

# **Portfolio of Compositions**

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# Abstract

This portfolio presents seven projects that use improvisation as source material for subsequent electronic music. Fixed media pieces including music for film, contemporary dance as well as two albums are included. Furthermore, recordings of live performance works where improvisation was controlled via compositions, loop-based material, custom-made software tools and hardware devices are presented in the folio.

The commentary explains the methods used in the projects and shows them in a wider context of other artists' work. It describes the creative usage of technology in the pieces presented in the folio. Also, the examination of visual elements as a guide for improvisation is discussed in relation to each project.

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## List of Submitted Projects:

### Data DVD (to be played on PC, laptop or tablet):

#### 1. *Dance Pieces* - Fixed media works for contemporary dance

- *Dance-Text-Origin* (audio, video) 2008
- *Roots-Dance-Poetry* (audio, video) 2009

#### 2. *Cinematic Project* - Music for experimental movies

- *Born* 2009
- *Winter Garden* 2010
- *Bipolar Landscape* 2011

#### 3. *Aquatusz* - Music for analogue visualisations

- *Aquatusz* (audio track and film) 2010

#### 4. *Synthesis* - Live piece for one drum machine and two performers

- *Synthesis* live in Aquil Terme (Italy, 2010) 2009

#### 5. *Electricity* - Live performance and album

- *Electricity* live extract (video) 2010

#### 6. *Freeform* - Live improvisation for experimental movie

- *Freeform* (audio, video) 2010

#### 7. *Space Fight* - Live performance and album

- *Space Fight* live in Trevor Johnes Studio (audio) 2011
- *Space Fight* live extract in Ron Cooke Hub (video) 2011

### CDs:

- Electricity ( CD album) 2010
- Space Fight (CD album) 2011

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I would like to gratefully acknowledge Jakub Hader for his work on *Aquatusz* and *Space Fight*, Juliana Alvarenga and Zezo Olimpio for their work on *Born*, *Winter Garden* and *Bipolar Landscape*.

I would like to thank choreographer Marie Ronold Mathisen for her work during the *Dance Pieces* project. Thanks to all improvisers and performers who helped me throughout the last three years of my studies, including: Anna Edgington, Ricardo Alvarez, ArekATematRzeka, Alex Harker, Chris Leedham, Joe Murgatroyd, Noah Noutch, Dave Keegan and Craig Scott. Thanks to Alex Harker and Oli Larkin for their technical support and invaluable advice on Max/MSP related issues.

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Finally, I would like express my deepest thanks to Magdalena Rodzen, my friends, family and in particular my parents for their patience, encouragement and financial help during my studies.

## **Author's Declaration**

I declare that this dissertation is my own work. It is being presented for degree of PhD at the University of York. This commentary haven't been presented elsewhere or used for other purposes.

Radoslaw Rudnicki

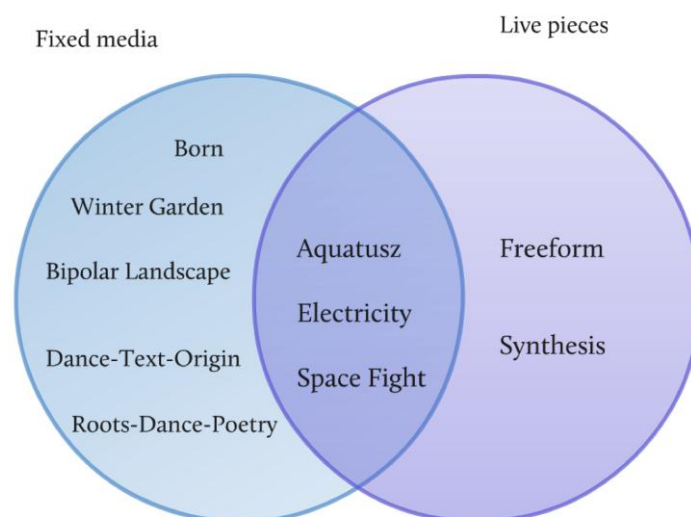
## Aims

The purpose of this document is to provide contextual and extramusical background to the compositions, which are in the folio. The folio itself is contained on the attached DVD. The document explores following issues:

- To compose new electronic media works using improvisation as a source material. These include working with visual material as part of the compositional process.
- To explore, within the creative folio, the role of editing processes in the restructuring of improvisation.

## Introduction and Aesthetics

In this portfolio, fixed media and live pieces as well as hybrids of both have been created. I used pre-programmed patterns e.g. in *Synthesis*, 2009 or composed audio tracks (*Space Fight*, 2011) as sources given to performers for improvisation.



**Figure 1** Types of piece presented in the folio.

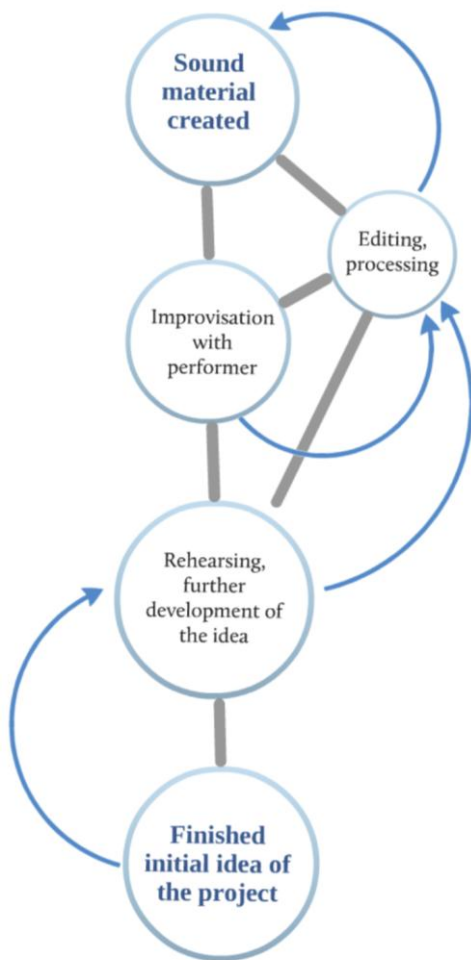


The folio also contains cross-disciplinary projects including music for film, contemporary dance and audio-visual installation/live performance.

