio would have been a pretty fledgling medium at that stage. Was it basically mimicking broadcast radio or were you getting in quite early to create new paradigms that, because it was a different medium, it could employ?

Well, one of the freedoms that we first saw with internet radio is that you didn't have to maintain a massive infrastructure to maintain it. So you could be pretty nimble. In the first instance, what we saw it as being is a medium for creative innovation, so you could basically not have an idea of the format, you could just do what you wanted to. And that's a huge freedom from independent radio stations that exist in New Zealand, like bFM and Contact, where I had worked. They are very broad format stations and they have a lot of experimental music on but it's still formatted. Whereas internet radio, you don't have to stick to that if you don't want to. There's no overheads and there's no profit-and-loss statement that you have to worry about so you just go for it.

In the first instance it was a medium for open, creative exploration of radio. Then, after a while, Honor and I started to wonder about what does this actually do to challenge the paradigm of radio itself? What are the things you can do with internet radio that radio can't do – or you can more easily do in this new medium. And so we started to experiment a lot with that, which included experiments with duration. For example, we had an installation in Germany as one of the first projects we did with Kunst Radio – an Austrian national art programme, where we had one single performance that went continuously live on radio for five weeks. And that's not the kind of thing that you can do with traditional broadcast radio because they want to fit you into two hours or something like this.

So we then started to look at ways that you can play with the medium and that also led on to way that you can use software to experiment with automation. And we built various softwares for remote control of transmitters and we started to also get involved with things like micro-radio with people like Tetsuo Kogawa from Japan.

So it has really opened up a whole broad spectrum of experimentation for broadcasting – mainly in audio but also a little bit visually as well.

There is now a lot more traditional radio simulcasting or streaming that they do on the net but has net radio as an entity in its own right grown much over the years that you've noticed? How much has it flourished?

I guess there has kind of been phases. Streaming was introduced as a public technology in 1995 when Real Networks technology maker introduced the Real Streaming set of softwares, and that was audio only at that stage. And at that point, it was a group of artists that got together under the banner of the exchange network and started experimenting in that. But there was also a parallel to that and a few commercial broadcasters got hold of this new technology and, essentially, they just used this technology to broadcast what they were doing on air. There was no new interpretation of the new medium in that process.

So, for a few years artists were doing really innovative, experimental things. But now, I think actually the commercial broadcasters are doing stuff that may have been pre-empted by the creative practitioners but they've had the opportunity to experiment and put some money on it and really do some amazing stuff. So a lot of national and commercial radio broadcasters are actually using the medium very effectively. And, if anything, the sort of creative exploration in this field has had a bit of a heyday and has died off now.

Did you have a background in computer programming or is that something you've learnt as you've gone through necessity?

No, learning to programme came because we are artists, Honor and I, and we had ideas for doing radio projects that needed software and the software didn't exist.

Being wandering New Zealanders, we didn't really have a place to situate ourselves to apply for funding – there's not much in New Zealand for building creative artistic software, for example. And if you're not a resident in a country, you can't apply for funding from there. So it was very difficult for us to find the funds to build the software, so we just decided we'd learn programming and do it ourselves. It was purely pragmatic.

You had a go at pirate TV at one stage as well?

Ah yeah, we did lots of pirate TV, actually.

When I was in New Zealand, I started New Zealand's first community broadcasting station, which is Static TV, which is in the Waikato and still running now as Big TV as part of the university's Screen and Media Studies degree.

We did quite a lot of experimental TV broadcasting. I guess the first extended period was about 1999 when I was living in Amsterdam and we created the software to control the local public television cable network, which is SALTO, And we built the software. So, essentially, what you could do from your homes is contribute programmes that you'd made yourself to the television programme and schedule them on live. You could sit at your desk and schedule stuff through a web browser and watch your TV and see it appear. You could actually, in real time, cancel programmes that were playing at that moment and replace it with your own programme. So, it was a completely open non-hierarchical system for formatting a broadcast TV station. It was quite an interesting experiment.

And beyond that we did a little bit of work – we've done some work with various Italian activists, broadcasters – Television Streets is one interesting one in Candida, which is an interesting group who create pirate broadcasting, usually on a low wattage – they broadcast on a small area but they also teach people how to use their own video editing software. And they're very interesting because the state of Italian TV is pretty atrocious, of course, because [Silvio] Berlusconi owns most of it. It's quite important that you have this independent activism going on.

So we've dabbled in a lot of experimental and pirate radio and television.

