

Outcomes

The research project involved the trailing of netcasting technologies which, through the course of the project, had significantly improved: compression rates, platform and hardware inconsistencies, advanced scripting and mixed media integration¹. This provided both an ever-changing range of delivery media and broader scope for the inclusion of many more creative ideas.

To ensure broad accessibility to the notion of a netcast opera, even an experimental one, I began working with the RealMedia² format. Real Networks had managed to penetrate the market to such an extent that their streaming format had become near on ubiquitous with Internet netcasting.

I had experimented with other formats: Quicktime™, Windows Media™, Shockwave™ and MP3 streaming. In terms of reliability, consistent performance, strong development paths and user up-take, the Real format kept coming in on top. More recent developments in MP3 audio streaming are proving a worthy contender. Several netcasts have proved even more successful with the fledgling MP3 streaming servers.

The following selected projects utilise various audio delivery methods and collaborative strategies to realise both real-time and on-demand access to them. The most important lessons learnt from them are itemised in the concluding remarks of this section.

FUTUREScan

FUTUREScan was performed live from Toy Satellite, Friday, 25 July, 1997, as a contribution to Hybrid Workspace, Orangerie, Documenta X, Kassel and Recycling the Future, KunstRadio, Vienna.



This was the very first audio and video netcast I had ever done. It was a remarkable experience. I did not have to heave a single piece of equipment out of the studio. I performed to a small international and local audience across a single telephone line, carrying both a RealAudio stream and web cam.

We used a laptop, courtesy of Cinemedia, to run the RealAudio encoder and a Zyxel³ modem, courtesy of Colin Renwick, to keep the connection to Pegasus Networks, sustained for the duration of the performance.

The webcam, supplied by the Communications Centre, Queensland University of Technology, was installed on one of our PCs which was also running KoanPro, Cubase and sound processing software.

Coordination between Melbourne, Austria and Germany was conducted via IRC, a mailing list, email and telephone. Simultaneous performances were also streamed from Kassel, Berlin and Linz.

¹ Synchronised Multimedia Integration Language.

² [online] <http://www.real.com> [Accessed July 2000].

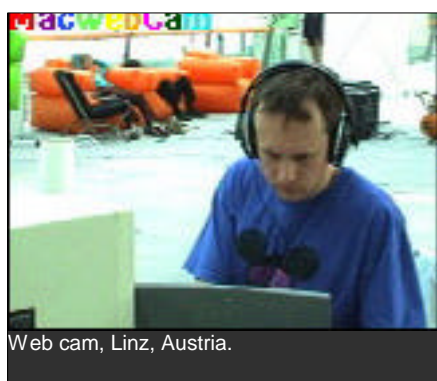
³ Zyxel's were popular in Southeast Asia for their ability to sustain net connections no matter how noisy the telephone line was. They have achieved near legendary status in the world of modems.

[online] <http://www.toysatellite.org/future/scan/> [Accessed July 2000]

Malaise | Unsound | SASS

On Wednesday, 10 September 1997, Kim Bound and Dale Nason performed *Malaise / Unsound / SASS* from Toy Satellite, necast via WiredAudio⁴ direct to Linz. Created for RtF, Ars Electronica 97, it was assisted by Justina Curtis and Bruce Morrison.

From Ars Electronica, I performed simultaneously with Kim and Dale, adding incidental samples and generative sound events. The necast was conducted with a 28.8bps modem, carrying a live stereo encoded RealAudio stream directly to WiredAudio. The Linz end of the stream, carrying both Melbourne and Linz performances, was delivered across an ISDN link to a RealAudio server in Vienna.



The quality of the stream from Melbourne to Linz was surprisingly stable and clear. It was considered one of the more successful netcasts during the Festival. Few dropouts, stable servers at WiredAudio and on-site technical support at both Toy Satellite and the KunstRadio setup at Ars Electronica contributed towards the success of this project.

With the addition of a web cam in Melbourne, the overall impression was one of low-tech hi-fi. Both the web cam and live RealAudio stream were being delivered across a single domestic telephone line.

[online] <http://www.toysatellite.org/future/malaise/> [Accessed July 2000]

Sensorium Scan

Sensorium Scan is a generative composition in six movements. It is essentially a reconstructed collage of a lecture by Robin Rimbaud (a.k.a Scanner) given at the Australian Centre for Contemporary Art, 1996 Melbourne Fringe and Cyberfringe Festival. Instead of streaming or relying on a plugin, this project provided the user with all the components required to make their own versions of *Sensorium Scan*.

Users can listen to my versions archived as RealAudio files. The rest of the site is comprised of individual sound (.wav) files, SoundFonts and KoanPro design files.

