

## From *The Loss...* to *NAGARIKA* to *double skin* | *double mind*: A history of digital CD-ROM and DVD-ROM dance transmission projects

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The idea of *NAGARIKA*, my last DVD-ROM based dance transmission project, released 2011, was actually born with the help of the International Dance and Technology Movement (IDAT), based at the Arizona State University (ASU), where I met Jayachandran Palazhy, choreographer. The last IDAT conference was held 1999 at ASU. During the research and development lab at Arizona's Institute for Studies in the Arts 2000, I gave a presentation on the release of the CD-ROM "Bill Forsythe: Improvisation Technologies". This CD-ROM is considered as one of the first digital dance transmission project worldwide, produced by Frankfurt Ballett, realized at the Center for Art and Media in Germany, ZKM Karlsruhe. After the release it was used primarily from the dancers of the company from 1995 to 1997, developing the first part of *Eidos:Telos* with it. 4 years later, Bill Forsythe decided to publish internal knowledge of *Improvisation Technologies* to the public. Released as part of the "ZKM Digital Arts Edition" the CD-ROM was published by Cantz Verlag, Stuttgart 1999, with a second release 2003. Recently the publisher updated the software to a third released (2012).

Since 1994, I was involved in the development of a first prototype of a CD-ROM that was primarily planned as a digital archive of recordings of performances and rehearsals of William Forsythe's *The Loss of Small Detail*. *The Loss...* CD-ROM project and also *Self Meant to Govern*, the next forerunner of the well-known *Improvisation Technologies* CD-ROM (1999) were prototypes - customized for inner use of the company towards teaching technique and enhancing production. An Application for those dancers who had not been involved in creation of repertoire pieces, to familiarize themselves with the work in preparing and performing them. *IT* was finally released to the public in 1999 and with a second release 2003. It was recently updated and re-released (2012). The core of this application was the application *Self Meant to Govern*, a major multimedia project, where we started to shoot all teaching, rehearsal and performance material from scratch. *The Loss of Small Detail* had been a small archive on one piece, put on CD-ROM. *Self Meant to Govern*'s format was unclear at that time. We wanted to put more than 4 hours of lecture and demonstration material on a digital device. The case study was a new production. I considered *Self Meant to Govern* as a production title more as a program for using the dance technique *Improvisation Technologies*. *Self Meant to Govern* was performed only once. The premiere was filmed with several cameras to serve as demonstration footage for developing a digital teaching tool. We started the project with Bill Forsythe 3 months after his wife and leading dancer of the company Tracy-Kai Maier died of cancer. The piece *Self Meant to Govern* was produced after her death in a radical honest and bone-dry way to show a technique as piece. In a way *Self*

*Meant to Govern* was not a dance production, it was a practical demonstration of *Improvisation Technologies* on stage. The dancers were wearing black bodysuits. The death of Bill Forsythe's wife turned the inside of the company out to start over in a different way. The piece, performed Summer 1994 had no second show. It was developed further to become a "real" piece in the first of three parts of "Eidos:Telos" (1995).

The hours of footage achieved during production made it impossible - in that time - to put all material on a CD-ROM. Finally we just took the whole computer, where we developed the application at ZKM Karlsruhe on a little moving cart to Bill Forsythe's office at Frankfurt Ballett. His office had a door to the main rehearsal stage, where dancers were requested to take lessons "in theory" in his office before joining rehearsals next door. He told me after completion of the project, that *Improvisation Technologies* was the most precious tool for a choreographer: a time saver, which enabled him to move on in developing new material on stage and even move beyond the technique *Improvisation Technologies*.

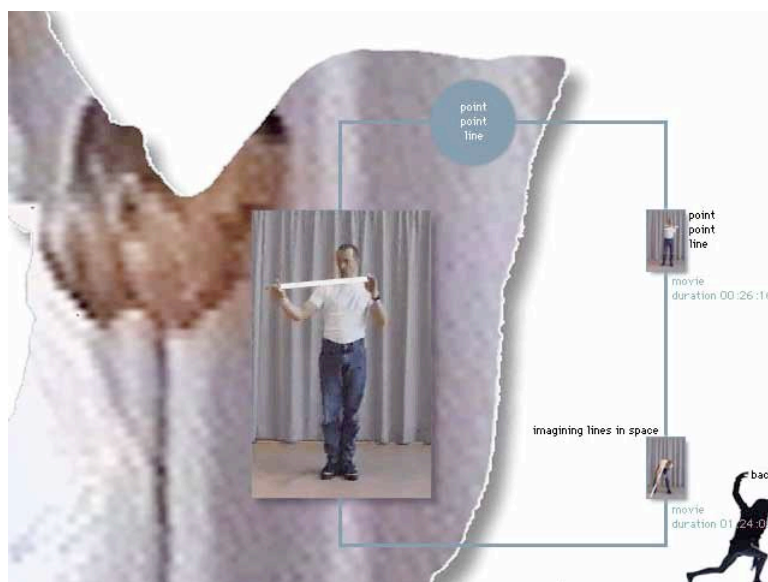
This text provides a brief outline of the developments on *Improvisation Technologies* which continued on CD-ROMs in Japan for *That's Kyogen!* and *NAGARIKA* in India. Two projects that followed *Improvisation Technologies* and take the ideas and technologies developed there as a teaching and archiving tool into new directions.