How much of a supportive environment has there been in New Zealand to pursue these kind of explorations? Has it been essential that you've been overseas for a while and does that seem to be changing now?

Yeah, it's been essential that we've been overseas to be established. I don't think, if we weren't in Australia, I don't think we would have. There was one place we did get some funding support, for example, was Australia. And without that, I don't think we could have made so many of the projects that we started with.

It was essential to be outside New Zealand for a while and there's a rolling economy in Europe where we've been based for six or seven years. There are a lot of festivals and media labs who know who we are and have invited us to do various things, which leads us also to commissions. You can earn a little bit of money through doing workshops and the odd installation and the fees blah blah blah.

In New Zealand, there's not that opportunity. In fact, it's very difficult to get any invitations outside these shores because international curators are very wary of inviting New Zealand digital-media practitioners to come to festivals and events because they just can't afford to fly them there. And their attitude is; if they can't afford to fly the practitioner to the festival, then they're not going to invite them. So you just silently get left off the list, which is quite disappointing.

But, having said that, coming back to New Zealand, it's growing and growing and the community for digital art is becoming very healthy and very supportive. And there's a lot of very interesting people doing very interesting things, and also with a mind to building a healthy community. So yeah, it's becoming increasingly possible to lead a digital artistic career here.

What kind of environment has there been within industry or the community in general for research in this area? Because, as well as funding, that sort of infrastructure has to be pretty important too?

Well, speaking from our experience, radioqalia has always existed under the umbrella of an artistic entity so we've largely been supported by commissions and funding that were for specific creative projects. There is a certain amount of that available and internationally there's probably more money, ironically, available for that kind of thing to New Zealanders from overseas than there is possibly to New Zealanders from within New Zealand. We got some support from the Daniel Langlois Foundation, where we're very fortunate and we got a very good grant that would help us research one particular project – radio astronomy. And it was the kind of money it would be very difficult to find in New Zealand.

There are some examples of creative industries funding available in New Zealand and there's the Smash Palace fund, for example, which has just got \$600,000 to invest into two stages of development – I think one is more-or-less research and the other one is development. So it looks quite healthy here at the moment and possibly more healthy than I've seen in other countries in the world.

Tell me about the Waikato residency that you're doing at the moment? What kind of opportunities has that created for you – what are you able to do there?

The residency came about through Sean Cubitt, who invited us to come and do a residency here as radioqalia, and he is working in the Screen and Media studies department at Waikato University. It's just essentially creating a space to breathe for artists so artists can come and they get an office and they get good internet connection and they get technical support and they get a certain amount of money each week and they can just go for it.

For us it's been very good. We've been able to develop a project, which is a prototype festival, which is called re:mote. And re:mote is all about putting together an international festival – or one day symposium, I guess – on new media art for a budget of exactly zero dollars. So we're looking at how this can actually happen because there's a lot of countries that don't have much funding for this sector but still have very interesting practitioners. So re:mote is an experiment in putting together this kind of format.

What we're doing is we're hybridising local presentations live at Elam during one day – March 19th

and these presentations will be by local artists on the topic of remoteness. And then it's going to be augmented with presentations from international practitioners that are going to be streaming live over the internet. And the audience going to be able to also talk with them after the presentations.

So, I've been mainly focussing on that and trying to work out the methodology of it all, what the set up of it is and how we could actually test it. So it's done in collaboration with ethermap.org, a very interesting New Zealand artistic entity with Zita Joyce and Adam Willetts. So far, everybody that we've talked to about this festival has been very excited and more-or-less decided that they will do it. There has been no fees asked, although we would like to pay fees if we can, in this instance there's been no fee, the venue is coming for free and blah blah blah.

So, it's been nice research and if this happens successfully, then we will probably do another one in Canada - we're doing a residency there in April. And then we might see what happens after that - we might do one in Croatia or perhaps Riga or Helsinki.

And on top of that, being able to look at a whole lot of other small projects that I've been working on with Honor - ongoing radio astronomy research for our main project, Radio Astronomy. And also I'm writing a manual for streaming media - how you can stream under Windows, Macintosh and Linux. It's an introductory book available as a PDF, and I'm writing that while I'm doing the residency as well.

Is there much interaction with other departments at Waikato, like engineering or computer sciences, and is that unusual that the residency is under the auspices of the Media Studies department?

Yeah, I couldn't say, I don't really understand the infrastructure so well. No, I have no idea. They've been good to me [laughs] is all I can say.

