

Residency Request

for the composer performer Mathius Shadow-Sky
to create the concerto:

UNISOLABLE & UNDUPLICABLE

the recipe of freedom

by **the Lamplayer vs the Machines**,
the unisolable and unduplicable unheardmusic creator.
Mathius Shadow-Sky is the unwitting reincarnation of the Lamplayer through the time.

Why U&U recipe? U and U recipe is a logical consequence of human beings collective organization:
|: Isolated and duplicated => absolute power possible; unique and together => absolute power impossible :|

Concerto for:

- 100 virtual musicians**, the Archisonic Lamp wall orchestra of clones,
- Multiinstrument human soloist** with
 - . Unoctavian 9-tone electric guitar,
 - . Analogue synthesizer EMS VCS3,
 - . Trumpet,
 - . Voice with artificial choir generates by a random harmonizer,
 - . Bali gong wadon,
 - . Harmonica,
 - . The Archisonic Lamp, and
- Foreign instruments**
 - . TG77's sine's sound'n surround drums with rice dry leaves...

The virtual orchestra of 100 clones **built** as a wall,
a **moving wall orchestra** where each clone will have its proper scale.
This surface orchestra will move in the tridimensional space creating different volumes shapes to
attack the human soloist. The concerto is a battle between the Human & the Machines.

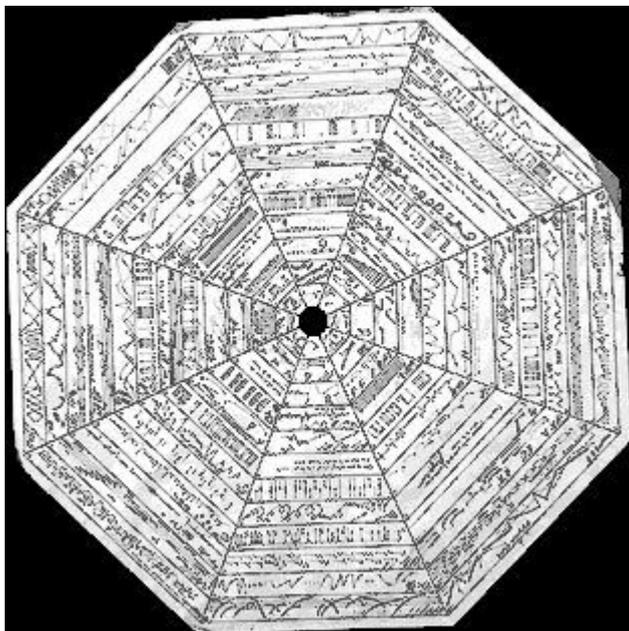
By **concerto** we will not use the classical concerto form which is based on sonata form in three movements and built on tonal system. We will keep the idea of competition game like ancient athletes fight described by the Latin word *concertatio*. This competition game is a part of the Ludus Musicae Temporarium where being concerted is also to listen to each other, being together to consult, to agree to act together: an opposition to discrimination and aggression.

We hope to realize a stage design controlling dynamically the shadow-light (with MIDI) which will be included in the music score with long white curtains. The costume and the mask of the lamplayer should be in mirror paper for light reflections. And a platform for the audience at three meters high, to perceive the moving sound under the feet. The Lamplayer will perform under the audience.

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THE ORIGIN



the transcription of the original clay tablet discovered at Mohenjo-Daro site, dated back to 3000 B.C. by Mathius Shadow-Sky in 1980 .

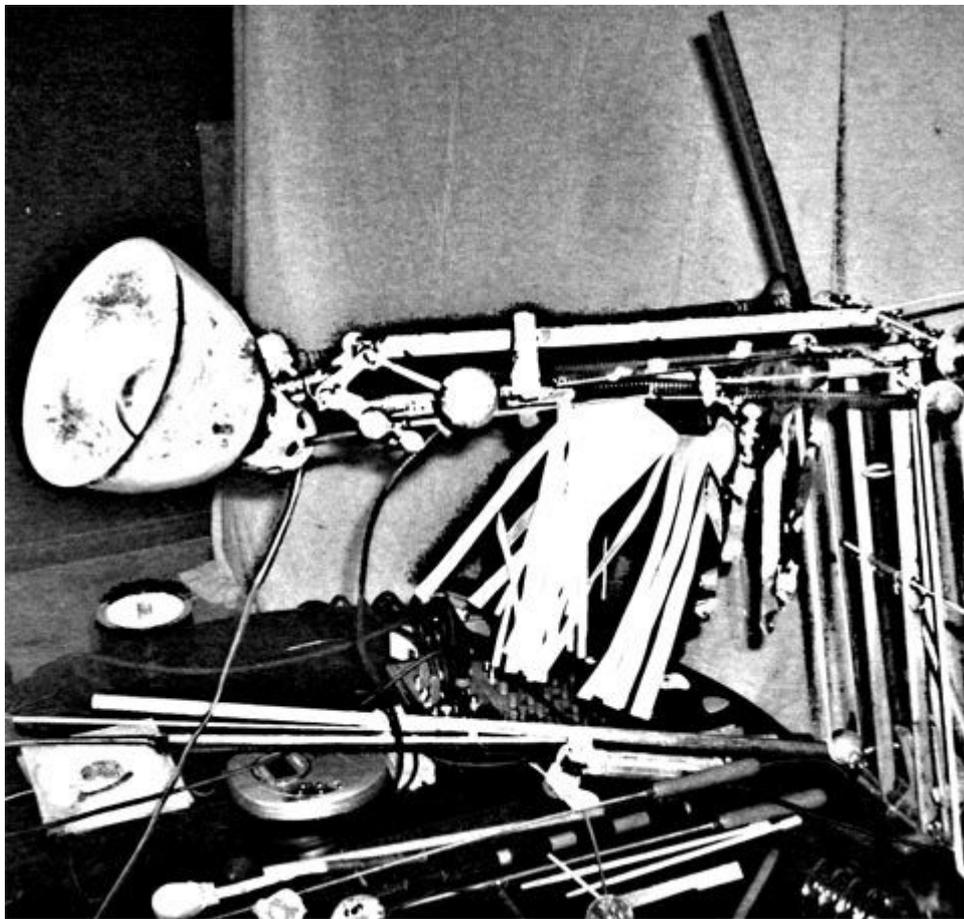
[complete story at <http://centrebombe.org/lamplayers.html>]