### **Analog to Digital Transfer - The Loss...**

From the moment that Forsythe started to work at Frankfurt Ballett, the company videotaped rehearsals and stage productions. Since Forsythe never stops developing and changing a piece after releasing the premiere, there was an extensive archive of different versions of creations of the company already in place in 1994. This archive was used to help new members of the company to prepare themselves for works created prior to their arrival to the company. The company gave out small SONY video tape players to the dancers, to be used to learn the movements from tape at home. These tapes however quickly wore out with drop-outs and even destroyed by heavy usage. Digitizing the existing archive should help, restoring and preserving the archive. *The Loss of a small Detail* (1991) was performed several years when we started the Digital Archiving Project. It was planned as test case to extend the archive also to other productions. In a way this production was perfect to start with. The title "The Loss..." pointed both to the loss of documentation material as a reason to start a digital archive and to the piece itself, which needed documentation to not lose its details on stage. During 4 years of rehearsal and production we proved on the CD-ROM that the production significantly changed its performance character. Which was partly very much intended by the choreographer himself. Forsythe was changing movement of the piece from time to time and repositioned props on stage to amplify physical awareness of all dancers on stage. But also the dancers on stage kept developing the piece further. If a dancer had to be replaced, the choreography was not

transmitted by Forsythe as creator of the piece. Each dancer, leaving the production had to teach his replacing part, which includes all changes happening over time by chance, but also happening by the dancer's interpretation of his movement part and also by different physical tempers, executing a movement idea in different ways. Change was program at that time. This helped supporting the idea to develop an instrument of tracing back these changes and developments over time.

Our first step was to digitize the analog tapes on CD ROM's, and to design an interface that linked excerpts of rehearsals to recordings of the performances. A moveable interactive cursor controlled the performance timeline and provided a point of connection between material from the performance and from rehearsals. Forsythe's rehearsal sketches and verbal comments on the development of the piece were made accessible as well. Excerpts from various versions of the stage performance demonstrated the development and changes over time during various showings of the piece on stage. We also developed an interactive feature that allowed switching view angles from front to side while watching the performance.

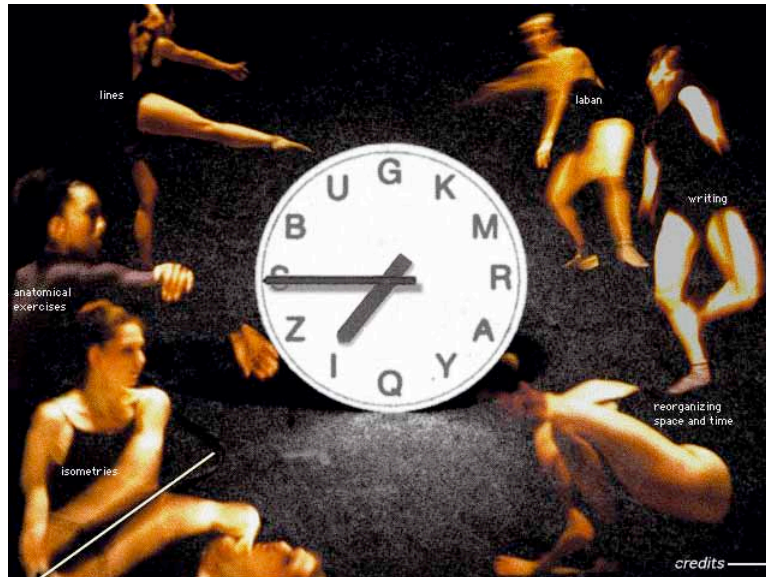


"The Loss..." Prototype CD-ROM, 1994

### **1995 - *Self meant to Govern***

After the work on *The Loss...* we continued to try to develop a digital instrument that would merged a video archive with a teaching tool for dance technique. 1995 Frankfurt Ballett and ZKM Karlsruhe started the production of *Self meant to Govern* as a digital teaching tool as application. The application contained lectures by Forsythe himself and by dancers from the "first" dance generation, i.e. those who had been involved developing the technology that would come to be known as *Improvisation Technologies*. One of them was David Kern, also member of the new Frankfurt Company, who is himself involved in developing since many years a software based rehearsal tool *Piecemaker*, a project is supported by the Frankfurt

based research project *Motion Bank*. We recorded *Self meant to Govern* with 4 cameras on stage. Also we asked the dancers to tape their individual rehearsals on video cameras. We added movement excerpts of the premiere performance to the origins of their movement ideas, documented in rehearsal. All this footage needed a structure to access the material. During the development process I learned how dancers incorporate movement:

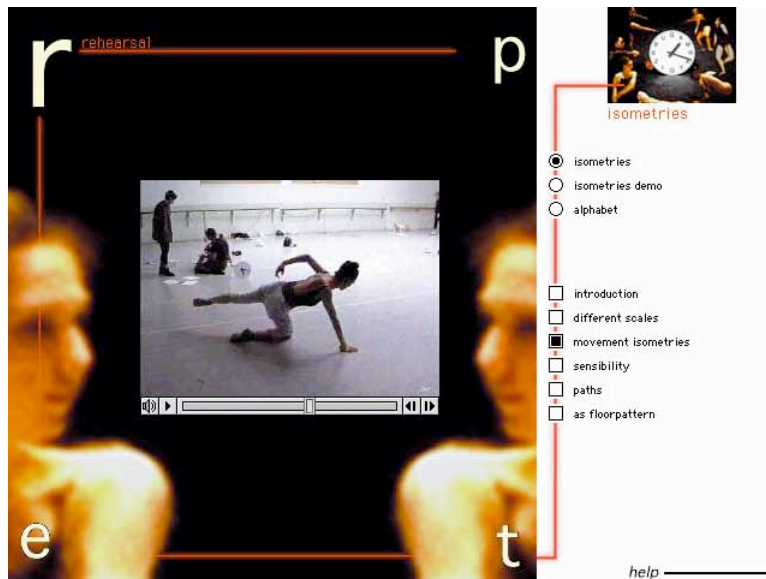


"Self meant to Govern..." Installation, 1994

## T E R P interface

I understood, that dancers are learning movement in several steps: explanation/theory  
-> example -> rehearsing -> performing.

The lectures in chapter **t** ("theory") represented Forsyth's teaching lectures. Links lead to **e** ("example") where the dancer can find an excerpt of the performance to learn "physically". Usually - outside the digital realm - a dancer needs to be near to another dancer's seeing, feeling the movement to learn "physically" before moving to rehearsal. We had to adapt this stage of learning with excerpts of the final performance, set aside to Forsyth's oral lectures. The creation starts in **r** ("rehearsal") in the rehearsal studio in a dialog situation from dancer to choreographer. With new technologies we saw also a third partner - to the video camera. The recordings of the video cameras were helping to see a movement idea from the audience point of view. Finally the chapters lead to **p** ("performance") with 4 video streams of different camera angles of *Self meant to Govern*, linked to lectures of the teaching chapter **t**. The cycle of learning was made possible to start from theory to practise and vice versa.



"Self meant to Govern..." Installation, ISOMETRIES chapter, 1994

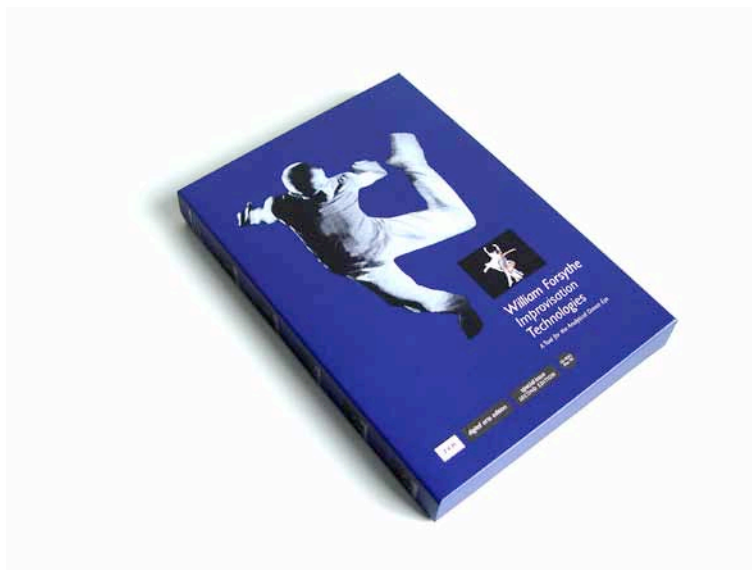
### 1999 - *Improvisation Technologies*

At Frankfurt Ballett, after having been used *Bill Forsythe: Improvisation Technologies* internally the hard drives got stolen in 1997. 1999 the CD-ROM project *Bill Forsythe: Improvisation Technologies* was made possible to focus and edit the given material for public use, but it was also useful to gain access again to lost digital footage. Today the only full working application of *Self meant to Govern* (1995) is accessible at the German Dance Archive in Cologne. ZKM Karlsruhe installed the full archive on a Macintosh Apple computer, running OS9 on it.

