

Workshop - "Web Music touchpoints"

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ABSTRACT

This paper covers the proposal for a 2-3 hour introduction workshop concerning the *touchp(o)int Sound Palette* interface projects by the author [1-4].

The title of the workshop is called "Web Music touchpoints" seeking for holistic inspiration by aesthetics and technology, including the following topics:

1. *When sounds meet - just as people*: Musical opportunities of sound relationships across the board
2. *Semantic Sound Synthesis*: Why musical interfaces should try to avoid generic distortions and endorse phenotypic sound recognition
3. *Four Temperaments in Music*: Basic musical recognition areas exemplified on a psychological model
4. *Music Alchemy*: The aggregate state of musical material determining the degree of communication potential
5. *Freesound and Hypersound Music*: Examples of community based artistic explorations
6. *Design for Musical Purposes*: Listening spaces spanning expert and public engagement
7. *ALSO - Communication Scheme*: Looking into general ways of musical distribution
8. *Web Music touchpoints*: Creating new musical interfaces as a function of an aesthetic intent and the necessity of real time engagement and experimental surprises

The intended audience of this workshop includes music professionals as well as music enthusiasts interested in thoughts about new ways of musical occupation in a globalized context.

Keywords

workshop, phenotype, semantic sound synthesis, style, interface, globalization

1. INTRODUCTION

"Web Music touchpoints" can be considered as an holistic approach to link sounds, sound structures, musical forms, styles and even concepts of various origins into new and dynamic pathways of common musical experiences.

The following text provides a brief overview about conceptual building blocks of the workshop as well as the required logistics. More information will gladly be provided by the author upon request.

Links to demonstrated topics are provided as references and do not necessarily represent the final materials.

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2. Topics

2.1 When sounds meet - just as people

Breaking bars of musical communication [5] happens where musical or sound experiences rooted in different personal and cultural contexts can be synthesized into a new entity, whereas this entity still retains sufficient identification for the original owners of the single experiences to be attracted by the music.

As a result each listener learns in comparison to its original experience the experience of the other owner as well as a new enveloping effect that is created through this fusion. This summary effect may be also attractive for new listeners which do not own explicit experiences neither in the first nor the second sound or sound structure (see *Figure 1*).

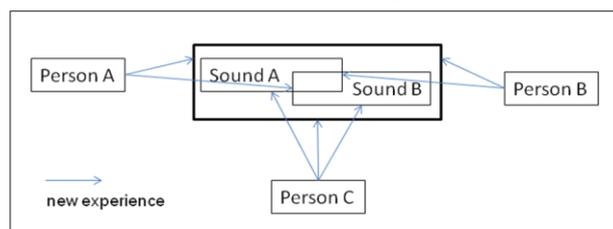


Figure 1. Interpersonal and intercultural communication model

The deeper the fusion of the elements occurs, the less eclecticism would appear allowing for a growing potential of new organic music materials. Community creation paradigms as suggested below (see sub-chapter *Freesound Music*) may demonstrate an extensive utilization of this communication approach beyond mash-ups of sounds that are still bound by popular recycled stylistic grids.

2.2 Semantic Sound Synthesis

Sound synthesis techniques have usually a strong pre-determining effect on sound and music results themselves such as instruments do. The concept of semantic sound synthesis [6] is to behave to the electronic medium as a neutral carrier and to shape musical events freely according to common axis of human perception and pattern recognition (see *Figure 2*).

Obviously it is much easier to suggest avoidance of pre-determining generic effects than to propose a system that would be able to generate complex semantic simulations. However, from practical reasons, advanced sampling technologies may come close to a general freedom of sound 'meetings' unbiased by structural rules of instrumental sound generation or sound processing systems, even so the quoted sound elements carry those instrumental characteristics necessarily with them.

The 'synthesis' model is based on an axis of material determination, spanning sensual capabilities (entropy) till predefined structural conventions (redundancy) and an axis of anthropologic determination, spanning from historic and social parameters down to momentary psychological conditions.

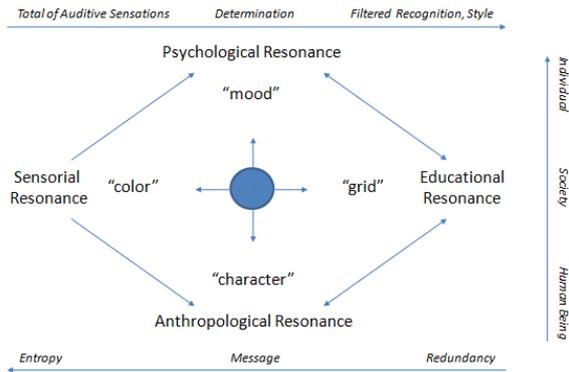


Figure 2. Model of Semantic Sound Synthesis

2.3 Four Temperaments in Music

Regarding the anthropologic axis of the semantic sound synthesis model, music seems to have common denominators in various areas of brain resonance or reflections caused by sound processes, rooted in