THE ADVENTURE OF THE LAMPLAYER SINCE 3000 BC

The discovery of the Genoscopic Kalandar, a clay tablet dated back to 3000 BC with musical symbols generated an unbelievable music back to 5000 years. The Lamplayer 5000 years after plays on lighting instruments the music from the Genoscopic Kalandar, a clay tablet discovered in 1921 by the archaeologist E. Comte at the Mohenjo-Daro site in the Indus Valley (actual Pakistan) dated back to 3rd Millennia BC and engraved of musical ideograms: a musical calendar beyond Time. The story of the Lamplayer started in the IIIrd millennium BC at Mohenjo-Daro, (actual Pakistan) when the GENOSCOPIC KALANDAR was first conceived. A calendar with a very particular function which is to allow the musical displacement of temporalities in relation to the audience: provoking the genoscopy of thought due to the syncretic understanding of the conceptions of time in different civilizations. It exists different traces of the genoscopic manifestations through the ages: 3000 BC in Mohenjo-Daro: conception of the Genoscopic Kalandar. 1000 BC in Byblos: conception of the "Mnemonic Disc" which is a poetic variation of the Genoscopic Kalandar: the Byblos Disc. 30 BC in Pompeii: bas-relief of Lamplayers. AD 0 in Rome: conception of the Roman's games named the LUDUS MUSICAE TEMPORARIUM developed by using the Genoscopic Kalandar and the Mnemonic Byblos Disc. AD 1980 in Paris: transcription of the Genoscopic Kalandar and the Byblos Disc. Rediscovery and deduction of the LUDUS MUSICAE TEMPORARIUM game's rules. AD 1995 in Forgues (south of France): for the first time, the music from the Genoscopic Kalandar and the Byblos Disc sounded by 2 Lamplayers and released on audio disc. AD 1997: 2 Lamplayers 5000 Years After second audio disc released and 5000 years old music available through the Internet. AD 2003 The birth of the Lamplayer & the Machines.

THE ADVENTURE OF THE LAMPLAYER SINCE AD 1980

In 1980 the Lamplayer with the "Ludus Musicae Temporum" was playing with an ordinary anglepoise lamp, like a Marcel Duchamps ready-made. Like also other Lamplayers personified by the Percussions de Strasbourg in 1988. Then the Lamplayer became attached to his childhood green lamp of the sixties, which he sophisticates more and more the sounds. In 1994 he met his lamp brother, Vincent Favre, to create the global version (but tight in time) of the Genoscopic Kalandar music: "5000 Years After, Music from the Genoscopic Kalandar". In 1997, he got a damning vision of the White civilization to create "aLive in New-Europe AD" a spectacular ceremony with the help of the light-magician Sami Benhaouachi. Then the Lamplayer left to the New-World and came back seven years later with the conviction that time has no age: 2003 the Lamplayer's music "ti.Me has No Age" where the Lamplayer also has no age. 2005-06: with "Inside of my Aliveness" the Lamplayer performs the surgery of his soul to communicate through his trance, the infinite of life and the youth of our Humanity. Since 2004, he tries to release the project "Unisolable & Unduplicable, the recipe of freedom" to show why everybody is isolated, withdrew into oneself, and duplicated in their behaviours, to hide the bliss of freedom they don't know.



THE MUSICAL GAMES OF TIMES ON LIGHTING MUSICAL INSTRUMENTS

The origin of the Musical Games of Times corresponds to the first trace of written music: the Genoscopic Kalendar (from today 2006, nothing older has been discovered.) The Genoscopic Kalendar is the mnemonic table of the Games. It was discovered at the Mohenjo-Daro site in 1921 by the team of archaeologists led by E. Comte, and dated back to 3000 BC. It's an octagonal score for musical games. A musical games calendar for a whole year season. The essential function of the Games is to immerse oneself in the waves of sounds to exchange its own temporality with other players coming from other civilizations. The players' crowd displacement of their temporalities in state of lucidity generates sonic and sportsmanlike euphoria at the Ludus Musicae Temporarium. The musical instrument is common to every player, and its characteristic is to not belong to any musical culture. The choice of a lamp as lighting musical instrument for the games is the symbolic attachment to the discovery of the light, the light under humankind control. The Latin name of the games: Ludus Musicae Temporarium is deciphered by E. Gjerstad in 1959 in the archaeological site of Rome. The Ludus Musicae Temporarium is the one non religious and non seasonal game which lives through the Roman Empire. According to G. Säflund, the temporarium is the ephemeral building of the games.

THE TWO MUSICAL CLAY TABLET WRITE THE COSMOGONIES OF TIME

During the 1921 excavations in the Indus valley (Pakistan), a team of archaeologists led by E. Comte discovered an octagonal clay tablet on the site of Mohenjo-daro. This scripture remains unique to the present day. The Indusian octagon dates back to the third millennium BC. It is engraved with combined ideograms which might have formed a table of laws. An extensive study has made possible the deciphering of the tablet's function: the signs only describe spatio-temporal movements distinct from those of the rebusian scripture. Its layout seemed to be calculated in order to organize time: a calendar dividing a seasonal year into 8 dodecades of unequal length; a 96 days' cycle in 3 lunar months. Accompanying the evolution of seasons throughout the solar year may well have been its aim. Compared to our present Gregorian calendar, this one would have a 19 day time-lag in each year with a 31 day time-lag in relation to its contemporaneous Chaldean calendar. Deciphering remained open because the signs described different movements (for each part of the 96 periods) not corresponding to any practical organization nor any description of objects. The publication in The International Archaeology Review of this discovery, with photograph of the tablet, attracted the attention of musicologist M. Shadow-Sky, a specialist of protohistoric music. According to his sources, he discovered that the tablet was indeed a playfully used musical calendar. The disc-shaped tablet (the hole in the centre was meant for circular reading) can be used to signify the moments' sounding of the 12 lunar months (4 cycles of 96 days). The sounds come from an instrument which may be an articulated lamp with spirals. His deduction