So there are facilities in other departments that you've been able to access as you've needed?

To a certain degree, like the music department and I think some parts of the computer science department seem quite friendly and helpful. And the English department lets me use their tea room. [laughs]

The Radio Astronomy project, how did that come about? At what point did your interest in broadcasting link to transmissions from the universe?

Yeah, that's a big question.

The whole idea of Radio Astronomy is, if you start thinking very broadly about the idea of broadcasting, it can become very poetic and very metaphorical. But actually also, just in interpretations of what's happening, if you look at the physical phenomena of a radio station, you look at a transmitter creating electro-magnetic radiation to communicate various forms of intelligible communications, and it gets reinterpreted back into sound by a receiver - that's what radio is.

But actually we were thinking about this, Honor and I, and there was the phenomena of radio astronomy - within astronomy, there's two fields; optical and radio astronomy. Optical astronomy is the study of the cosmos using giant lenses for visual studies as we know it. And then there's radio astronomy and radio astronomy is essentially these huge radio telescopes that act like antenna picking up the electromagnetic transmissions from objects faraway in the cosmos. So that lineage, from the source that is broadcasting these signals to the radio telescope dish that is receiving and interpreting it, is exactly parallel to the set up for a standard radio station. So we could see immediately, once we started thinking about this, the kind of interesting things that you could comment on in terms of what broadcasting is. It can really expand the notion of what it is to broadcast and what it is to communicate, and the idea of having communications that have been here since the beginning of the universe but we've had no opportunity to understand them until recently, or even to receive them, until recently. It's quite an interesting idea and quite poetic in itself.

So we started contemplating this. And also, one of the interesting things about radio astronomy is, if you convert the signals into audio you can actually learn a lot about the cosmos, which isn't so easy to understand by, say, looking at a photo in National Geographic. For example, pulsars – if you see a pulsar, which is a small spherical mass, say about 10 miles in diameter, and they rotate extremely fast. And if you look at a picture of a pulsar, like a photograph, it's just going to look like a small spherical mass. What you don't realise is that it's rotating – you lose the time-based element. But if you listen to the sound of a pulsar rotating, they have a burst of energy every rotation. And you hear this steady click. And for the very fast pulsars, you hear a continuous tone and it's very interesting to hear that because you can comprehend the amount of energy that might be required to turn this 10 mile diameter mass so fast.

This is actually, in radio astronomy and a lot of sciences, something called sonification, which is the turning of information or data into audio so you can better comprehend it. We're largely a visual culture and we tend to think more in terms of visualisation but sonification is a very interesting way of comprehending phenomena.

So, Radio Astronomy has kind of taken all these things together and what we've decided to do, because of the freedoms that you have with net radio, or internet radio, was look at the possibility of making a radio station that broadcasts the sounds of space – that audio-ised or sonified the emissions from planets and combined them into one single broadcast stream that you listened to.

It's essentially what we went about doing, we made various partnerships with NASA and their telescopes around the world – RT32 and Riga and Windward Community College in Hawaii – a very small telescope – to get all of their signals, convert them into audio and then make this live radio station that you can listen to on the internet.

So you're basically taking a feed of whatever it is that they're pointing their telescope at, be they looking at it or listening to it, and you can just tune in. If they're looking at the sun on that day, you'll hear the sun?

Yeah, it's a mixture of pre-recorded and live stuff and you can listen to the live stream and you can hear the sound of the sun, you might hear a pulsar, you might hear whatever phenomena is coming live. Some of it is VLF, which is the sound of the earth's ionosphere, which is not strictly space, but there's very interesting sounds. And actually, it can be enjoyable just on the level of understanding that you're listening to something pretty amazing, like you're listening to the sun, which is pretty interesting in itself. But also, if you're a follower of electronica and experimental music, I think there are a lot of parallels between the sounds you can hear, which are – naturally – occurring sounds, and what you might hear if you went along to an experimental gig of electronic music.

Did you have any idea what sort of sounds were going to arise when you first started working on this? Has it been quite a surprise that, – Wow, some of this stuff sounds really cool, and it could've just been really static-y?

Yeah, well we were quite happy with the notion that it would be static-y and then we were very pleasantly surprised to hear that there were all these beautiful little nuances that different phenomena have – lots of beautiful texture. Some people might still listen to it and just say it's static but I think it sounds quite beautiful.

Do you have a favourite cosmological phenomenon then, like the asteroid belt or something like that?