Each of the six movements could be described as an aural metaphor for Rimbaud's foray into scanning culture, the source of much of his creations. Three pieces from the current collection were on exhibit at the Blue Armory (Virginia, USA).

[online] <http://www.toysatellite.org/sensorium/scan> [Accessed July 2000]

⁴ [online] <http://www.wiredaudio.com.au> [Accessed July 2000].

SSEYO Koan^oasis 198

Initiated by SSEYO Ltd, *Koan^oasis* was a unique opportunity to collaborate with twelve composers, including Brian Eno. The idea was to create a Koan based composition, each composer contributing at least one voice (track) and one SoundFont sample. The final piece worked as an inter-networked, patchwork with individual components located in numerous locations. A single page, scripted accordingly, pulled all remote assets into a single piece.

SSEYO described *Koan^oasis* as "... a kind of global music eco system. Each composer contributes a musical *life form* with its own character and behaviour, and the music is the rich, ever-changing ecology of interactions between the life forms."

"SSEYO *Koan^oasis 198* is an online generative composition created by a networked community of Koan artists. It has allowed the Koan artists in their own time to realise, develop and amend their own online components of a generative sound environment and thus to compose music in a distributed manner. The artists do not have to be present or online when the work is *consumed* by you. For the first time, artist's all over the world have been able to contribute, offline and in their own time, to a low bandwidth generative community project which anyone in the world can hear 24 hours a day. It opens the doors to new forms of virtual performance and ultimately interaction."

"A SSEYO *Koan^oasis* is an empty *container* Koan piece placed on a webpage at SSEYO's web site which contains links to participating Artist's contributions. When you visit the webpage the linked contributions are downloaded to create a composite virtual work on your PC."

We used a mailing list to coordinate the project, each contributor sharing their Koan and SoundFont files as the composition came together.

It was important to understand what each contributor was attempting to create within the context of the entire piece. Eno was the only participant who did not contribute to any of the discussions, nor did any of us hear his track until the piece was near completed. Regrettably, his silence limited the success of this as a collaborative composition. I do not know why he remained outside of the process. It was like playing in a band with one musician playing whatever they felt like, whilst the others attempt to play together. Collaboration is about participation – all contributors share responsibility to bring a project to a mutually agreed end result. If one person begins to make decisions for themselves, despite some level of collective consensus, the collaboration can fall apart.

Koan^oasis, to my mind, is not musically successful. It sounds like many pieces all struggling to be heard. It is for this reason that I chose to create a sub-harmonic drone that did not attempt to compete with any of the other contributions, rather act as a kind of binder.

The voice/track I created, *Passage*, provided *Koan^oasis* with a low-end, bass resonant undertone. *Passage* is designed to be barely perceptible, something akin to the constant drone of the metropolitan soundscape. It adds a sombre counterpoint to the ceremonial nature of the piece.

The SoundFont is a sample of a close miked cymbal from a series of recordings made with Melbourne percussionist, Sharky Ramos. Close miking from beneath the cymbal captures a broad series of harmonics. The sample contains approximately 7 beats creating a complex series of overtones which are further accentuated by down-pitching the voice in KoanPro and adding a slight filter sweep.

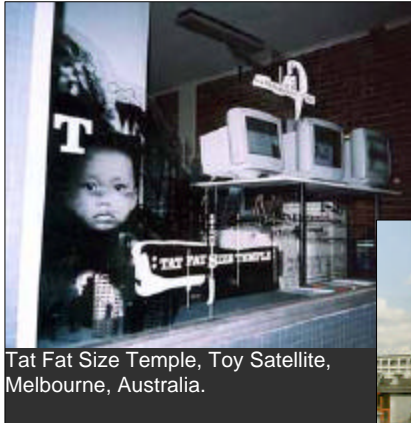
[online] <http://www.sseyo.com/koan^oasis/koan^oasis198/koan^oasis198.html> [Accessed July 2000]

Tat Fat Size Temple (1)

From 1 – 9 September 1999, composers and sound artists from 16 different international locations collaborated on a unique, perhaps the first of its kind, remotely actuated generative soundscape.

Sound Drifting could be heard via numerous web sites and public installations including the OK Media Deck, Linz (Austria), one of the host venues of the international Ars Electronica Festival.

Toy Satellite artists created *Tat Fat Size Temple* (TFST), a challenging installation comprised of sounds and images accessible via a dedicated web site, public installation and the *Sound Drifting* installations in Linz.



Tat Fat Size Temple, Toy Satellite, Melbourne, Australia.



Tat Fat Size Temple, Sound Drifting installation, Ars Electronica, Linz, Austria.