Over the last four years, the use of improvisation as source material for composition research has made my work more live-performance oriented. I started by creating fixed media works (*Dance-Text-Origin*) in 2008 then gradually shifted towards music realised live (2009). Newer works, such as *Synthesis* (late 2009) and *Freeform* (late 2010), were developed as live performances from the start. *Aquatusz*, *Electricity* and *Space Fight* work as both types. They are not only

presented as albums (*Electricity*, 2010) or a film (*Aquatusz*, 2010), but they were also played (see appendix) as multimedia live performances.

Editing and restructuring were also investigated with both fixed media and live performance in mind. Pieces for fixed media were composed on a Digital Audio Workstation (DAW) while live performance was approached by using custom-made patches and flexible hardware. Improvisation systems were used in *Synthesis* (2009) that dealt with micro-sound edits inspired by Stefan Betke (*Pole*, CD, 2000), and long time-scale ideas were examined in *Freeform* (2010).



**Figure 2** Project development working process shown in diagram form.

Figure 2 shows the workflow present in all types of my work. I used these methods to permit the artists<sup>1</sup> opportunities to provide source material for the works presented in the folio.

The aesthetics of these pieces (*Electricity*, *Space Fight*, *Aquatusz*, *Roots-Dance-Poetry*, *Winter Garden*, *Freeform*) place them on the edge of Jazz (Robotobibok, 2004), Dub (Augustus Pablo, 1976) and beat-based Electronic Music of Cristian Vogel and Jamie Lidell (*Super Collider*, 2002). The pieces are the result of controlled improvisation with electronic devices, bass-heavy rhythms production (*Electricity*, 2010) and interaction with jazz performers (*Space Fight*, 2011) in the projects. Decisions about the structure, sound design and a mix were made aurally. All of the work characterises controlled improvisation, sound editing and sculpting of each timbre used.

## **Improvisation as Source Material and Its Relation to Found Sound**

In order to achieve the desired results in my work, I gave performers guides in the form of soundtracks, use of drum machines or a simple conducting system.

A phonograph in the hands of a hip hop/scratch artist who plays a record like an electronic washboard with a phonographic needle as a plectrum, produces sounds which are unique and not reproduced – the record player becomes a musical instrument. (Oswald, 1985)

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<sup>1</sup> Enrico Bertelli – percussion, Matthew Postle – trumpet. Matt provided melody lines ('Little Tune' in the *Electricity* project), pitched material (throughout the *Electricity* set) and responded to the rhythmic section I created ('Mhthr' in *Electricity*). Enrico's expertise in percussion helped in development of the drum kit sounds in *Synthesis*.

My approach to source material is similar to plunderphonics as editing and selecting short samples (often only a few seconds long) is the main part of the compositional process in my pieces (*Dance-Text-Origin*, 2008). What makes it different from John Oswald's music is the fact that I create the electronic material myself (through sound synthesis), manipulate the samples and do not comment on others in my work or re-contextualise material through editing (*Cassetteboy vs David Attenborough*, 2007). Since the performers that take part in my projects are not free from external influences, I retain control over the structure of their improvisation. The improvised material is made in response to my previously arranged patterns (a good example being the project *Electricity*). My editing approach is similar to one used by hip-hop artists as explained by Christopher Martin (DJ Premiere) in *Scratch*, 2002. I searched through the improvisation session to find the most suitable samples in order to use them as part of the patterns, grooves or as melodic material. Also, hip-hop artists, such as Wu-Tang Clan (*Enter the Wu-Tang [36 Chambers]*, 1993), tend to use samples in repetitive, looped-beat patterns throughout their whole pieces; I do not. Furthermore, my music might be considered similar to that of M.C Schmidt and Dr. Drew Daniel (Matmos), whose work is more focused on the process of sound design and editing. Their pieces (2000 to 2001) are characterised by

a materialist approach towards sampling, a natural consequence of a musical environment where all sounds are viewed as objects. The three artists acknowledge that samples necessary bring to new works associations from their original environments. (Demers, 2010)

I do not use extra-musical associations as composition tools. Instead, I prioritise the sculpting of sound, timbre and mixes within the pieces; most of the composing decisions are based on these elements. The materialist aspect (Navas, 2005) is present, though, as I structure material based on its own internal qualities, in a manner influenced by Feldman (*Piano and String Quartet*, 1985), who ‘was a sound materialist, relishing the internal characteristics of sounds rather than their semantic potential’ (Demers, 2010).

Ideas drawn from Francesco Lopez, who records sound to document the activity happening in an environment in a given place and moment (Cox, 2000) can be found in my music, especially in those pieces that involve displacing the environment to a listening space chosen by the listener. I have employed that technique in *Space Fight* (2011) and *Aquatuzs* (2010) through the use of recorded performances and improvisation sessions edited in the piece, unlike Lopez who leaves material unprocessed (*Buildings*, 2001). I manipulate my sound sources (such as improvising with cling film during *Born*) and interact with them several times (see figure 2.).