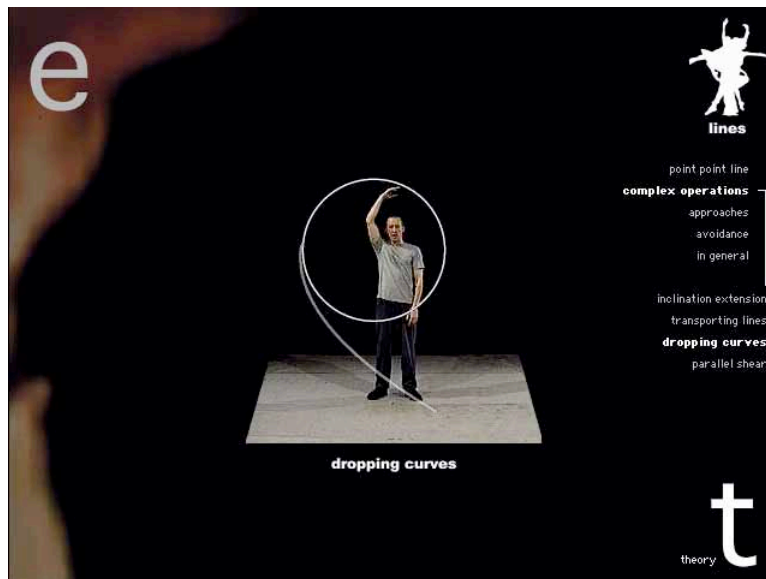
Forsythe decided not to focus on one specific stage production. The technique of the company moved forward, the character of the company was about to change. So it was the right moment to look back and to release a product of dance knowledge, talking about developments of the company of over one decade. The subtitle was carefully chosen to say, this CD-ROM is "A tool for the analytical dance eye". The audience is now invited to witness the inside dance making process of a dance company. Chapters "Laban" and "Isometries" were taken out to streamline the dance transmission product for public use. In a way *Improvisation Technologies* did also erase many links to other movement and notation techniques to establish a non referential new source of dance knowledge in post modern dance making, which sounds actually like a contradiction in itself. I was not happy to see many chapters go, introducing into historic sources of dance knowledge, where *Improvisation Technologies* came from. But due to the fact that we had to squeeze all chapters to a small device like a CD-ROM we had to finally erase chapters.

The main **4 t e r p** chapters were reduced to only two chapters, connecting theory with practise. With **t** ("theory") and **e** ("example") the production related chapters **r**

and **p** were taken out. It is important to mention, that deliberately there is no information, how choreography can be made, because on the CD-ROM there is no! The movement examples, one can find in chapter **e** are demonstrations of the technique, generating and changing a set of given movement ideas. For example dancer Christine Bürkle came prepared to the recordings with a "non improvised theme". After demonstrating a linear movement, she unfolded, flipped, reversed the movements to reorganize the material in realtime in front of the camera. Noah D. Gelber did "room writing", where he was dancing with and through furniture and scenic sets like executing a physical storyboard with his body. On the CD-ROM there is *Solo*, a dance film project of Bill Forsythe presented at the 1997 Whitney Biennial. But there are no links to theory and example chapters. If one wanted to place the CD-ROM into a long line of development from the idea to the creation of choreography, I would rather say, that the CD-ROM content is placed on the beginning of the line and on its end - with *Solo*. There is a big gap in the middle part of the line which would have covered the creation process of choreography. There were many misleading assumptions in the dance world after 2000, which might also have lead to its success, expecting Forsythe to release his artists' secrets of dance making.



Improvisation Technologies CD-ROM, 1999



Improvisation Technologies CD-ROM, LINES chapter, 1999

## 2000 - That's Kyogen!

Right from its first release, *Improvisation Technologies* was met with great interest in Japan. The TV producer Tokyo Media Connections (TMC) approached ZKM with the idea to also produce a DVD and DVD-ROM series about Kyogen theater, a theatre form that is part of Noh theater traditions. The aim was not to invent digital tools that could assist in understanding and transmitting contemporary movement techniques to use new technologies to raise interest of young audiences to an old art form. They were not interested to see theater pieces in a theatrical language they had difficulties to understand. 500 years ago Kyogen theater pieces were written down in a book and were not changed since then. Because the source of creation and documentation is visible - the book - the actual artform on stage is fixed.