1. Body moves of physical work, walk and dance, etc.
2. Speech apparatus and breathing system
3. Emotional engagement
4. Intellectual recognition capabilities

These areas are materialized in basic structural areas of sound organization independent of stylistic and cultural determinations [7] such as

1. *Figures*, represented by rhythmical pulses
2. *Xpressions*, represented by phrase-like assemblies of elements
3. *Layers*, represented by long lasting sounds
4. *Events*, represented by arbitrary and unexpected elements

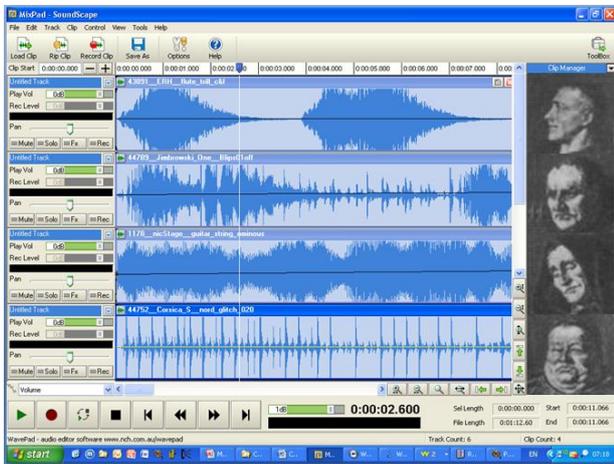


Figure 3. Educational model of four different base structures mapped to the classic temperaments

For educational purposes [8] it may be helpful to link those areas to the classical model of the four temperaments by *Hippocrates* that can also expanded to higher levels of musical characteristics such as musical form or even historical epochs.

2.4 Music Alchemy

The second axis of the semantic sound synthesis model relates to the information theory, mapping the musical recognition in a paradigm of entropy (total of possible sensual experiences) and redundancy (complete anticipation or order of sound element occurrences).

For educational purposes an analogy to the aggregate states can help to measure the 'temperature' of a certain musical structure:

1. *Solid*: as in fixed atomic relationships (like metals), sounds are bound to certain grids (often equidistant) and therefore easy predictable
2. *Fluid*: as in floating atomic relationships sounds are moving along certain vectors and their predictability is limited, creating a certain tension of which and where a sound may follow or develop to
3. *Gaseous*: as atomic motions in gases, sounds following each other freely without predictability, leaving the overall space for a somehow summarized experience

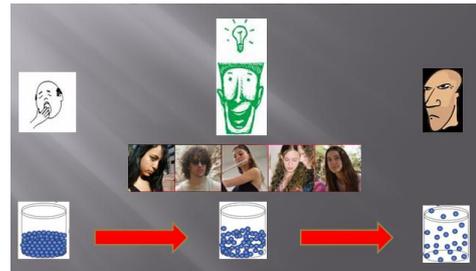


Figure 4. Model of various aggregate states for musical recognition

The aesthetic impact of the degree of predictability is critical for the level of interest into a certain music or style (boring - interesting and moving - unstructured and therefore boring again). It depends extremely from the educational history of a listener and is therefore very dynamic (see *Figure 4*).

2.5 Freesound and Hypersound Music

Fluid, or continuous sound relationship may build the ground for broad opportunities of interrelationships between sounds and sound complexes originated by different authors, even with different social or ethnical backgrounds. *Freesound* and *Hypersound Music* are designed as paradigms to endorse this potential of common musical creativity.

2.5.1 Freesound Music

The *Freesound* concept has been established by the theme of the *ICMC 2005* in Barcelona [9] and found its ongoing major realization as the largest common sound resource available over the Internet, *The Freesound Project* at www.freesound.org.



Figure 5. Freesound Music workshops in the international arena (2008)

Freesound Music endorses the creation of musical pieces solely based on *Freesounds* taken from the site based on a *Creative Commons* license (see freesound.ning.com).

2.5.2 Hypersound Music

Another way to promote interpersonal authorship is the concept of *Hypersound*. *Hypersound Music* tries - as a reaction to the overwhelming music production of today - to focus on sound phenomenon rather than generic battle grounds. The listener or performer follows the stream of musical pieces while breaking out to related pieces at defined fitting hyperlinks or *Hypersound* links, such as *Hypertext* links in text streams of web pages, just in real time. This individual way of browsing through musical pieces creates a musical experience in itself presenting a new or hyper-compositional paradigm with an enhanced involvement of the listener (see also *interactive movies*).