of the instrument was based on the small pictograms at the top left of each group of signs. The choice of a lamp as a musical instrument, according to M. Shadow-Sky, can be traced back to two criteria: first, its peculiar and immediately recognizable tone; second, the symbolic relationship of the discovery of a light source which human beings can control. Given the absence of spiritual symbols, the meaning of this music did not relate to any religious ceremony but rather to a decree published by the cities of Indus, Mesopotamia and Egypt, and voted for by the three government majorities. This decree authorized the displacement of temporalities for a crowd of players in a ludic state (the decree is kept in the library of Delhi). The Games were divided into 4 groups and mixed according to chance, competition, enactment and vertigo. The annotated symbols of the Indus tablet refer to the choice of each sound-group according to the period played. The musical calendar revolves around 96 constantly changing sound profiles having a tendency to begin a new at each new cycle. If this calendar may seem in some respects distant from the Chaldean one of the same period, it is only because its functions differ. The Genoscopic Kalendar does shed some light on different time levels in order to submerge the players into the game of sounds: a kind of ludic musical sport linking different civilizations. In 1981, a fire destroyed the Archaeological Institute of Baghdad thus causing the tablet's loss. As of today, only M. Shadow-Sky's 1980 accounts survive. His transcription is sufficiently readable that it can now be used again. Following the musicologist's initiative, the "Lamplayers" perpetuates the Games of the "Ludus Musicae Temporarium," as they were referred to in Latin according to E. Gjerstad's 1959 reconstruction on a Roman archeological site. Given the absence of anniversary celebration and gods' worship, the Ludus Musicae Temporarium is the only non-religious, non-seasonal game across the Roman Empire. G. Säflund views the Temporarium as the ephemeral edifice of the Ludus Musicae. During the 1936 Lebanon excavations on the Byblos site, P. Montet discovered a clay disc with Phoenician pictograms, numbers and alphabet dating back to the XIth century BC. It occurred to M. Shadow-Sky that the principle governing time organization was the same as the Genoscopic Kalendar's. The Byblos Disc, however, is a poetic variant of the Mohenjo-Daro musical calendar and defines the bases of Time Musical Games. Composed over a three-day period, it included nine circles describing the different parts of the day: the images generated by the sun's varying positions as described within the fourth circle in the "Used Life Hours"; the psychic images coming from the generating sun described by the "Memory Reactive Clock" within the sixth and seventh circles and, finally, the ninth circle indicating the metric duration determined by the use of waterclocks. The Lamplayer suggests music from the Byblos Disc kept in the Damas library.

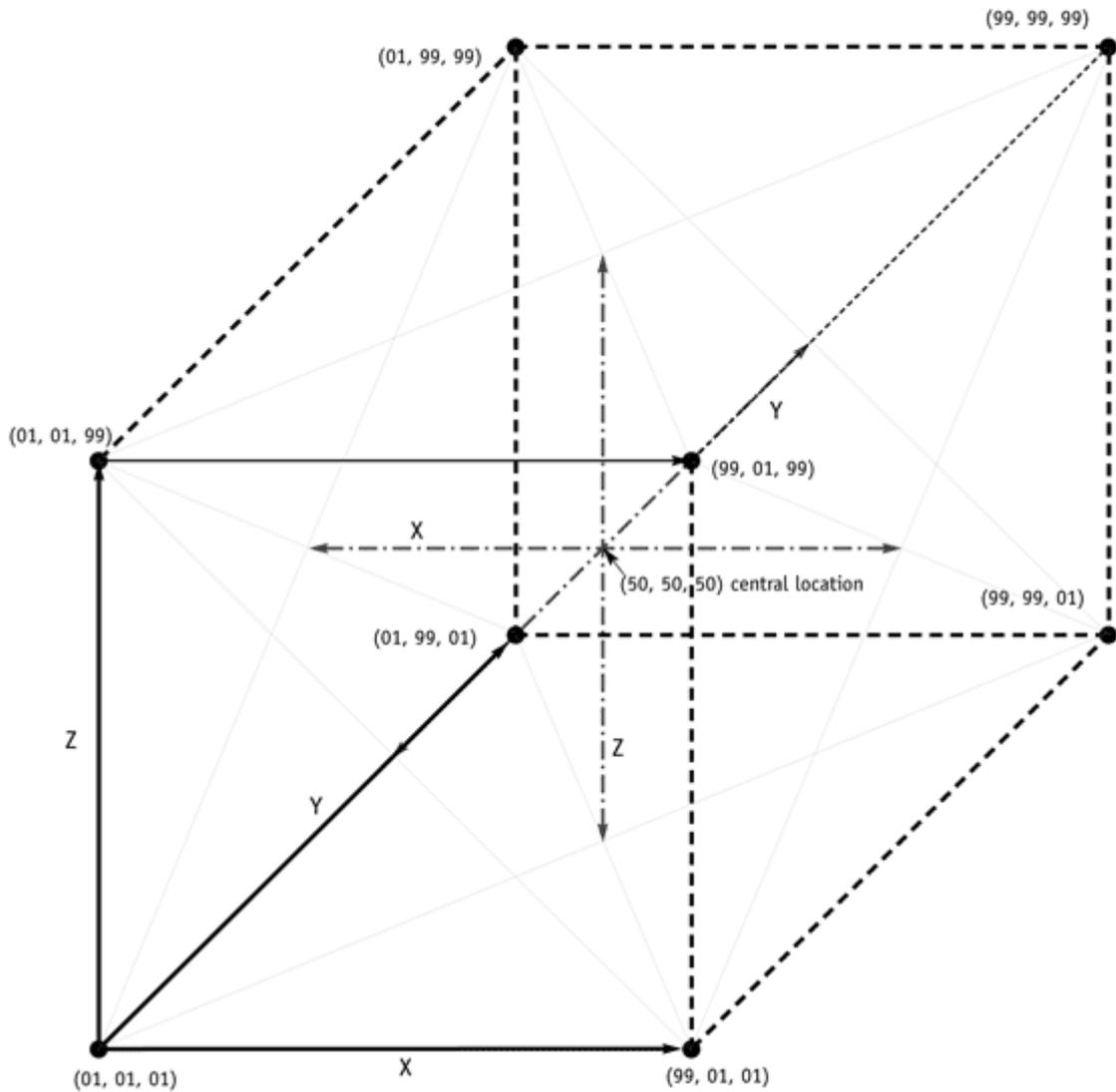
Mathius Shadow-Sky and John Blacking, (Queen's University). Belfast 1981.



the Lamplayer always masked performs in Berlin in October 2006 (photo by Lan Hungsiang)

WORKING RESIDENCY: GENERAL REMARKS

The Darwinist question "what for" following by "give me a reason to love you" sung by Portishead, are the questions why I should invest your place to create another piece of music? Those questions push further to ask: "why are you making music?": a chains of whys does not answer to the question why? The one answer is: I love it, that's it. In your organization there is a cube space, a perfect place to experiment 3D moving wall-orchestra.