One can also find resonance with Chris Watson in my use of source material (*Weather Report*, 2003). Watson uses microphone techniques and is selective in choosing the material he will record in order to show his view of wildlife/environment in a given time and space (Gadenz et al., 2008, 11:50-12:55). I control my view of improvisation/performance by selecting and processing gathered material (*Space Fight*, 2011). In this respect, our approaches are similar.

I maintain control over randomness as John Cage did (*Music of Changes*, 1951), determining a minimal amount of information required for performance by

giving musicians the instructions for dynamics and density of playing only (*Synthesis*, 2009) and leaving the improvisers the space to express themselves in order to capture their idiosyncrasies, mistakes and accidents. However, the events in my material do not happen by chance, nor are pieces composed through chance processes. My similarity to Cage is in the fact that I create rules around improvisation in order to gather desired material for editing and composition.

### ***Dance Pieces (2008-2009)***

*Dance-Text-Origin* (2008) and *Roots-Dance-Poetry* (2009) were made in collaboration with Norwegian choreographer Marie Ronold Mathisen, who was studying at the Northern School of Contemporary Dance in Leeds in 2008-2009.

*Dance-Text-Origin* and *Roots-Dance-Poetry* are fixed media pieces containing edited voice recordings and both acoustic and electronic improvisation. Since both pieces had the theme of ‘origin’ (interpreted here as ideas of cultural background or personal roots), language differences and accents in the spoken voice were explored. This was executed through the use of native Polish and English speakers reciting Wislawa Szymborska’s poem titled ‘The Three Oddest Words’ (Szymborska, 2000: 261) and singing it in native and foreign languages. Also, Norwegian and old-Norwegian spoken texts, such as ‘Håvamål’ (Anon, XII), were read by Marie.

This use of voice and language provided diversity in sections of both sparse pieces. Similarly to the voice, the acoustic improvisation was edited in order to create textures and ambiences (2:34-3:00 in *Roots-Dance-Poetry*) and to serve as the basis of a rhythmic section (1:30-3:44 in *Dance-Text-Origin*). Gamelan gongs (*Dance-Text-Origin*) and hang drum improvisation were recorded

before the structuring of the pieces took place. Conversely, the trumpet improvisation (*Roots-Dance-Poetry*) was recorded after drum patterns were composed. The former was used to generate ideas for the sections while the latter brought a human feel to electronic loops (making them sound more natural, less digital). Both trumpet and drum sounds supported the transitions (4:50-5:00).

The structural organisation was based on improvisation on two levels. Dancers were improvising to the choreographer's instructions and to the music. I filmed the rehearsals so I could focus on gestures and shapes that dancers performed (while improvising with my sound sources to the recorded video clips). In my approach, music influenced dance improvisation during the rehearsals over time (not live) and vice-versa; improvisation was the communication medium. The timeframe between composition and rehearsals was a week.



**Figure 3** *Roots-Dance-Poetry* – rehearsal at NSCD in Leeds, 2009.

*Dance-Text-Origin* was created for two dancers. I made both gestural and rhythmic connections between male and female voices and between acoustic and

electronic sounds. The voices fade in and out and give the impression of two different ‘origins’ or cultural backgrounds through their use of language, dialect and accent. I also used gamelan gongs, representing roots of eastern (Javanese) music culture with different music scale and notation, and hang drum, a new, western instrument (PANArt, 2005). In *Dance-Text-Origin* a few ideas that occur in separate sections are connected. The use of the voice (0:00-1:12 and 3:50-4:20), synthesised ambient samples, hang drum (1:08-3:22) and gamelan improvisation (3:53-4:14) formed the sections.

In *Roots-Dance-Poetry* I used more contrasting instrumentation (voice, vibraphone, trumpet, double bass, electronic sounds), density (noise, sparse vocal parts) and style (accessible beat-based music, noise, ambient) than in *Dance-Text-Origin* in order to express the extended choreography in music. Marie wanted to create narrative choreography, choosing to represent a person who tries to communicate with other people, one who ‘struggles but achieves it at the end, loosing her individuality halfway through’ (Rudnicki, 2009). I represented this in the music by making an abstract and minimal start to the piece, from which develops an easy-to-recognize, hip-hop/dubby rhythm (Radiq, 2004). Marie explained her idea for the choreography, which was structured as follows:

1. *Everyone on stage - small movements*
2. *Janice - solo while vocals*
3. *Duet Izzy and Heather wavy sound -> into duet with Flex and Izzy*
4. *Flex solo -> into duet with Janice*
5. *Add 30sec for trio (Flex, Janice, Heather) = 1min vocals coming in*

6. *Unison (Janice, Flex, Heather, Izzy)*

7. *Janice solo -> Liz comes in.*

**Figure 4** Sketch of *Roots-Dance-Poetry* structure (Flex, Izzy, Janice, Liz, Heather – dancers)

The solos, duos and quartets of dancers – like in musical ensembles – were represented by the audio tracks (trumpet, drum machine, voice and delay used as quartet, 7:07-7:20) and formed the structure of the choreography. This expressed the narrative that Marie had in mind and involved using different types of sound quality to reflect on origin, age and history. For example, I used vinyl recording (3:03-4:12) as well as raw 12-bit sound of digital synthesis with delay effects (6:22-6:55) taken from *Elektron Machinedrum*. For unison choreography (all performers dancing together in sync), I used 4/4 drum machine loops. It is worth mentioning that once working on the second piece I was more confident with the dance medium and created the music in separate sections beforehand (each 1-2 minutes long). I wanted to make space between the sections by having silence between them. Marie found this idea easy to work with, as the sounds used were abstract in nature (ambient textures, voices with delays, looped double bass pad). Connecting the sections was done by simple fading in and out, direct cuts, silence or blending with delays and reverbs. After I finished the music Marie worked with this piece and fine-tuned the choreography timings to the sound track.

