



Translation between surround formats:

A case study in the piece *Voyage
Foog Phat Moog No1.*

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Acousmatic and Electroacoustically-led music

- Musique Concrete-orientated Electroacoustic music
- Devised in studio: Concert Hall dissemination by diffusion
- Development up to 8 channels - 1990s onwards (Otondo, 2007)
 - Commercial and established film standards of 5.1, 7.1 and extensions.
 - Tendency for non-commercial orientations
- Scales upwards in diffusion in performance situations

- “spatial composition...may lose integrity when transferred to another audio technology”
(Baalman, 2010)
- *How can this be maintained?*
- Translation starts to become really important!

Voyage Foog, Phat Moog No.1



- Moog Sound Lab
- Multiples of all Moog modules
- System 55 centrepiece
- In conjunction with BCU, Capsule and Supersonic



Technical Creation and Mix

- Solely based on sources and transformations of sounds from Moog
- All are monophonic (effectively point) sources
 - Quite bizarre outputs (electrically)
- Applied postproduction processing to create sense of multiple stereo images as well as point sources
- Mix into 5.1 surround in Conservatoire studios - primary mix
 - fixed as the “Original Master” mix output from the project
 - wanted to maintain elements of spatial control for the listener - a “prediffusion”
- Alternative “Production Masters” for dissemination comprising binaural surround as well as multichannel surround versions.

5.1 into 2 doesn't go...?

- With 5.1 mix as an Original Master, what are the options for creating other deliverables, and controlling translation?
 - Alternative mixes?
 - Downmix solutions?
 - How might this process look?
 - Does a straight fold down work?
 - Intermediary Codec? Create an auralisation?

5.1 into 2 doesn't go...

- Solutions:
 - Application of Higher Order Ambisonics (HOA)
 - *Virtualmonium* of Barrett et al (2016)
 - Facebook 360 plugin set
 - Blue Ripple Third Order Ambisonic (TOA) Pluginsets



BLUE RIPPLE SOUND

Facebook 360



Blue Ripple

- Reaper as vst host due to 16 channel required bus width
- 6 Channels panned to virtual positions
- TOA decoder to binaural 2-channel panner
- Output 2-channel binaural
 - Additional basic post



Voyage Foog Phat Moog

Conclusions

- Full album will be released Summer 2019 (BRC/NMC)
- Online stream and download in multiple formats:
 - 2-channel stereo
 - 5.1 surround
 - 2-channel binaural surround
- Presents a potential model for production approaches when moving between surround formats and translation is required.



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