KunstRadio originally commissioned TFST after discussions with Heidi Grundmann, Sound Drifting curator, held in Vienna (May 1999). The notion of a real-time, live and online collaborative generative soundscape was of great interest to me. Given my background in such projects, having created compositions of this nature since 1996, Heidi was keen to see my involvement, and that of Toy Satellite, with a contribution fed into the global mix from Australia.

In June, Justina Curtis and I traveled to Sarawak. During our stay, there we were privileged to record, videotape and photograph the day-to-day lives of the people of the Rumah Sauh and Rumah Jeli longhouse communities. This extraordinary material formed the basis of both sound and visual components for TFST.

The idea was to create a soundscape that represented the fragmentation of Dayak culture due to the encroachment of *western* economies and social values. A generative approach to this project gave us more opportunity to replicate the *ebb and flow* of such influences as they cross into the various social structures that have bound these communities together for more than three centuries.

See App. 3 for a detailed report on this project.

Tat Fat Size Temple (2)

Encouraged by the success of this project we (Toy Satellite) were interested to take the idea further and develop a totally screen-based music/sound instrument that worked in tandem with image - a prototype of an instrument that both sound and image designers could compose for.

Rather than opt for the conventional knobs and sliders approach, we were interested in the notion of an interface that had a strong conceptual background that was subtle, delicate, informative and satisfying to use. We applied for another Stuff-Art grant through the Australian Film Commission. The application was successful, giving us the opportunity to explore these ideas as well as to illustrate the source of our sound and visual inspiration.

TFST is an attempt at creating an informative and interactive, sound-based web site of a culture in transition, one that endures both the urbanisation and economic imperatives that are alien to it.

This is identified by the contrasts provided in TFST by the images of Smith Street, the main commercial artery running through the former working class suburbs of Fitzroy and Collingwood, Melbourne.

Landmarked by government housing apartments, these suburbs have been common destinations for migrants in particular Vietnamese, Chinese, Greek, Italian and to a lesser extent, middle eastern communities.

In the past two decades these areas have become synonymous with significant increases in residential and commercial property values. Despite the fact that inhabitants of government housing live on the fringes of the poverty line, commerce has descended and with it comes expectations of a higher standard of living at the expense of low-income residents.

The conditions in this urban environment informed the parallels that could be drawn between urbanisation of indigenous Sarawak society and the homogenisation of urban life in Australia.

Soundscapes evolve out of recordings made in June 1999 during the Gawai Antu festival at Rumah Sauh and Rumah Jeli, Iban longhouse communities, Sarawak, Malaysia. TFST is dedicated to these remarkable and resilient people.

September 1993 I first visited Sarawak and spent a week there being exposed to the social inequities and tragedies that are all too often hidden from the international community.

Under the guise of a popular democracy the Malaysian Government has successfully sanctioned, supported and profited from the felling, extraction, pulping and trade of 80% of Sarawak's primary rainforest. All this in less than 20 years... and with it the traditional lands and self-sustaining livelihoods of its indigenous peoples.

I'm not a politician, I'm not a journalist, I'm not a member of any activist organisation nor do I donate to any. I have eyes, an inquiring mind and occasionally defer to my heart for compassion. Above all, I'm proud to proclaim myself an artist. The challenge was to take what I had seen and felt and translate this into something meaningful not only for my own people, but the people who had to remain in Sarawak to continue their struggle.

I took my Sarawak experience back to Australia and within six weeks of my return launched *FIERCE/InterRave*, a multi-faceted party, performance, symposium and what could be described in current terms, a precursor to today's net casts, a text-cast with about 40 participants representing the net connected world in 1993. We managed to raise enough money to purchase three 9600 Baud modems which I believe are still in use by NGO workers in Sarawak today.

June of 1999, I had the opportunity to return to Sarawak, this time with Justina Curtis. She ran a two-day web-publishing workshop for NGO workers in Sibu, a riverside town north-east of Kuching, the capital. After the workshop we were privileged to visit and stay with the Iban of the Rumah Sauh and Rumah Jeli Longhouse communities.

We shared their food, generous hospitality and festivities, most of which appeared to us as perhaps the last fragments of animistic traditions that remain with these people today. The pressures of an ever encroaching urbanisation has brought with it not only a cash based economy, it's brought with it Christianity which appeared to have created a divide amongst some of the communities. However, despite its appeal to some, I doubt any of us would ever experience, live through and survive successfully a share house of up to 100 or more cohabitants. We were told about one longhouse where near on 200 people lived. That's about 80 families... Talk about getting it together... These people know what it takes to create and sustain a community and it hasn't got much to do with partitioning kitchen shelves and stepping over your mate's underwear in the bathroom!