WHAT I'M PROPOSING?

Music with an object as musical instrument: the archisonic lamp, I made 26 years ago, conciliates the dichotomy between instrumental and electronic music: *the electronic timbre richness with poor access playing against the instrumental rich emotional playing with unique identifiable timbre*, but today it doesn't matter. The next stage is to compose a virtual tridimensional huge orchestra of clones from this musical instrument object. To clone the archisonic lamp in 100 virtual-individual-musicians to form a wall-orchestra. The archisonic lamp is composed with many instruments (more than one hundred) and each of them can be isolated on a specific unheard scale to compose a huge multiscale orchestra. With the help of machines like among others: computer samplers, scaler and spatialisators. The concerto purpose is to immerse the audience in the total space (up, down, left, right, front, behind) by more than hundred moving virtual independent cloned musicians against a human musician. An *interactive Battle Concerto between a real human soloist and the machines*.



THE ORIGIN OF THIS UNISOLABLE & UNDUPLICABLE MUSIC

Freedom is the necessary ingredient for mankind to progress from its childhood. All aberrations created by human kind are experimentations of life to try to understand what is life. And to push up the limits of life of what is possible and what is not; process used by all human children. Like, to control human mass by few people: one of the funniest human game, because it repeats throughout centuries! Today, we are in the process to tame our doubles we try to create: the machines. The machines give sensations that mankind can't: like here, a human orchestra cannot do it: flying through space with unheard mass scales playing. In this case, to be cloned and being conscientious of this state, generate revenge of life against the human responsible. But it is just a game, because the machines are not yet independent to decide by themselves. The strategy of the clones will be to clone the human soloist to become an unfree machine. Normal. This is a life activity that Men try to do to other Men! The story will not be linear: no one way composition.

THE DEMONSTRATION OF THIS WALL-ORCHESTRA BATTLE

This wall orchestra will suddenly appear and disappear, on left, then on top, then behind, then on bottom, etc., we have 6! paths possible i.e. 720 paths. This wall-orchestra will move continuously too, playing with speed: speed up or slow down *unexpectedly*. Then this wall-orchestra, this straight surface, will distort like a soft sheet of material in contrary slow winds, moving these 100 virtual-musicians through our 3D space of 1.000.000 points, creating moving shapes. Some of the constituting virtual-musicians-points will independently move themselves, like a mischievous disobedience. Because each virtual-musician-point is independent in its character; it has a unique scale that no other one has, every virtual-musician-point is a stranger, a foreign, an alien to the others: they have no common element: an illusory difference. This wall-orchestra will play with a human soloist, a multi-instrument soloist, with stranger instruments. *The virtual orchestra will battle to isolate and duplicate the soloist*, like them, which are clones of one instrument: the archisonic lamp. A concerto battle for freedom. Wall-orchestra will fight to imprison the free soloist like school confines creativity in a straitjacket of convention. Will they complete their work? Destroy freedom like nowadays?

WEAPON CONSEQUENCE TYPE EXAMPLES

Several "weapons" composition-processes will be created for the music battle: a game.

1. When a sound is moving through tridimensional space: it changes, in the necessary threshold of tolerance to recognize its identity, beyond that it loses it. One of the weapons in this piece will be based on lost or kept illusory identity by clones: a globalized morphophonetic schizophonia created by the soloist.
2. As soon as a sound passes through a medium (canal) it is necessarily distorted (ear is also a medium): filtered, distorted to saturation (signal overdose), and noise added. Another weapon of this music will be to destroy the sound according to which medium it will pass through, like mines in a field. Distortion and saturation change the character of the sound but not its nature; it remains identifiable to an appreciable limit, and beyond it disappears in an unidentifiable mass of differences.

3. Sound doesn't exist, just in our brain in response to small pressure fluctuations in the air. We've got a translator that works in a range of ratio 1000 approx. beyond there is no translation. Inaudible sound = untranslatable air pressure, one calls infrasonic and ultrasonic vibrations. The weapon here will make the wave untranslatable to a sound but felt on body pressure.
4. The machines sound thief make that the soloist cannot play his part, because his part is stolen by the recorder. (Recorded music is recorded music not unrecorded music?)
5. Sound gets parasite on: by using strength bell-shape filter in a complex spectrum you will emphasize partials forming an independent composition of chords from its sound spectrum.

