

final report for

# The Virtual / Real Interface Project

Chisenhale Dance Space

3<sup>rd</sup> - 9<sup>th</sup> June 2001

*by*

*Brian Curson & Robyn Stuart*

*of*

***al'Ka-mie***

**Proposer:**

Brian Curson

**Facilitators:**

Brian Curson  
Robyn Stuart

**Applied Participants**

**Dancers:**

Helga Stomberger  
Daniela De Paulis  
Robyn Simpson

**Technical & Media  
Assistant:**

Ulla Wirzenius

# Table of Contents

<b>PICTURES FROM THE PROJECT</b>	<b>3</b>
<b>THE POINT OF DEPARTURE FOR THE PROJECT</b>	<b>6</b>
<b>PLANNING AND THE PRE-PROJECT PROCESS</b>	<b>7</b>
<b>THE SELECTION PROCESS</b>	<b>7</b>
<b>TECHNICAL</b>	<b>8</b>
<b>BUILDING THE SCENES ON THE COMPUTER</b>	<b>8</b>
<b>INTERACTIVITY OF DIRECTOR</b>	<b>9</b>
<b>THE FINAL SCENE LIST</b>	<b>10</b>
<b>THE CREATIVE PROCESS</b>	<b>11</b>
<b>LOOKING BACK</b>	<b>12</b>
<b>COSTUMES</b>	<b>13</b>
<b>DIGITAL</b>	<b>13</b>
<b>LIGHTING</b>	<b>13</b>
<b>MOVEMENT</b>	<b>14</b>
<b>DIGITAL MATERIAL</b>	<b>14</b>
<b>CONCLUSION</b>	<b>15</b>
<b>FUTURE WAYS TO GO</b>	<b>15</b>
<b>NOTES FOR ANOTHER PROJECT</b>	<b>15</b>
<b>FINAL WORD FROM THE FACILITATORS</b>	<b>16</b>
<b>APPENDIX</b>	<b>17</b>
<b>APPENDIX A – ORIGINAL PROPOSAL</b>	<b>18</b>
<b>APPENDIX B – ORIGINAL BUDGET</b>	<b>19</b>
<b>APPENDIX C – ACTUAL BUDGET</b>	<b>20</b>
<b>APPENDIX D – PROGRAMME NOTE</b>	<b>21</b>
<b>APPENDIX E – EQUIPMENT USED IN THIS PROJECT</b>	<b>22</b>