It was an exhausting and often uncomfortable experience, but despite the difficulties our soft, pale skins endured, we were inspired and motivated to record, document and produce work not only in honour of these people, but to raise awareness once more to the tenuous and fragile lives our indigenous brothers and sisters must live and the wisdom we will no doubt lose should we allow their cultures, traditions and spiritual practices to perish.

Thus the foundations for *Tat Fat Size Temple* were laid.

Early November 1999 Toy Satellite launched the first iteration of the *Temple*; a nine-day generative soundscape drawn from recordings we made in Sarawak. *Tat Fat Size Temple* was streamed in real-time into a global sonic collage entitled, *Sound Drifting*. *Sound Drifting* was produced by Austria's KunstRadio, for the 1999 Ars Electronica Festival held in Linz.

It was an awesome and sublime experience. The soundscape intermingled with the streetscape of Smith Street becoming part of our lives - an aural waterfall if you like, always fresh, always illuminating, never tiresome.

We were so pleased by the response to this work, both to its online and onsite presence that we couldn't lay the *Temple* to rest. We asked ourselves, how do we take the generative properties of these sounds and bridge them with the rich source of images we had accumulated from Sarawak? How do we create perhaps a deeper experience of Sarawak, its people, and its traditions? How can we demonstrate this fragile relationship between what was, what is and inevitably will be? And can we demonstrate that despite what is crushed on the surface can never be truly buried within?

These were big asks! But along came *Stuff-Art 2000*...Big asks, little disk! We raised similar questions prior to the first *Stuff-Art* project and we were fortunate enough to produce *Ausländer Micro* for it.

Now, some have asked why we took the *Temple* to *Stuff-Art*, something so technically challenging, time consuming and personally challenging to produce? A very good question... Perhaps we like doing it tough? It was tough, but there were good reasons for applying for *Stuff-Art*.

Not only does *Stuff-Art* provide challenging constraints for net artists, it reaches an audience that would otherwise remain ignorant of the potential for new media to provide not only works of entertainment value, but inspiring, evocative and personal experiences, experiences that usually relegate art works to the often austere environment of the gallery. The *Temple* is an art piece; there's no doubt about that. Whether it has entertainment value or not, doesn't particularly concern me. The question of what is entertainment and how it is manufactured is another issue all together. I feel projects like *Stuff-Art* expand the notion of entertainment by show-casing what is termed as "the best compact Interactive work from around Australia" via the Internet. We are fast maturing an online culture where onsite and online can be merged into a public, more diverse, less net focused experience.

I know I'm not alone these questions, ideals and pursuits. Nor is it an original idea to challenge the presumptions of entertainment. At the end of a long, caffinated day I'm simply someone who is compelled to make things happen despite the constraints we often have to work. After all, this is Australia, not Mozambique. We have resources!

When producing *Tat Fat Size Temple* we also wanted to use tools that these days seem to be marketed to the producers of more mainstream applications. We wanted to point towards, as technically exacting as it was, the production of content that isn't necessarily born of commerce, e-commerce and that which has become the hallmarks of today's Internet. Maybe we wanted to take the "enter" out of entertainment and replace it with a single "a" ... to "attain" knowledge not simply to be entertained by it.

I used to fear the mainstream, but it's the mainstream audience that votes and buys shares in Telstra. There's power there. But the medium of the mainstream can sting, and it too can bite... I guess some of us, and I include some of my other *Stuff-Art* colleagues in this if I may, some of us want to inject a potent venom into the relationship between the medium and its audience. But like all good medicines, they take time and a great deal of patience to do their work. So my friends, please take time in the *Temple*... it may not be all things to all people, it's simply a humble offering from people moved to create.

[online] <http://www.toysatellite.org/tfst/> [Accessed July 2000]

Feedback

The following feedback was received via email.

Very nice work!
Thomas Dolby

Very immerse! I enjoyed it, although I must admit, I didn't 'get it'.
Jim Welles

Overall this is one great Flashnik example. Very well done and a delight to experience. It's refreshing to see that not everyone is contaminated by mainstream US originated cultural pseudo values, and that production of such gems still happens. OK, OK, I loved it. That's enough.
Redstar

TAT FAT SIZE TEMPLE, besides being the coolest name I've heard in awhile, is a great site. The concept comes through nicely without being too overt. I really like the moving buildings. It reminded me of the film "Muriel" by Alain Resnais: 'International' style architecture become threatening in the middle of the film. Excellent use of sound paralleling the shifting visual metaphors. Really fine work!
Chris Burke