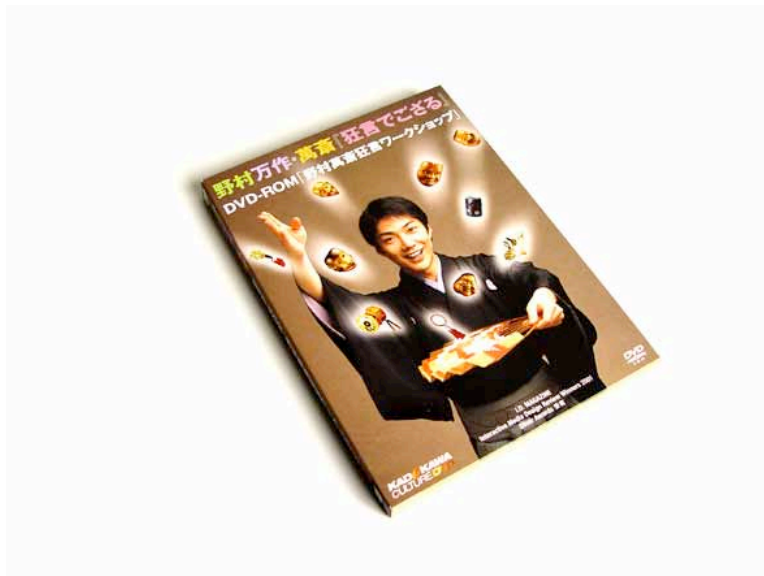
In the western digital dance transmission title *Improvisation Technologies* we used digital means to document a dynamic artform to enhance the interaction with the contemporary artworld. *That's Kyogen!* did rather the opposite, advertizing its ancient form with contemporary media tools to younger "contemporary" audiences.

Teaching Kyogen had so far been happening only inside a few families and usually one had to be member of the family to be chosen to become an actor for Kyogen performances. Becoming a Kyogen actor involves a learning process of many years in which one literally grows into different roles. The older an actor becomes, the more challenging the acting becomes. To make the family knowledge in teaching Kyogen acting and movement techniques public by means of a DVD therefore was a radical thing to do that involved a break with tradition. The producer Tokyo Media Connections found the Mansaku / Mansai family in Tokyo prepared to collaborate in this project.

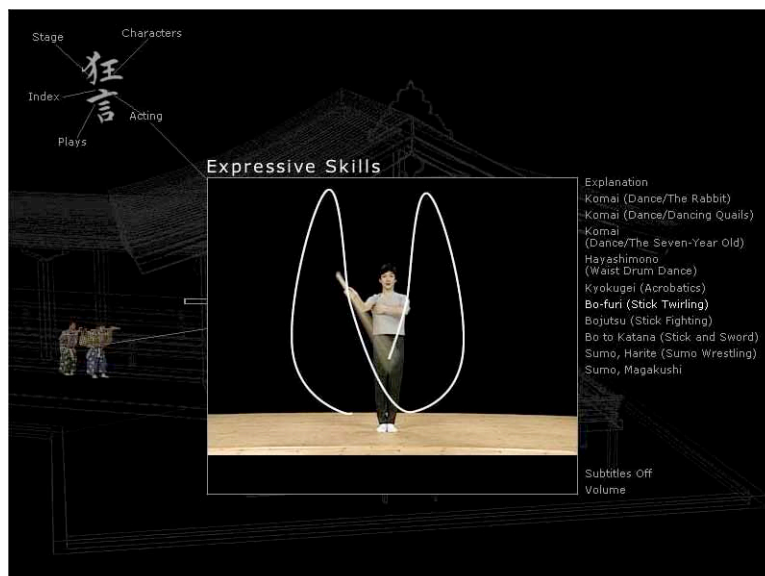


For the DVD-ROM we had to break down the holistic way of teaching into chapters to be able to establish a structure, necessary for relating theory to practice. Maybe we were also trying to use the CD-ROM to make the teaching possible without the presence of a teacher. We decided to organize the teaching in hierarchies and chapters.

Apart from the "normal" way of starting to learn by oral explanations, followed by a physical demonstration we used realtime links to "acting" and "characters", watching the performance. In *Improvisation Technologies* we had no links from performance to theory, in "That's Kyogen!" the CD-ROM was based on this feature.



"That's Kyogen!" DVD-ROM, 2000



"That's Kyogen!" DVD-ROM, ACTING chapter, 2000

## NAGARIKA

In summer 2000, during a research lab at Arizona's Institute for Studies in the Arts, where (among others) I did a presentation on *Improvisation Technologies*, I met the



Indian choreographer Jayachandran Palazhy. Palahazy is the artistic director of Attakkalari: Centre for Movement Arts and Mixed Media, a dance company and a teaching and research center in Bangalore. We collaborated in the US on several telematic performance ideas and have continued working together on stage, but also collaborating on an interactive dance transmission project titled *NAGARIKA: an Integrated Information System on Indian Physical Traditions*.