Here, the role of the music was not to ‘express’ the dancers’ moves; its purpose (apart from being soundtrack to the performance) was a framework for the aesthetics, atmosphere and inspiration for dance improvisation.



## ***Cinematic Project (2009-2011)***

This project contains three pieces made for filmmaker Juliana Alvarenga in collaboration with Zezo Olimpio, who wrote melodies and improvised on keyboards which became ‘found material’ for my own new compositional process.

The auditory acuity and atomic listening of sound engineers and producers are phenomenal. The amount of studio time and the attention they give to the manipulation of sound and textural change at the microlevel is often greater than they lend to designing the arrangement and harmonic and melodic patterning of a song. (Meintjes, 2003: 12)

My approach to the micro scale extended from small-scale editing of clicks and samples (Jelinek, CD, 2001) to granular synthesis using techniques originated from Curtis Roads (Roads, 2004: 306), such as string sounds made out of piano samples in *Born* (3:56-4:22).

I organised the pieces around the structure of ‘rough cuts’ of films without sound sent by Juliana. The density of sound and sections was based on shapes, colours and movement in the films. For example, in *Born* I used ambient noises (0:10-0:26) and the recording of improvisation with materials (paper and cling film) while the colours were light. Harsher, rough sounds (2:00-2:08) were used in the middle, and processed rhythmic sound was introduced once sculpture appeared in the film (1:28). Each performer was asked to treat the moving image as a score/guideline and inspiration for the sound. I made decisions as to which

take fit best with the given movie shot, layering a few if necessary in order to make musical sense. In *Winter Garden* I perceived the colours to be very toxic (saturated green, pink, etc.), so for aesthetic reasons I used as much synthetic material as possible.

Cling film, paper, styrofoam and piano in *Born* gave me both contrast (acting as main source material for the piece) and the starting point for processing (ambient granular textures and rhythms). In *Bipolar Landscape*, the flute played in a style similar to the Bolivian pan flute, which made a connection to Bolivia, where the movie was shot. The Hammond organ, on the other hand, worked as a bass and acted as a framework for the piece. I improvised with processing (delay, filter and reverb), changing parameters in the style similar to that of dub artists such as Rainford Hugh Perry (Lee Scratch Perry, 1976). I recorded this improvisation with effects while the rhythmic section was playing and used it to fill the silence between flute parts in already mixed takes.

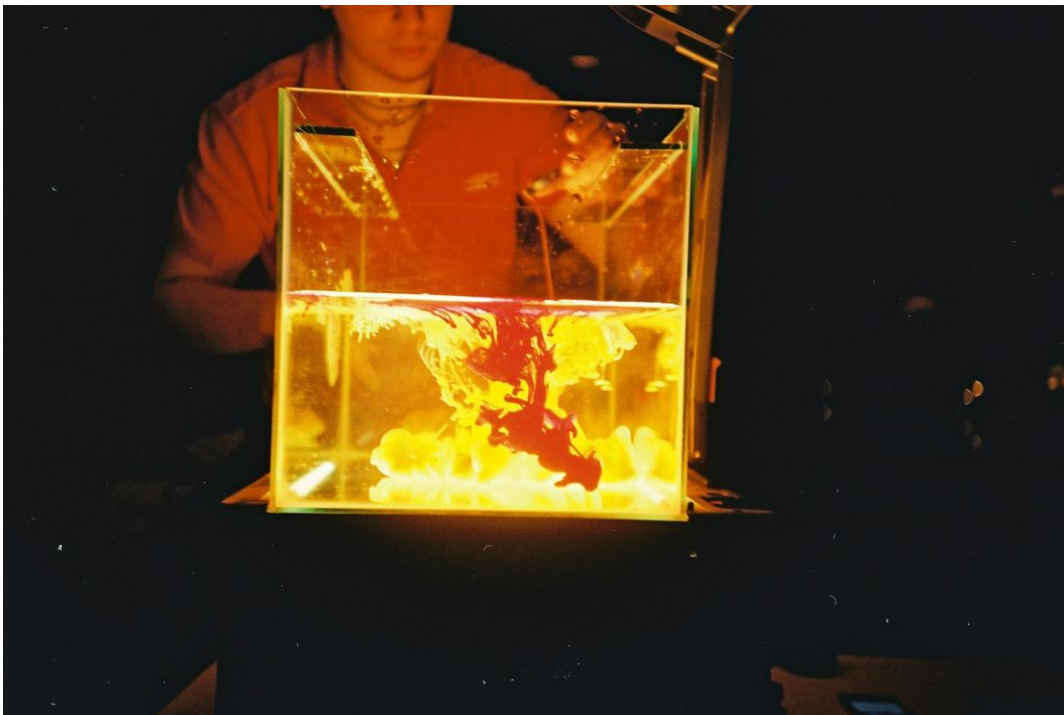
Uneven, broken rhythms in *Winter Garden* resonate with the work of Autechre. On *Quaristice.Quadrangle.ep.ae* (Autechre, 2008) Mr. Brown and Mr. Booth generated their rhythms using computer algorithms and improvisation with software and hardware (Pequeno, 2010: online, accessed 9 Nov 2011) in order to create their music. I create my rhythmic section through edited improvisation alone with similar effect in order to describe the film (the three-dimensional structure of the cubes placed in space) using rhythmic patterns of music.

### ***Aquatusz (2010)***

This work was made with visual artist Jakub Hader. Initially I was asked for music for the installation piece. Jakub was experimenting with analogue visuals

by dropping coloured ink inside an aquarium full of water sitting on top of an overhead projector. His process made ever-changing analogue visualisations; intensive projector light made heavily mixed colours beautifully vivid inside the aquarium.