Actually, on that aspect, I'm falling more and more in love with the sound of the sun, which actually sounds more static-y than any other phenomena. But it's a very gentle ebb and flow of static, it's very meditative and I think it's quite subtle and it's quite beautiful. But there are some quite dramatic pieces also that you can listen to, some pre-recorded – it's not very often that you'll hear something

that is quite dramatic, which is live, except for perhaps the earth's ionosphere – the little clicks that you can hear just about on any day is very reminiscent of asynchronous glitch music and it can be quite beautiful as well.

Do you get the audio equivalent of space junk as well – is there a lot of interference and strange things that you catch as well, like next door's garage door opener?

Yeah, well actually, that's one of the sad ironies, I guess, about radio astronomy. We did some work in Mexico for a while for an exhibition and installation in Mexico City and the interesting thing was that Mexico was known for being one of the early regions for astronomy with the Mayans and the Aztecs and they used to have their temples in the middle of their cities for observations, which were of course just visual observations. Now radio astronomy has just taken the place of, to a larger degree, a lot of optical astronomy but, because the cities have built up – like Mexico City has built up and it's largely an electrical city – there's a huge amount of energy being consumed by that city everyday.

So a lot of electrical interference is being generated by the use of electrical devices and you can no longer do any observations, be they radio or optical astronomy from within the city. So these huge, beautiful instruments, which in a way you could say are parallel to what they used to build when they used to build their pyramids when astronomy first started off, have had to be shunted out from the middle of modern urban life and have had to find isolated spots where there are no interference. So it's kind of interesting to me that, in a way, we've become more electrified and as we're filling up the cities with much more interference and electrical interference, that these observations can no longer occur close to cities and they have to remove themselves from that environment.

You've created a CD from the recordings from the telescope using different artists including internationals like Scanner and locals like Rosy Parlane – how has that come about?

It came about because, essentially, there was a CD that was released about three years ago that was made up of a whole lot of samples recorded from the sun etc. and we were one of the artists on that CD. And it was released at the same time as a documentary DVD, which is about a residency – 20 artists went to this ex-Soviet radio telescope and experimented with it, and the DVD was made up of that weekend. Then last year the people who organised this residency – the RIXC Media collective in Riga, who Honor and I have been collaborating with for a number of years – said that they were going to re-release and remaster the DVD and said we should look at putting together a CD to go with the release – a fresh CD with new material. And also, it was coinciding with the release of radioqualia's Radio Astronomy project, so I suggested that it use samples that Honor and I had recorded in the research phase of that project, and so they agreed.

So I got busy just emailing people that we had worked with over the years and just asking them if they'd be interested in using this sample-base to create some works. And actually, out of everybody asked, everybody agreed to do it. Again, unfortunately, there was no fee for the artists, but we tried to give them as many DVDs and CDs as possible.

And the whole thing, you've made it available on the internet for free download as well?

Yeah, you can go to the internet to our website and you can download the tracks. This is part of the interest that radioqualia has in looking at various models of broadcasting and how copyright fits into this as well. And recently there's been a movement called Creative Commons, which is at [Creativecommons.org](http://creativecommons.org), is actually a stock number of licences that allow you more flexibility and more control over the copyright of content that you've already created. The standard default stance is that if you've created something, you don't let anyone use it unless they pay you. But you can actually be much more flexible with your rights than that and just the fact that people didn't know that has precluded them from being more flexible with their rights, which is why Creative Commons is actually quite important.

So, we asked all of the artists if they'd be interested in putting this CD together and if they would also be happy if we released the music under Creative Commons licenses so other people could download it for free legally, and so they could also take samples from it and make derivative works etc. And they're all very happy with it, all except one who we excluded from the CD because they weren't happy with that licensing model.

Where does the earning-income side of being an artist come into the whole Creative Commons philosophy?

Yeah, it's a tricky one. Where does it come into any model for making art? That's the big question and I think you have to make your own decisions as to where your economy lies as an artist. As an artist, your economy might actually lie outside of making art. For example, while in Europe, I've been very lucky to have a lot of opportunities to do workshops, which I get paid for "teaching people streaming media. So that's been a supplementary economy. So you take what you can from where you can.