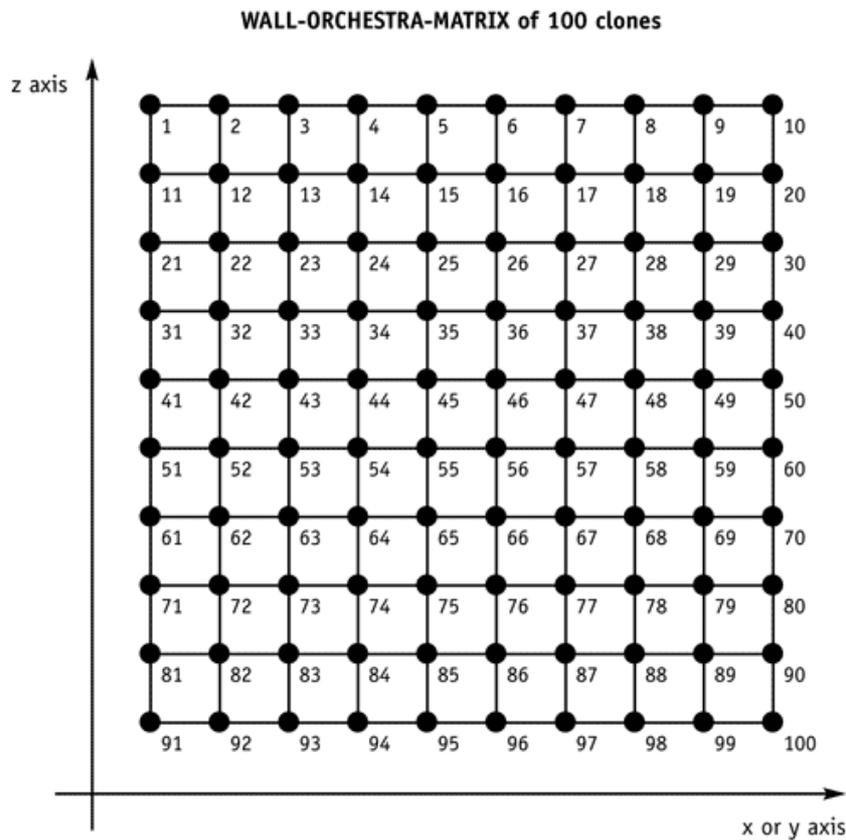
COMPOSITION OF THE VIRTUAL ORCHESTRA (NOMENCLATURE OF 100 CLONES) ON THE MATRIX-SURFACE

By Archisonic Lamp clone families: we will distinguish families by their sound and determine how many families are in hundred people concentration soft wall?)

- λ. **Bowed** instruments: springs, strings [nylon, steel, copper], stem [screw, bamboo], rubber band, lampshade bell, BY fan blade, bows, wood bow, screw stem, superball, rubber, chains, finger pad,
- θ. **Percussion** instruments: lampshade bell, springs, strings, stem BY stone, felt, leather, plastic, rubber,
- δ. **Plucked** instruments: springs, rubber band, strings, spring-strings, stem,
- β. **Others uncategorized** instruments: rubbed, handled, rolling, vibrated,

THE WALL - ORCHESTRA – MATRIX will be organized by families of *instruments*

A family is a group of similitude sticking together or not. The geophony of the orchestra will be mobile, with emigrant families. The distance between them will be elastic, according to the flying surface shape, and the space attraction places driven by war strategy.



and its (x or y, z) 100 virtual musicians coordinates

Z axis

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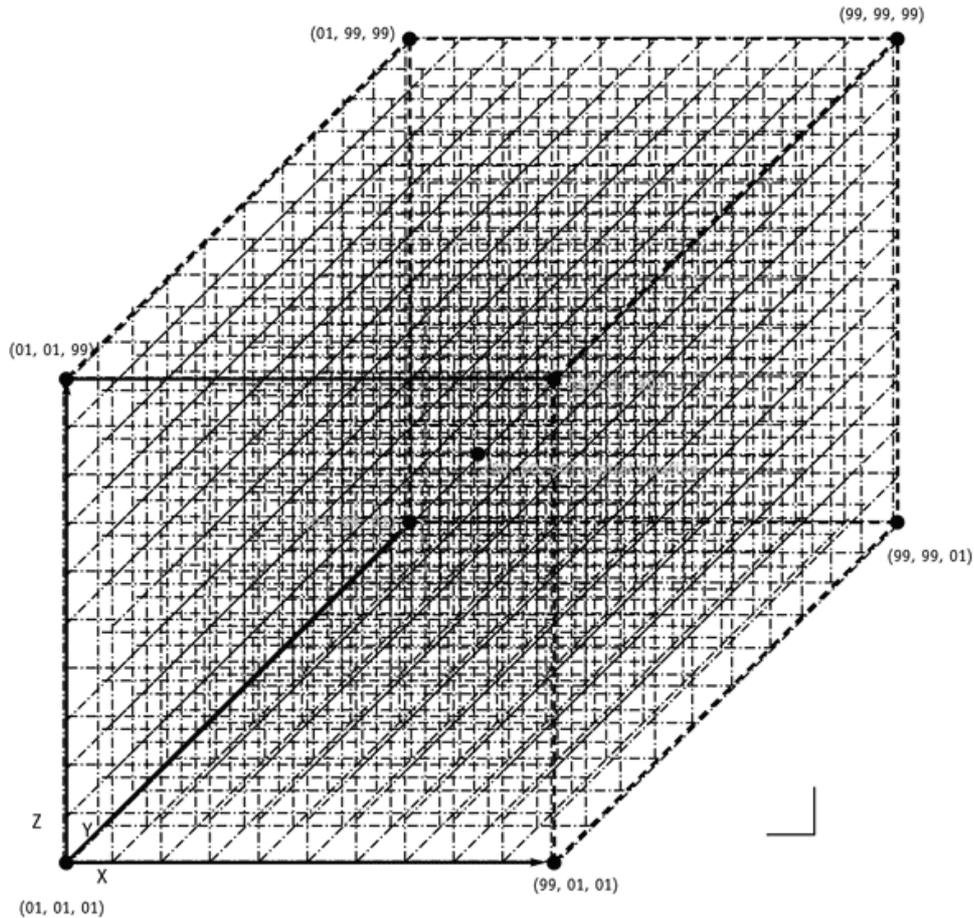
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X or Y axis

MOVING THE ORCHESTRA-SURFACE IN A VOLUME WITH 100 POINTS-VIRTUAL-MUSICIANS

This surface of localized wall-clone-orchestra will move in the tridimensional space of the Kubus, to form different shapes, like moving shoal fish, or mass of birds flying in one in the sky (a 3D moving cloud of flying starlings (étourneaux)), controlled by geometrical functions like: $z = \sqrt{y} \cdot x^2 \cdot n$ where $n = (-1 ; +1)$ gives a kind of flying wings. Or the surface of Boy: $\Sigma = \mu[P(R^2)]$. Etc., we need to test all these moving shapes. A projection of 100 virtual-musicians-points to 1.000.000 points of the cube. Localized with x, y, z axis with their 100 points coordinates from 01 to 99, where 50 is the middle of the cube.