My idea was to use this type of analogue visual as an inspiration and guide for the ensemble in order to generate sound material. In order to do so, I grouped musicians in pairs and asked each pair to play similar gestures. We played key clicks and rhythmic gestures (0:00-0:20), and I added ambient sounds (0:40-1:00) myself at a later stage of developing the piece with the use of electronic processing. I swapped musicians' roles and changed the groups of improvisers for each take. This method provided me with sonic diversity within source material.



**Figure 5** Visualisations for *Aquatusz* – rehearsal, 2010

Like the colours in the aquarium, the piece is about mixing different types of sound material, styles and art forms. The piece changes over time as the

colours and shapes of liquid ink do. Reverberation is a metaphor for the water space within the aquarium.

### ***Synthesis* (2010)**

We improvise to find new solutions, but we must also remember the limitations or opportunities provided by our medium. With certain qualities of interaction, there is a feeling of symbiosis between human and technology.

(Soules, 2002: 319)

*Synthesis* is a study of interaction between two people and technology. I created it for percussionist Enrico Bertelli. I used my limited medium – one drum machine – and played it together with the percussionist. With an integrated sequencer, this type of drum machine is normally used for dance and techno music.

As Mark Dresser explains:

But you can't orchestrate feeling, that's a thing the musician has to bring to the music, and its to do with who they are, how they're able to translate the experience – and you have to know your instrument, know the score, to get to the music behind the notes [...] we went together like a hand and glove. And it was to do with our...with that extra element, that thing that's not written: making decisions, relating, leaving spaces for each other. I mean there is a heavy human thing happening. (quoted in Lock, 1988: 122-123)

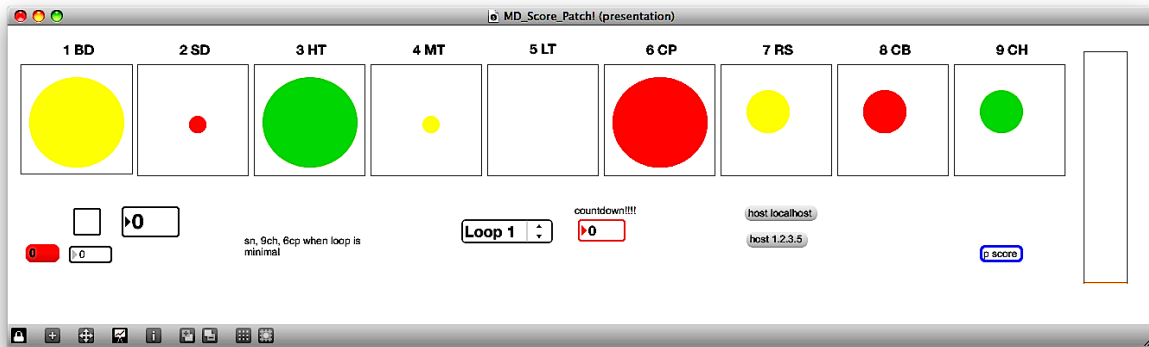
I wanted to go out of the ‘quantised grid’ and use improvisation on individual drums, giving the music a human feel without heavy use of automation in programming the patterns.

*Synthesis* is an example of extreme improvisation. Both performers play on the same instrument, the sound of which is defined by the improvisation itself (changing synthesis parameters by both players affecting each other’s actions). The piece has a very raw, digital sound due to extensive usage of the Machinedrum 12-bit synth module (pushing it to the limits with extreme usage of parameter modification), but it still has a very recognisable human feel (as opposed to mechanic/digital) in that it features asynchronous playing, gradual changing of the patterns, smooth transitions, syncopation and drum rolls, with certain space between each note and definite dynamics of playing provided by the live drummer. Bass-heavy, sequenced synthetic kick drums make it drift on the edge of techno or bass-heavy elektro (Mouse on Mars, 1999: *Super Sonig Fadeout*; Modeselektor, 2007: *The Black Block*). The 4/4 patterns collide with the asynchronous playing of the drummer, who unexpectedly becomes irregular to come back again tightly with the beat.

Part of our enjoyment of the music, however, remains an appreciation of the human source of the sounds themselves, which is also in a sense distinct from the articulation of non-notated parameters of the sound through performance gesture. (Emmerson, 1986: 42)

The piece shows how human percussion gestures are combined with custom-made synthetic instruments. (I designed each drum’s dynamics and timbre from scratch.) I designed the sound of the instrument to resemble a typical drum kit

setup but with synthetic sounds. I developed a patch that scaled the volume information sent from the drum kit and sent it as MIDI data (CC messages) to the individual channels of a drum machine. From the start, it became apparent that I needed a way to organise the piece as playing together was too random. I was also filling in the spectrum too quickly, and as a result, the drummer could not hear his actions. Therefore, I developed a restructuring max/msp patch that enabled me to show which drum the percussionist should play at what time. It functioned as a score, though I could change it at any time to reorganise the piece live while improvising. That became very useful not only at the beginning of the project when we were learning each other's playing and getting used to the material but also while we played in very reverberant spaces, like in St Catharina Church in Treviso, Italy (BDP 2.1 concert in 2009). There, less playing was needed to fill the spectrum and time as the reverberance of the room gave different composition. (Playing was sparse due to long reverb time.)



**Figure 6** *Synthesis* – showing circle size and colors related to dynamics and density required

The patch was run on two computers, with the main part running on my laptop and the ‘client’ on the improviser’s machine. Both parts communicated via the UDP protocol over a wireless network.

This interactive guide was created as a learning utility for improvisers. It not only helped us to get used to each other's musical language and style of playing but also to reorganise/edit the piece while improvising (communication through graphic signs while playing).