The Creative Commons doesn't necessarily guarantee you an income because you've given your content away. You can see it as being part of a promotional strategy or you can just see it as being honest, in a way. I think there are a lot of artists that believe, if they make their music and they release it on CD and they pay for it to be printed onto CD and they distribute it, that they're going to make a lot of money. And often they end up losing a lot of time and a lot of money. But if you consider strategies of licensing things under Creative Commons, you allow people to download it for free and your overheads just disappear. So, instead of losing money "well, you're not making money and you're not losing money, you're breaking even by doing neither. And I think it's an interesting avenue just considering that And just really being honest with yourself as an artist and just how much money are you making by being protective of your copyright and would you benefit promotionally or otherwise from having a more liberal approach to the licensing.

The radioqualia track on the CD "tell us about that?

That just reflects the growing love that I have for the sound of the sun. It's basically all just unadulterated static from the sun with a few little bits and pieces thrown in, but that's all it is. And it's a very gentle, quiet piece. It has a little bit of VLF in it "it was recorded with a receiver that picks up the sounds of the ionosphere but this kind of receiver is actually very sensitive to electro-magnetic interference. And so a lot of the sounds that are on there "little glitches are little glitches that come from the urban environment. And the track's called vlf vs. the sun because [it is] the sound of the sun versus the sound of the electrical pollution.

The Max Nullto track, Document MN 90.4 actually has vocals. Where have they come from?

Yeah, that's the only track that does have vocals on it. That's actually the only track where they didn't use just purely our samples. And it's a very interesting guy from Slovenia who intercepts telecommunications between satellites, so he's gathering some of that material and he's mixed it in. So it's communications that have been going through satellites, or in some cases he's also got some ground-to-air communications as well.

Is this the same material that Pitch Black have used on their latest album?

Yeah, that's right. Pitch Black used a sample on one of the tracks on their latest album.

Soviet Military Rhodes in title alone suggests that there's something spooky going on "is there? Who's Tennis, the artist who has done that one?

Yeah, that's the really interesting! I love these guys, they're sort of glitch-dub and they've been around in the UK for some time and been released on biphop, the French glitch-electronica label. They do

really lovely stuff. Thatâ€™s probably one of the more traditionally musical tracks â€“ very luscious and nice production, they did a great job.

I donâ€™t know what the title means. Yeah, it is a bit sinister. [laughs]

Are there new emerging technologies that youâ€™re keeping an eye on that youâ€™re itching to get your hands on? Whatâ€™s exciting on that front?

Well, actually, Iâ€™ve become less and less of a technophile as it goes. I was very gadget-happy for a long time but now I find, strangely, radio astronomy is a digital media project and is seen as digital art but, actually, itâ€™s very analogue â€“ taking signals traditionally seen as analogue, these electro-magnetic radiations from the oldest things that exist in the Universe â€“ and itâ€™s very anti-tech. Itâ€™s very lo-fi, in a way, and I think thatâ€™s been very interesting to get away from this pedestal-ing of technology.

So, yeah, not really keeping an eye on anything. And also, I think that thereâ€™s a real danger of technology becoming fashionable within the new media art scene â€“ you see waves come through of various technologies and perhaps Iâ€™ve seen some which have more opportunity for content than others do. I think Iâ€™ve learned personally to step back a little bit from that â€“ from the waves of new technology â€“ and evaluate them a little bit more carefully as to how useful or how interesting you think theyâ€™re going to be. But, for the meantime, falling more and more in love with radio, and the more I learn about it, the more exciting it becomes. And I think it still, in a lot of ways, offers so much more for art than a lot of digital media does.

So what next for radioqualia? Youâ€™ve gone online and now youâ€™ve gone outerspace â€“ whatâ€™s the next project?

I guess the next thing weâ€™re focussing on immediately is this festival that will be in New Zealand called re:mote. And then weâ€™re picking that festival up and weâ€™re seeing if we can turn it into a rolling festival. So, to take it to other countries that donâ€™t have such a traffic in new media practitioners.

In New Zealand you donâ€™t have many international artists coming through and mixing with the local artists and thatâ€™s something that you do have in many places that Iâ€™ve lived in Europe. So, with seeing if that festival gets some sort of interaction going between practitioners around the world, and then weâ€™ll evaluate it and weâ€™ll try it again in Canada to see how it goes. And maybe weâ€™ll try it somewhere else as well. So itâ€™s kind of a rolling format.

Apart from that, there are ongoing requests to exhibit Radio Astronomy, that we have to look at, as well as always refining the technical infrastructure for that. Honor is now resident in the UK, and when I get to the UK weâ€™ll get together some more projects and start afresh new ideas.

<http://www.radio-astronomy.net>

<http://www.radionz.co.nz>

<http://urlx.org/nzherald.co.nz/2bda>

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