The aim of the NAGARIKA project is to release a series of DVD-ROMs based on traditional Indian dance teaching techniques as a preservation project of heritage with digital means. This initiative received support from Daniel Langlois Foundation in Canada, the Goethe Institute, the Art Foundation in Japan and Ford Foundation India. Jayachandran Palazhy formed a small interactive media design and development team around Matsuo Kunihiko, a Japanese media artist, and myself. At the time of writing two DVD-ROM have been produced: *NAGARIKA1: Bharatanyam* (2006) and *NAGARIKA2: Kalaripayatthu* (2010). Because of legal issues only the second DVD-ROM NAGARIKA2 is available to the public (<http://www.nagarika.attakkalari.org>.)

### **2006 - NAGARIKA 1 Bharatanatyam**

The first NAGARIKA DVD-ROM, was dedicated to traditional Bharatanatyam dance, a dance practice that knows a long oral tradition for teaching and transmitting knowledge. Indian dance training has always been strictly oral, happening through instructions with vocal singing and beats. Therefore we designed the NAGARIKA Project around verbal instruction lessons given by six masters and teachers, some of them being quite old. Jayachandran Palazhy had been their student many years ago. On the DVD-ROM, the teachers give introductions of Bharatanatyam technique, explaining the workings of movement, time, rhythm and music. The DVD-ROM also contains excerpts from performances by the teachers themselves or by some advanced students of the school. In a way the NAGARIKA project reflected also the teaching history of the initiator Jayachandran Palazhy, who was taught in both techniques, worshipping the knowledge of his teachers.

The basic outline of the NAGARIKA project followed the model developed for the *Improvisation Technologies* and the interface designed for the NAGARIKA *Bharatanatyam* DVD-ROM was not much different from the basic layout of the Forsythe CD-ROM. The NAGARIKA *Bharatanatyam* DVD-ROM used digital media to introduce dance techniques. It links short lectures with movement examples in order to explain movement techniques. As key image we used this time a floor plan pattern of an Indian temple with openings to all four points of the compass. Jayachandran defined this image appropriate to the way dance is located in Indian culture. Dancers were both part of the Brahmin Caste and also banned during the English colonisation. *Bharatanatyam*, danced by women in that time was considered

"sexually explicit", where *Kalaripayathu* schools closed down, because it once had been created as a martial artform for training soldiers.

One could say that the *Improvisation Technologies* established a kind of role model to link short lectures with movement examples and performance excerpts to explain a movement technique using interactive media tools. The NAGARIKA project could also help distributing dance knowledge, which worked already for Frankfurt Ballett. So there was simply no reason to start from scratch. The interface designed for NAGARIKA series was not much different from the basic layout of the Forsythe CD-ROM.

Lectures (Explanations and Context) are linked to excerpts of movement sequences (Adavu) or longer parts of choreography (Korvai). In the Context chapter, there is space for longer explanations, connecting dance to other fields in time and space. Explanations are given for movement ideas, but also ideas in architecture, the body, pedagogy and music. Several teachers give their introduction into movement techniques. There are many overlaps of teachers, teaching chapters of similar movement ideas in *Bharatanatyam*. Each of the teachers way to explain their movement ideas was quite different, but also interesting to compare their different ways to achieve similar results moving on different paths.

*Bharatanatyam* training always had given verbally; there are also expressive gestures and facial communications, eyes and head movement and many other expressive skills of the whole body involved. Originally, we were discussing the possibility of highlighting aspects of this type of communication by adding graphics to the video like in *Improvisation Technologies*. For example, there the context chapter explains how the dancer establishes the stage where the piece will happen by means of a circular eye movement from left to right, followed by an arm movement, establishing the stage where the piece will happen. We used graphics on top of the video images as a tool to follow the construction of this logic and to provide insight in how *Improvisation Technologies* can be understood in terms of an increasingly complex mental architecture taking shape through dance movement.

In NAGARIKA too we planned to emphasize some of movements and expressions by superimposing animated graphics on top of the movement or gesture. Such visualizations might have made sense to highlight an invisible architecture as a foundational structure. Jayachandran Palazhy however objected to this, arguing that more fundamental to Indian traditional dance are its temporal structures and the knowledge of temporal rhythms. These rhythm exercises are expressed by singing and gestures. This also involves the knowledge of different non-linear time scales. What is necessary to understand these complex temporalities is to practice the 'singing' of beats. Teachers use hand gestures and finger clapping in numerous ways to recall very complex temporal structures. We tried to capture this complexity in graphics like watches running with different hands on top of each other, however the results were not satisfactory. Animated graphics, it appeared, were not the appropriate means to