## ***Electricity* (2010)**

The aim of the *Electricity* project was to explore communication between trumpet and electronics using loop-based material, sound synthesis and processing. The album (RPE Duo, 2010) is the recording of the live performance.

The electronic part of the project was heavily inspired by hip-hop, which is reflected not only in the use of a 90bpm tempo and 4/4 beat-based grooves (DJ Krush and Toshinori Kondo, *Ki-oku*, Sony Music Entertainment, 1996) but also in the sound material used. Sampled trumpet improvisation (sampled jazz, soul or funk tracks) is commonly used in hip-hop records (Tribe Called Quest, *Midnight Marauders*, Jive, 1993), but much more complex sounds are present in *Electricity* than in a typical hip-hop track. There are a number of artists using electronic material in jazz music to whom one can relate my compositions. However, while Rob Mazurek with Chicago Underground (*Synesthesia*, Thrill Jockey, 2000) and Kuba Suchar and Artur Majewski (*Mikrokolektyw*) in *Revisit* (Delmark Records, 2010) use electronics, they mainly utilise keyboards, atmospheric or lead sounds, occasional techno-like click track or arpeggiator in their pieces. Uwe Schmidt and Burnt Friedman (Flanger) in *Outer Space* (Ninja Tune, 2001), Jan Jelinek meets Triosk (1+3+1, ~Scape, 2003), Burnt Friedman and Nu Dub Players (*Can't Cool*, Nonplace, 2003) seem heavily inspired by dub artists from the 1970s such as Osbourne Ruddock (King Tubby) and Horace Swaby (Augustus Pablo), using

similar approaches applied to modern jazz music or clicks-and-cuts aesthetics (Clicks and Cuts, Mille Plateaux, 2000). The synthesisers used are the Korg MS20 (Burnt Friedman, Secret Rhythms 3, Nonplace, 2008), which function to support acoustic instruments or to provide additional texture. This differs from *Electricity*, where several layers of sound synthesis are used to provide a dense rhythmic section for the project.

*Electricity* was structured around five themes (ambient, rhythm, groove, noise and melody) that determined the focus of improvisation. The order of the themes used in the performance was improvised, and each of them consisted of 3-4 patterns/loops.<sup>2</sup> The trumpet performer recognised the loops by the bass line as the texture and rhythm was each time different due to the use of live sampling.

### ***Freeform (2010)***

*Freeform* is a solo piece based on a hardware and software improvisation system I created. The source material used is sampled guitar (Craig Scott). The idea of the system was to be flexible, fast, easy to use and portable. While gathering the source material, one of the few restrictions I placed upon the improviser was a ten-minute timeframe per take, which seemed long enough to get desired results from the improvisers I worked with.

I used these improvisations as layers of sound in the piece, where layers do not depend on each other, as Monty Adkins did in his work, *Five Panels* (Adkins, 2008). I recorded almost one hour of sound material – five improvisations. I experimented with the most recent loops and patterns that I

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<sup>2</sup> Loops were represented on a groovebox and drum machine that has up to 6 (Monomachine) and 16 (Machinedrum) channels of sequenced digital synthesis. Used in different combinations, there were enough layers to provide diverse material for improvisation (layering textures and rhythmic tracks, variety of sounds and effects used) and thus to make it engaging for the audience.



made while working on the project, those which I considered worth developing as musical ideas. After this jam session Craig's role was over, and I started to develop my improvisation system. In this respect the project was similar to *Aquatusz* and *Dance Pieces*, where musicians took part only during the acquisition of sound material for further manipulation and editing.

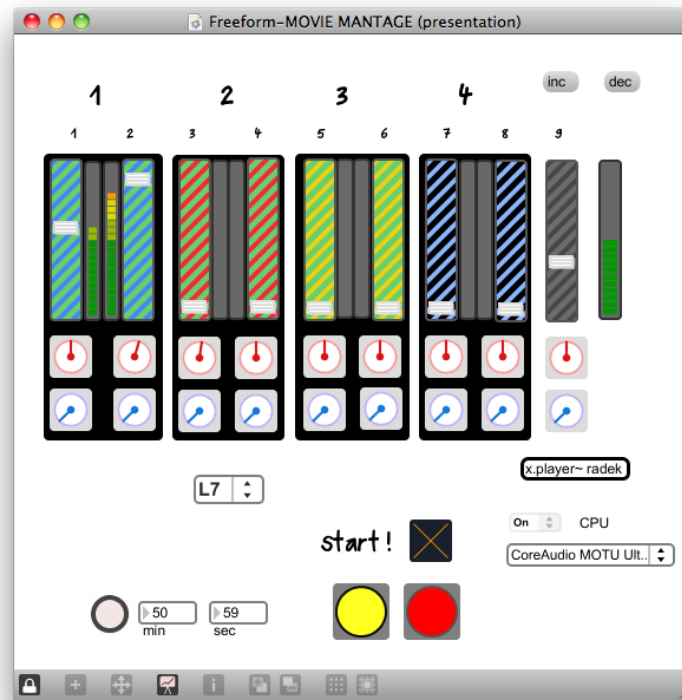
At the very beginning of the project, I decided that all of the material used in the system would be asynchronous. All the synchronisation was done aurally during the performance, not automatically by the system. To achieve that, I created the patch, which acts like a basic mixer with time information.<sup>3</sup>

While setting up the piece, I usually loaded different improvisations to each part; this gave me a guide simple enough to allow me to keep track of my place in the music and to play each part of the piece for an equal length of time. I progressed with the piece going from one part to another sequentially, 1-5, using different parts of the improvisation file each time. I experimented with replacing the parts while performing, layering and editing them.