1.000.000 coordinates in space to shape the flying mass of 100 virtual musicians:



SHADOW-SKY-MULTISCALAR-COMPOSITION-SYSTEM

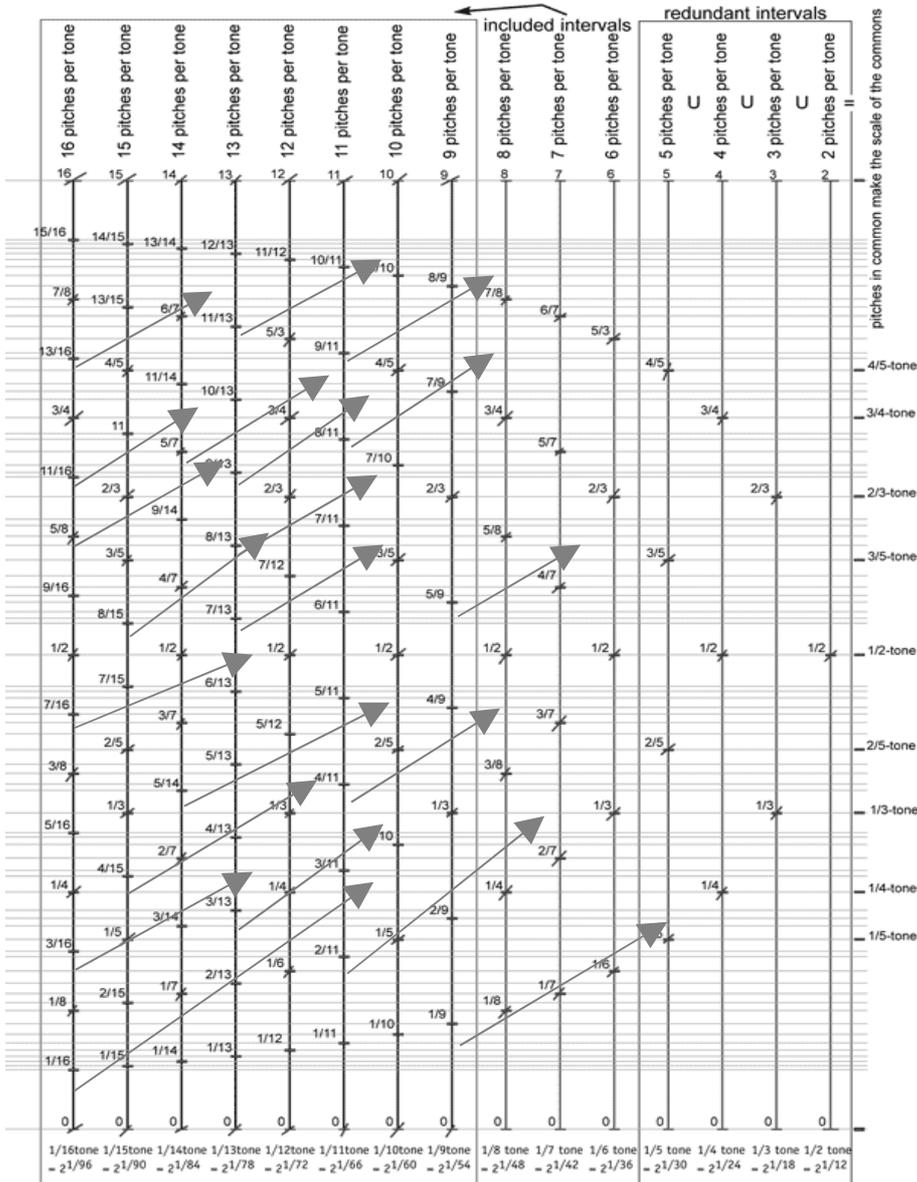
All scales in the infinite are integrated in the Multiscalar System. More than the classic polytonality (where one mode is used in its different transpositions of its own scale's degrees), the multiscalar system gets all the scales known and unknown for its use. A space full of different metric axis where sounds hooks on freely. You build chords without the gravity of the fundamental but with the multidimensional field of infinite number of intervals where no one is similar: their intersection is empty between them and of course the curiosity pushes up to use unheard intervals. For example: scalarfield²⁹ is twenty nine scales axis field where sounds bound on freely on one or more. With hooking on more than one scale, you are in the state of permanent metabol, a

permanent throw of transformations. If the scales are moving independently, it means that there is several tuning forks gliding on not fixed frequencies: a diapason's polyphony which is supposed to slide the scales to other destinations. Like our Universe this scalarspace has different located field-forces where it happens a certain type of attractions, let's explore these unknowns... The research of infinite unheard intervals. Each scalar is a clock with regular frequency of a unique interval of time. Each interval is a ratio between two proportional frequencies. A usual clock is cyclical, and we will try to build non cyclical clocks not to come back to the beginning of time. To do that we need to bound the space of time to localize which non cyclical clock will sound good for us. Unfortunately we still need to bind the space to localize our bounds between our uncyclical clocks of sounds sensations, which is the multiscalarfield.

APPLICATION OF THE SHADOW-SKY MULTISCALAR COMPOSITION THEORY

Our purpose is to create a multidimensional field of unknown intervals to form different scales for each virtual musician. We will focus on non cyclical (asymmetrical redundant) scales which have any common interval and pitch among them (the 12-tone scale will be banished too). We will build 100 modes with their transpositions to personalize the illusory character of these 100 clones. Most of the Archisonic Lamp's sounds have inharmonic spectrum, which gives an additional difficulty to have precise pitch detection: more complex is the spectrum less you recognize the pitch or interval. We will work from simplest to very complex sound to test each scale according to each virtual musician with its specific range where it sounds. Then we will apply the sliding-tuning-forks-contrapoint, like moving axis in 100 dimensions space of time (we work with frequencies), to create bridges between scales on common pitch to provoke an exchange metabol between virtual musician's scale owner (the schizoscale process).

The 9 to 16 pitches scales dividing the tone, which divide also the octave in 6 (Debussy's "gamme"), are included in the ensemble of scales dividing the octave. But all scales dividing the octave are included in all scales dividing the tone. They are also symmetrical with the half-tone as center. Trying to avoid symmetry, we will use them as foundations to build our *multidimensional scalarfield^X* for our **uncyclical scales**. A localization system to catch the unique modal scale for each 100 archisonic-lamp's clone virtual musician.