2.6 Design for Musical Purposes

The design of the musical style [10] itself is further strongly determined by the musical intent of the communication, i.e. the approached target audience and its expectations of use. The purpose model can be unfold based on the axis of material redundancy, spanning from entropic and continuous elements to discrete and repeated shapes, and on the axis of musical expertise and experience (see *Figure 6*).

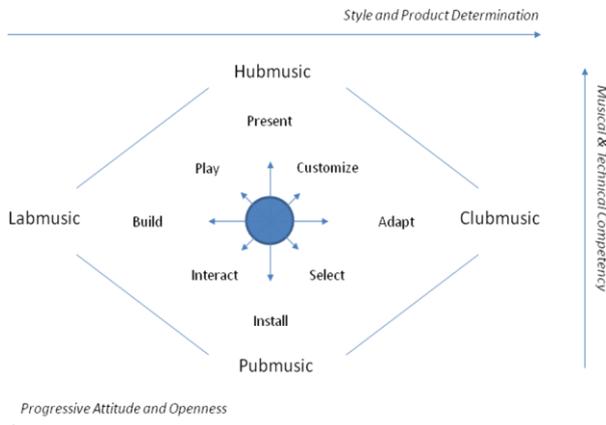


Figure 6. Generic musical engagement model

Based on this model we can distinguish between 4 poles of musical engagement:

1. *Labmusic* summarizes music with a high degree of experimental (entropic or continuous) sounds, including lots of rich spectra, noise and other extreme sound material, strong processed natural sounds, etc. *Labmusic* often includes formal experiments as well.
2. *Pubmusic* refers to music with a strong orientation to physical and balanced sounds as known from common hearing experiences. The musical structure itself is more balanced and musical forms are rather simple and not too concentrated.
3. *Clubmusic* represents music with a high degree of stylistic determination due to specific utilization purposes, for example, music for dance. The musical structure is very concentrated, sounds are advanced but balanced, and the musical forms are rather simple.
4. *Hubmusic* summarizes music with the highest degree of musical differentiation through an optimum balance of distinguished musical values. This music functions as a hub for all other musical areas, serving as an orientation for effective information reduction in advanced music design (*Labmusic* convergence path) as well as for enrichment opportunities of more conservative music design (*Pubmusic* and *Clubmusic* convergence path).

Further blends of this model are shown in *Figure 7* (see sub-chapter *Web Music touchpoints* below).

2.7 ALSO-Communication Scheme

Beside the different purposes of musical communication, musical events can be distributed by different means of media and listening situations. They can appear synchronous or asynchronous, and they can appear in a certain location or being distributed over various locations. Depending on one of the four *Asynchronous-Local-Synchronous-Online* combinations (*AL, LS, SO, OA*) it can be determined which technical means need to be applied to a system of musical communication. The following table provides an overview about the four basic deployment opportunities:

Table 1. ALSO-deployment combinations

Time	Space	Example	Project ¹
Asynchronous	Local	Installation	<i>Sound Spheres</i>
Synchronous	Local	Concert	<i>Sound Tours</i>
Asynchronous	Online	Web Game	<i>Sound Hunting</i>
Synchronous	Online	Broadcasting	<i>Sound Casts</i>

All models can own different kinds and degrees of audience feedback and may obviously appear also in combinations, for example, if a concert is being broadcasted.

2.8 Web Music touchpoints

The vision of a holistic music synthesis in a globalized context can be summarized as the detection and instrumentalization of musical *touchpoints* that interconnect musical experiences, naturally gained on a phenotypic level, originating from different local, social and historical contexts. The vision of an



Figure 7. Example of a musical engagement model at cm-gallery.com (2/2011)

open and interconnected stylistic approach does not aim to an annihilation of musical diversity but rather to an enrichment of musical experiences through the processes of ongoing specific formations in the respective field (see *Figure 1*).

3. Workshop Requirements

The workshop requires the following equipment:

- Hand-held touchscreen computer (provided by the author: *HP TouchSmart tx2*) with *Windows* and *Internet Explorer*
- Stereophonic system, preferably with 4 sources around the audience (cross channeled)
- Standard projector to display computer screen
- Writing board

¹ Below projects are subject to proposals see *References* [1-4].

4. AUTHORS

4.1 Friedhelm Hartmann

Friedhelm Hartmann (Freed) is a German composer, programmer, and researcher currently living in Israel. He studied music at the *Music Academy and SEK'D Dresden*, *Academy of Arts Berlin*, and *ICEM*, Essen.



Figure 8. Freed (Friedhelm Hartmann)

Freed developed his own computer-aided compositional language *Celsyus*, and did research at *University of Tel Aviv* on semiotics in electronic music. He was secretary of the composer's league of the society for new music of the *Ruhrgebiet (GNMR)*, and continues to develop and carry out his artistic concept of community based composition.

His numerous works have been recorded and performed in various countries in and out of Europe.

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