It is worth mentioning that the piece was performed as the new soundtrack for the experimental film *Totalité Remix* (Vaude, 2005). Performing along with the moving image in part determined the structure of the piece. I usually played aggressively during parts of the film in which the images were dark and changed rapidly (5:30-6:10) and ambiently towards the end of film, when the pace was slower (6:20-8:00).

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<sup>3</sup> Max/msp patch included a timer, and a yellow and red LED light that was lit after 7 and 8 minutes of playing (see Figure 7). This setup helped me in deciding when to end the piece and showed me how long I had been playing.



**Figure 7** *Freeform* – mixer – interface shows volume, pan, send (to rack of effects) and time.

In order to recreate *Freeform*, a performer would have to obtain the max patch that I created. To control the patch, any type of midi controller can be used. Choice is dependent on the user’s confidence, speed of operation and familiarity. I leave the choice of sound material to the performer, as *Freeform* is focused on ways of re-structuring and electronic processing; the source material itself is not of great importance. There is no particular rule for the length of the piece, as long as the performance is diverse and interesting.

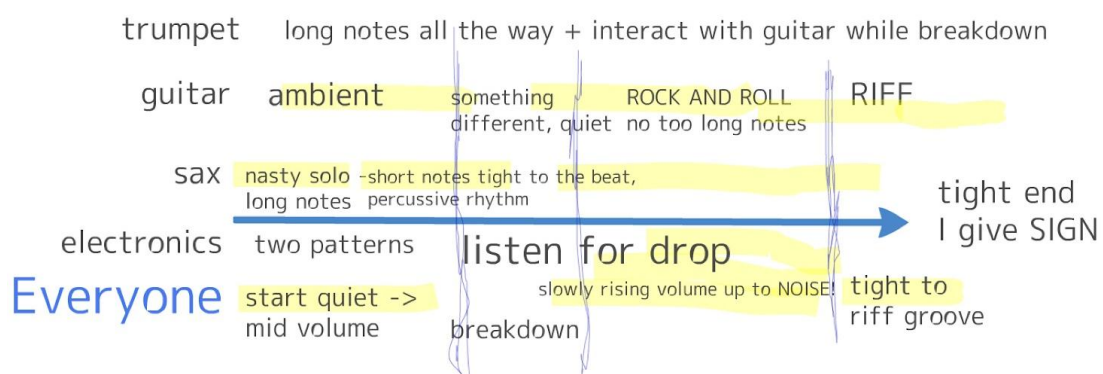
### ***Space Fight* (2011)**

Composers who have weighted their activities towards live electronics rather than studio based synthesis seem to me to have been strongly affected by the fact that a morphology imposed upon electronic sound-objects

through the monitoring of performance gesture can be much more refined and subtle than that resulting through intellectual decisions made in the studio. (Emmerson, 1986: 58)

As Emmerson notes, live performance is more gestural than studio composition. I not only combined the two approaches in this project, aiming to blend both worlds – refined performance gesture and non-real-time editing decisions – but I also controlled the improvisation through my choices in the studio (my decisions during the editing process). As a result *Space Fight* is presented in the folio as an album produced in the studio as well as a recording of the live performance. In order to achieve unique sound, musicians were processed live, with analogue and digital effects that emphasized their idiosyncrasies. Performers were given guides so that the improvisation could be controlled.

## Space Fight



**Figure 8.** *Space Fight* – guide for performers

However, unpredictable arrangements and the raw sound of drum machines, combined with the acoustic and processed improvisation used in the pieces, made the music unique. The density of the tracks places them on the edge of commercial, contemporary and noise music. At the same time, the

arrangements do not fall into any of the mainstream genres as they avoid typical structures (verse chorus) and loops. While making the album, I realized that musicians found it easier to play if they were given guides. I prepared sketches containing information such as ‘*sax – play ambient*’, ‘*guitar – reverse reverb*’, etc. This, combined with the audio loops, gave improvisers the framework to work with.

What interested me greatly in the making of this album was the investigation of different approaches to improvisation, creative use of sound quality and recording (Shepherd, 2011: 257). For example, the second half of the *Conquer the Stars* track was recorded during the concert, which provided more energy to the piece than studio work due to the presence of the audience. I also designed the guitar sound, processing it through the rack of effects in the studio combined with the pedals that were used during the concerts.

All of his associates attest to King Tubby’s deep love of jazz, and it seems plausible that his sensitivity to jazz’s labyrinth of split-second creative decisions was reflected in his refashioning of the multitrack mixing board as an improvisational instrument, as well as in his pioneering of the dub remix as an act of real time improvisation.

(Veal, 2007: 117)

I changed the workflow in the tracks presented in the album in order to approach improvised material from a different perspective and to add another layer of complexity to the pieces. *Alarm!* was a raw recording from the gig although it was carefully edited and processed in the studio (similar to *Electricity*, but in trio setting). *Space Fight*, on the other hand, contained almost unedited live

electronics and trumpet with edited guitar, sax and trombone taken from our jam session. This combination of techniques aimed to make *Space Fight* complex and dense in terms of the rhythm section and textures used; therefore, the audience was meant to decode the piece during listening (to find new timbres during repeatable listening). Furthermore, the mix of live and studio work did not make it obvious that pieces are studio compositions.

## **Future Work and Evolution of Current Projects**

In the future I see myself simplifying and creating hybrids of my live performance methods to make them compatible with the pieces presented in the folio. That would allow me to more easily combine the pieces into longer sets and allow for the exposure of my research before a wider audience. This ‘hybrid’ approach will also help develop new (to me) techniques and strategies for improvisation and composition. For example, further development of the Max/MSP patch used for restructuring improvisation in *Synthesis* (2010) might result in compositions for larger ensembles, different instrumentation or a varied number of conductors. Such research could also be achieved through improvisation with musicians and the use of visual elements as guides (Quintet.net, 2002: online, accessed 21 Mar 2012).