The scalarfield¹⁰⁰ is the "U&U recipe" multiscalar-system. The projection of above selected fundamental asymmetrical prime and odd intervals, in which we will input the necessary filter of the minima and the maxima perceptible, will build our **scalarfield¹⁰⁰ matrix**. This work should be done at the beginning of the residency.

SCHEDULE OF WORK RESIDENCY

- A. constitution of the multiscalarfield¹⁰⁰-system for "U&U recipe": (should be done at the beginning of the residency.)
- B. constitution of the virtual orchestra:
 1. recording each virtual instrument, i.e. each different sound of the Archisonic Lamp by families: bowed, percussion, plucked, rubbed, handled, rolled, vibrated..., on different shapes and materials of the lamp,
 2. sampling of these sounds to form the orchestra,
 3. scales applying: unique one to each clone, according to its sound families,
 4. spatial positioning of the clones in the vertical matrix-wall-orchestra: the families geophony,
- C. In-time music composition of the clones' virtual-wall-orchestra:
 1. score strategy composition of actions-reactions,
 2. geometrical moving shapes composition, including interactive trajectories (the battle in the air), and multiscales metabols (metamorphosis inside the mass of clones),
 3. composition of the soloist part: which instrument, when, how, and how he could loose his identity and being cloned by the machines in the battle (reaction ex.: electric guitar huge bangs in the total soundfield of the cube as shockwave punctuation.)
 4. improve the interaction between the human soloist and the machines
- D. rehearsing the composition,
- E. performing the composition and recording the performance (audio and video),
- F. mixing to 5.1 with video on DVD, for your and my archives.

EQUIPMENT NEEDED FOR THE COMPOSITION, RESEARCH, AND PERFORMANCE

- . A cubic soundproofed public studio enough large to experiment 3D sound trajectories
- . I know it's not easy, but to feel 3D moving sound, being up is great, to feel moving sounds under its feet. The possibility to be in the centre of the cube: with *a clear-sound plate-form in the middle-high position for the audience*. During the performance, the soloist will be under the audience.
- . 8 loudspeakers in each summit of the cubic soundproofed studio to perform 3D sound trajectories
- . mixing console 24x8 for the performance
- . 2 big tables (one for the machines, and one for the soloist musical instruments)
- . A very powerful silent computer (PC PIV, 4 giga processor, and 2 gigabytes of RAM, external HD 160 gigabytes, Windows XP optimized) or even more joint by Ethernet network.
- . A pro sound card type RME 8ins x 8outs
- . A class A preamp, to record sounds of the archisonic lamp (type API or Georges Massenburg)
- . 1 microphone for voice and trumpet with stand-mic
- . 1 microphone for the gong wadon with stand-mic
- . Eventide harmonizer with MIDI connection to control the pitch of each of 8 pitch shifters
- . software : Sound Forge, Kontakt 2.1, Scala 2.22, Nuendo 3.5, plug-ins (URS, PSP, UAP with PCI card, etc.),
- . the free program Pure Data (for interactions) with somebody who knows to program Pd with math notions,
- . spatial sound processor (I have one) the SP-1 of Anadi Martel. Its particularity more than a 3D panner, it has a phase and polarity mode (in 4 loudspeaker mode) that gives more realistic sound position in 3D space. The algorithm is based on a recording equation developed by Michael Gerzon (Ambisonic). But it has just one input!
- . Musical instrument of the soloist: Old analogue synthesizer EMS VCS3, voice with a choir generator (Eventide harmonizer), 9-tone electric guitar, trumpet, harmonica, Bali gong, saturation and whih pedals effect, and the archisonic lamp.
- . Old guitar amplifier head type Marshall or Hiwatt or similar 100 watts with direct out

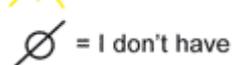
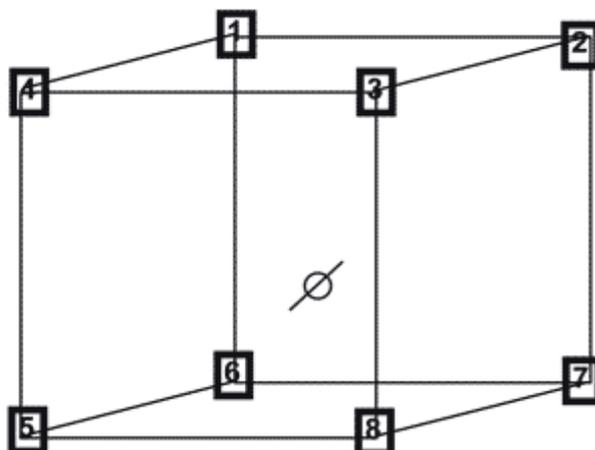
TECHNIQUE

In 2006 to realize this kind of music, some programs are necessary with powerful computer(s). To create my clones' orchestra, I will use their sampler Kontakt 2.1 to generate 100 virtual instruments with an unheard scale for each instrument. The scales will be generated with the help of the program Scala that Kontakt recognizes their scripts.

At this time, I do not know about a program which could apply automatically geometrical forms of 100 coordinate-surface-points into 1 million coordinate-volume-points. Most of the multitracks, are configured for surround mixing, not for 3D mixing. The 3D panning (positioning and moving), is not an enough process for moving sound localization; we need for the movement localization to control phase polarity like my SP1, but it has just one input, and the phase polarity control is just with four loudspeakers! During my career, I always met technical difficulties depending more on people than on technical possibilities (look at [Ourdission](#) we create in 1982, with moving sound in inflatable audience-tube). The most difficult with technology still today is the interactive real-time metamorphosis of sound, of scale, of space. But as an explorer my duty is to find impossibilities to make them possible...