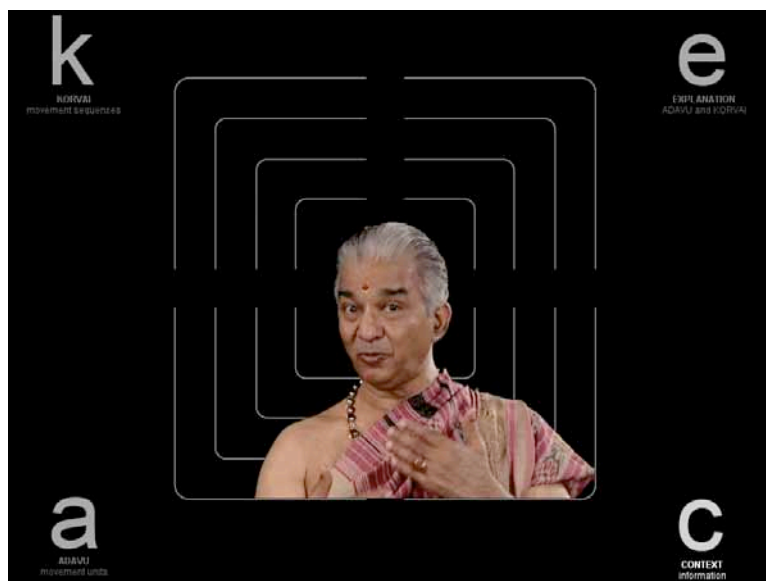
express these complex relations of temporal layers to movement. Therefore in the end we decided to leave out the graphics and simply present the teaching through a mediated representation of a live teaching situation and include recordings of actual teaching. The lessons are expressive as well as clear and precise and show how the dancers use the movement of the body to establish time and space with expressive gestures.

For example as an introduction of the stage a dancer looks with an expressive gaze from left to right followed by an arm movement swiping through space, establishing the space of the performance. The audience "reads" this gesture both as an opening gesture and a gesture to enhance the imagination of an unseen architecture.

*Bharatanatyam* is a dance full of images and stories, connecting the moving body to imagination.



NAGARIKA1 Recording at Attakkalari Center , Bangalore 2006



NAGARIKA1 DVD-ROM, CONTEXT chapter 2006



NAGARIKA1 DVD-ROM , ADAVU chapter, 2006

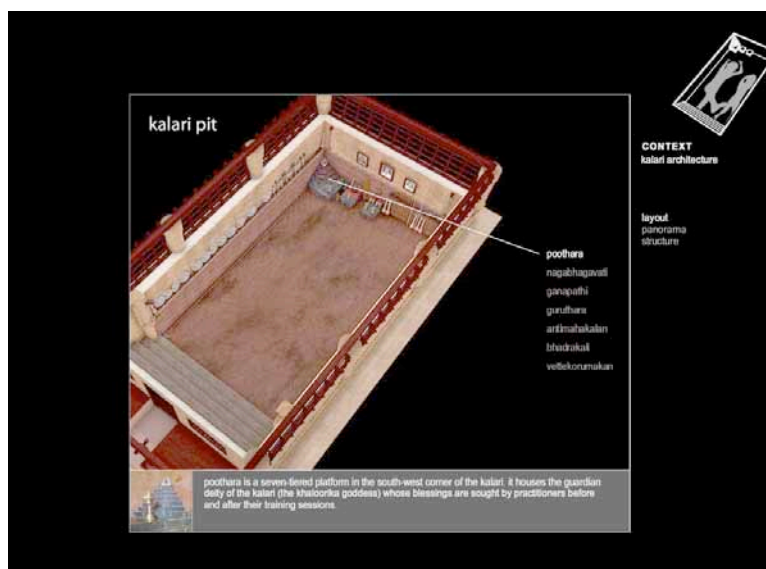
### 2010 - *Nagarika 2 Kalaripayathu*

Four years later Jayachandran invited me and programmer Matsuo Kunihiro to work on a second issue of the *NAGARIKA* series. This time we were asked to work on documenting Indian *Kalaripayathu* dance, taught in many schools in Kerala, a country in the south west of India. It moved from there with the Buddhist movement north across the Himalayas, where other martial art forms arised from there. When Jayachandran Palazhy was becoming a dancer in young age beeing trained in the ancient martial artform, developed around the 11th century as a training and healing practise for soldiers. Most movements in the training derived from animal movement like elephant and serpents. The movements of animals improved flexibility of the bodies but also invited the spirits of the animals into the bodies of india soldiers to gain strenght. Interesting for me was to learn, that the most powerful weapon after learning to fight with a metal sword and long bamboo sticks was considered the human body.