I would also like to expand my work from the audiovisual arts (*Aquatusz*, 2010) into multidisciplinary research, developing collaborations with scientists, environmentalists and engineers, similar to Brilliant Noise (Jarman and Gerhardt, 2006: online, accessed 12 Nov 2011). I would like to investigate the use of human-computer interactions (originally designed for music performance) in community engagement and knowledge exchange projects by manipulating

content describing scientific issues. Developing projects with people from diverse backgrounds might broaden my audience, adding another level of complexity and intellectual value to my projects.

## Appendix

### **Performances:**

*Electricity*: Dialogues Festival, Edinburgh, UK (2010), Manchester Jazz Festival, UK (2010), Lancaster Jazz Festival, UK (2011), Lancaster University, UK (2011), CFCP, Dublin, Ireland (2011), Sensorium, Dublin, Ireland (2011).

*Freeform*: Festival Omaggio, Aqvi Terme, Italy (2010), Concerti di Primavera, Paese, Italy (2010) Late Music Festival, York, UK (2010), CFCP, Dublin, Ireland (2011)

*Aquatusz*: Sensorium, York, UK (2010) as installation/performance for live visuals and tape piece. On Festival Omaggio, Aqvi Terme, Italy (2010) and in Candiani Centre, Venice, Italy (2011) as audiovisual performance for live visuals and improvised vibraphone and electronics. On Concerti di Primavera, Paese, Italy (2010) as audiovisual performance for live visuals and improvised trumpet and electronics. On Sensorium, Dublin, Ireland (2011) as audiovisual live performance for improvised trumpet, electronics, and analogue and digital visuals (web camera feed projected on the wall). On Late Music Festival, York, UK (2010) as audiovisual live performance for visuals and live electronics.

### **Hardware used for electronics improvisation:**

Elektron Machinedrum SPS1-UW MK II - drum machine, groove box used as multi-effect unit and sampler in *Synthesis*, *Electricity* and *Aquatusz*.

Elektron Monomachine SFX-60 MK II - groove box synthesiser used as multi-effect unit in *Electricity* and *Aquatusz*.

Jomox T-Resonator - analogue filter and multieffect used in *Space Fight*, *Freeform* and *Electricity* as bass and drone sound generator.

### **Performer roles in *Cinematic Project*:**

*Born* (2009)

Radek Rudnicki - created sound-scape for the piece, sketching the structure of the piece with processed found sound, mastering

Zezo Olimpio - created melodic and percussive material, preparing piano improvisation

*Winter Garden* (2010)

Zezo Olimpio - piano and Fender Rhodes improvisation

Radek Rudnicki - recording, processing and composing electronic material

*Bipolar Landscape* (2011)

Zezo Olimpio - created the harmonic background and textural material

Radek Rudnicki - manipulating tone controls in real time, mastering, providing textural material through the sound effects

Ricardo Alvarez - flute improvisation while watching the movie

### **Glossary:**

My personal definition of the terms used in the text.

1. **Ambient sounds** – atmospheric, sparse, quiet
2. **Beat-based** – electronica, techno, music containing electronic rhythmic section as main part of the composition.



3. **Commercial music** – accessible, commercially appealing, popular music
4. **Contemporary music** – electro-acoustic composition
5. **Cross-disciplinary** – engaging two or more disciplines in case of my folio music, dance, film, installation.
6. **Dub** – music originated in Jamaica in 70's by artists like Osbourne Ruddock (King Tubby), Horace Swaby (Augustus Pablo), characterises in heavy processing and improvised mixing. In my compositions I use similar approach treating mixing as instrument as dub artists did, being improviser and member of the band myself.
7. **Fixed media** – tape piece, CD track, fixed opposed to real time – live performance.
8. **Groove** – pattern containing drum and bass elements (made on synthetic drum machine in this case)
9. **Hang drum** – percussive instrument known as *the Hang* created by Felix Rohner and Sabina Schärer (PANArt).
10. **Human feel** – organic musical gestures/ rhythm/ groove/atmosphere present during live situation opposed to quantised digital feel.
11. **Improvisation** – reworking of precomposed material in live situation.
12. **Internal qualities** (p4) – timbre, intensity, density and quality of sound such as bit rate, sample rate, pitch and volume.
13. **'live'** – real-time musical performance containing real-time decisions, gestures and actions.
14. **Loop based material** – musical material containing repeated patterns as main part of the structure.

15. **Materialist aspect** (p4) – materialist approach, treating sound based on its qualities rather than its associations, meaning or origin; based on aural judgment.
16. **Micro sound edits** (Pole, CD, 2000) – edits to millisecond level, short sound clips such as those used on Stefan Betke's album.
17. **Mixed media** – two or more media mixed into one unique art form
18. **Noise music** – music genre based on noise sound as main part of the structure of the piece, characterises in excessive volume.
19. **Primary research** – main research in case of this work music compositions
20. **Randomness** (p5)– improvised material provided by musician in terms of style, notes, volume, density, dynamics.
21. **Raw recording** – unaltered recording of the live performance.
22. **Sources for improvisation** (p1) – guides for improvisers, different ways to get material out of the performers.
23. **Unique sound** – unusual, containing individual qualities such as personal style, timbre, idiosyncrasies specific to the player.
24. **Visual elements** – graphical signs and moving images used as guides for performers.
25. **Visualisation** – visual media containing graphical elements, representing music, sound, idea, gesture.

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