WORKING SET UP

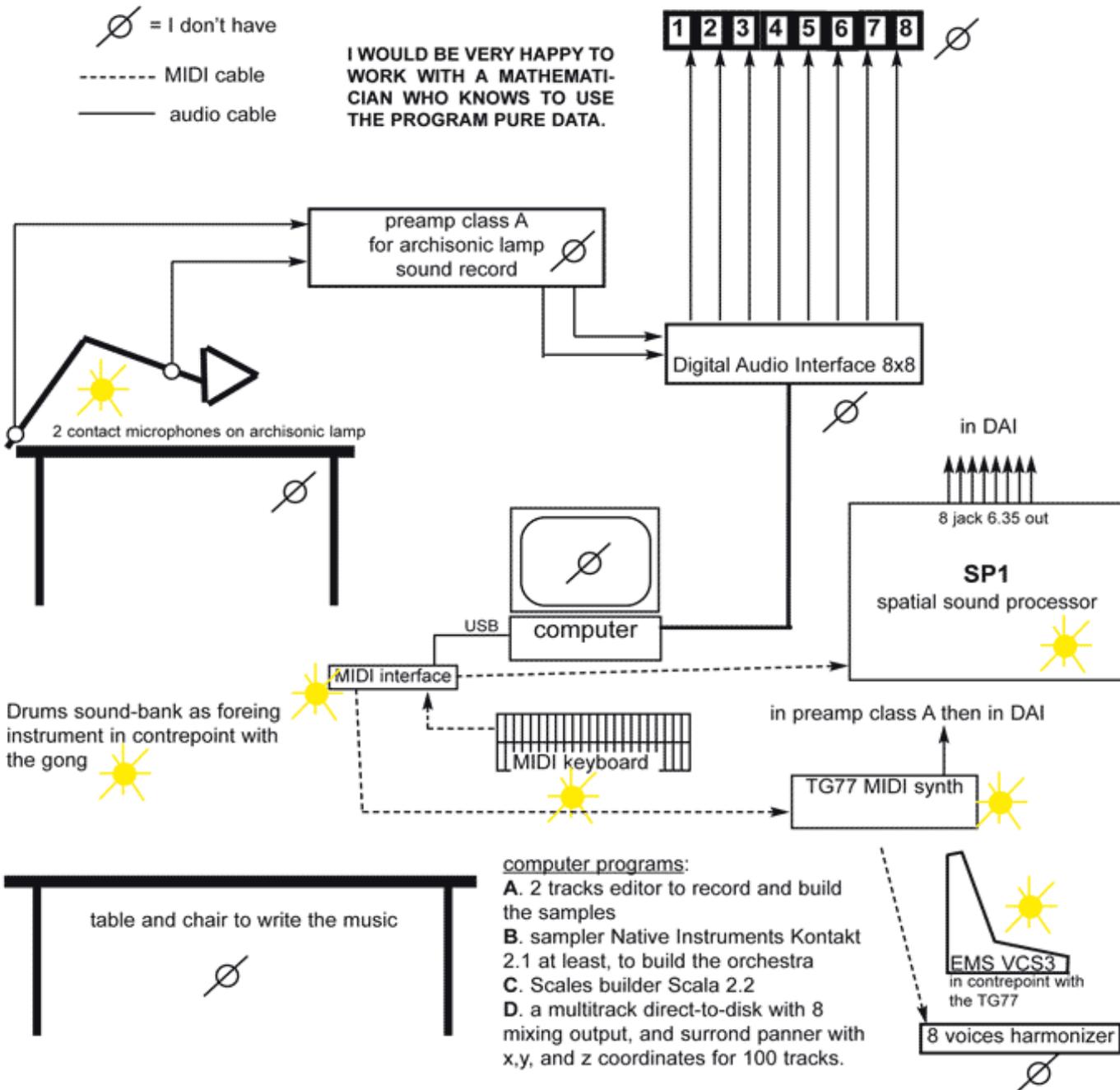
The computer first will support 100 MIDI tracks with 7 Kontakt samplers (as VSTinstrument) with 16 different instruments each in the multitrack recorder. Then all MIDI tracks will be transformed in audio tracks to be spatialized individually to form 3D shapes in the cube. A powerful computer will be necessary to realize that virtual orchestra project.

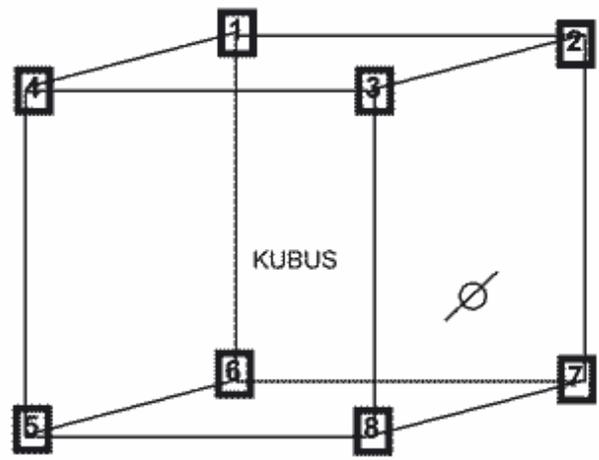
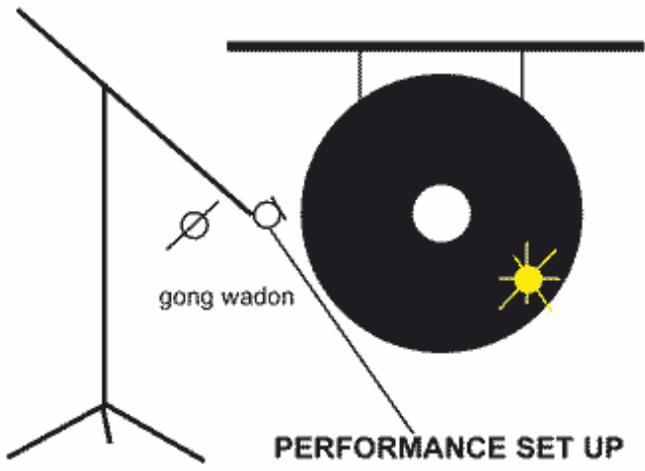


----- MIDI cable

———— audio cable

I WOULD BE VERY HAPPY TO WORK WITH A MATHEMATICIAN WHO KNOWS TO USE THE PROGRAM PURE DATA.





Loudspeakers should have an open field nearest to 180° for proper sensation of 3D moving sound. If the audience is not heightened but on the floor (no chairs during the performance), the floor loudspeaker must be more powerful than the fours up.