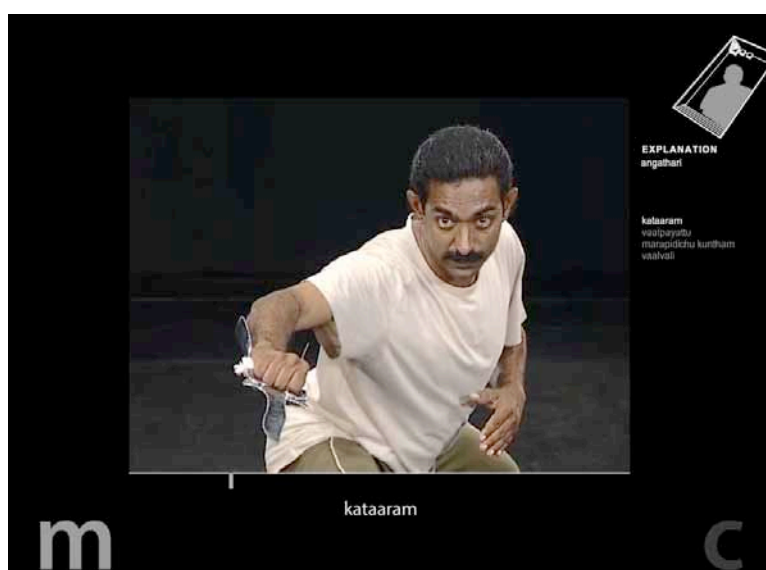
The design and concept of the second DVD-ROM was adapted to the layout of *the* first issue: On the right side of the start page one could find explanations and context information, on its left side *Adavu* and *Korvais*, movement units and complex movement examples. Several teachers gave introductions into the art form. Some of the teachers in their own language Malyalam - with English subtitles. The instructions to movement had no titles or a representing names to classify them, so the long instructions given to the dancers executing long phrases of movement sequences also were put one to one as chapter headlines. Explaining movement units became long like "kai nivarthi kootti thozhuthu madakki nettikku pidichu amarnnu", which explains a "meipayattu randaam mura/methari" movement in the Hindustan Kalari School in Kerala. The other schools, invited to the *NAGARIKA* project were

"Choorakkody Kalari" and "CVN Kalari", schools which were all based in the north or the center of Kerala in India.

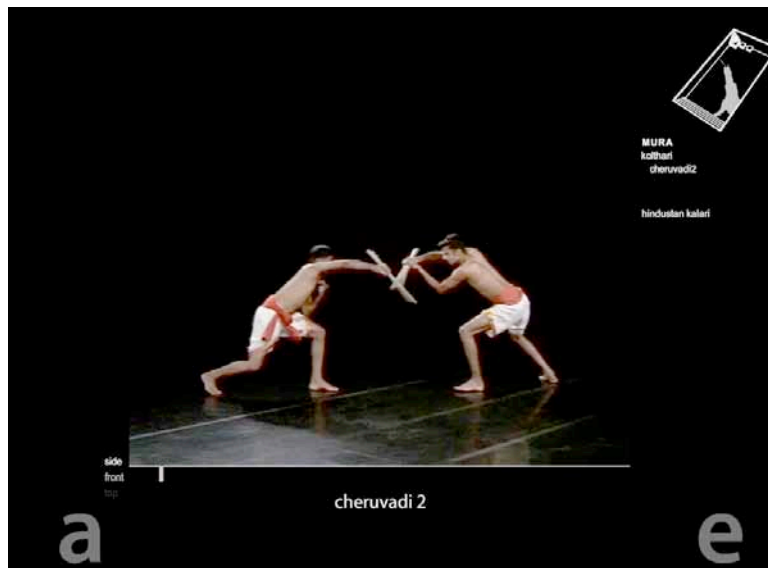
We had again 4 chapters arranged around a key image, showing a *Kalaripayattu* training pit. This pit had a special architecture, connecting the artform to religious rituals. The training area is filled with religious objects in its corners and walls. Still *Kalaripayattu* is considered as dance. In India, the contemporary dance movement is searching for alternative sources for a unique language for indian movement culture. Many dancers in India had been studying dance in the UK, where now also many dancers go to the Netherlands and other European dance schools. At the choreographic center ICK Amsterdam, the *BEYOND* program, starting in 2009 invited asian and european dancers and young makers informing and giving instructions in workshops and movement session before joining a creation process.



NAGARIKA2 - Kalari Pit, CONTEXT chapter, 2010



NAGARIKA2 - EXPLANATION chapter, 2010



NAGARIKA2 - MURA (movement) chapter, 2010

## New interfaces

New fluent forms of distributing knowledge is already there for learning movements in different cultures. New media tools were used to give a dynamic and hyperlinked frame to transmit dance knowledge in the 90s and after 2000. These days digital tools are there to access dynamic dance knowledge everywhere. *Improvisation Technologies* CD-ROM videos had been accessible on Youtube since years.

At ICKAmsterdam Bertha Bermudez, a former Frankfurt Ballett dancer, initiated a dance knowledge DVD-ROM project *double skin | double mind*, which we developed further into a dance training installation for the Amsterdam University of the Arts (AHK). The interfaces of dance learning is losing its metaphorical link to the practice of oral transmission, reading a book or watching a video.

In 1994, I extended the learning interface of *Self Meant to Govern* with e ("example") to express a unique area, where two bodies need to share the same physical space to learn movement. This link remains essential to learn dance. The physical to physical link can possibly be soon achieved with other tools in other new spaces.