# Pictures from the Project



The Body Sea:  
Dancers move in  
sea of undulating  
bodies

← ↓

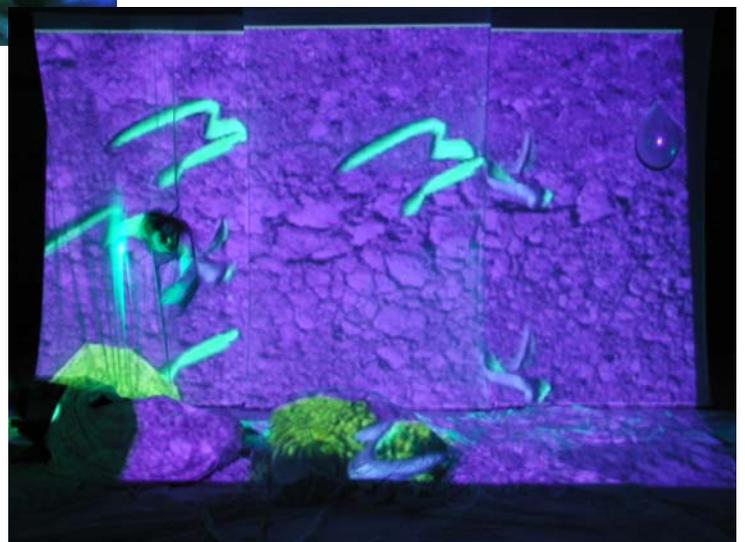


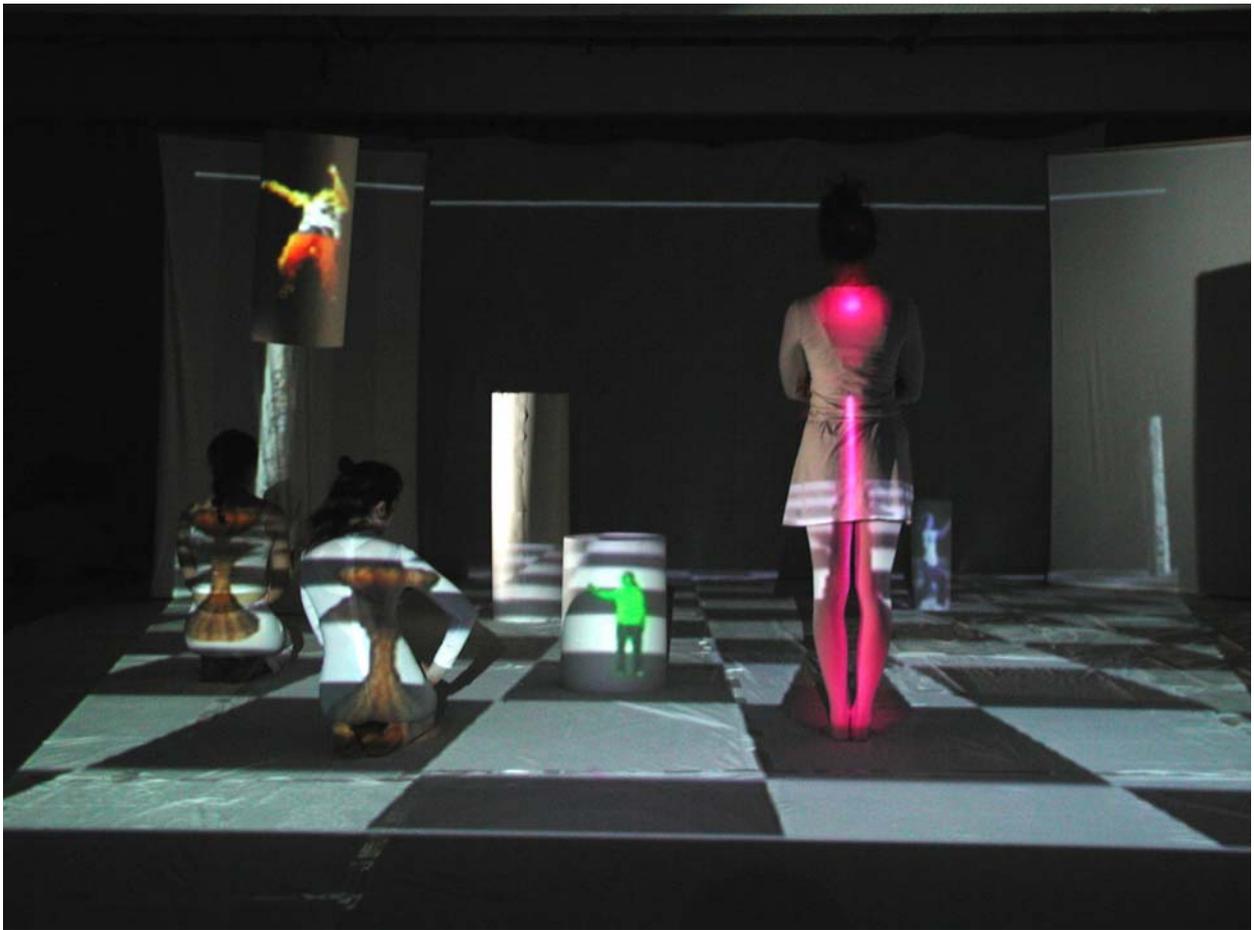
↑

A dancer  
moves  
against an  
abstract  
animated  
background

→

Shoots grow  
from the  
screens  
augmented  
by limbs and  
body parts





↑

The Chess Scene:  
As the three  
dancers move  
the chess pieces  
follow them



→

The Lava Lake:  
Robyn stands amid  
bobbing rocks on  
a molten lava lake



The Puppet Hands:  
Three dancers strain  
against the influence  
of a projected hand  
beckoning them on  
stage



The Temple Scene  
showing Robyn  
and Helga on  
white covered  
tables



The overall set-up  
showing computer  
and white set with  
chess scene

# The Point of Departure for the Project

Brian has been working on setting the real body within a digitally created image for several years. But it was in summer 2000 that we started thinking how we could transpose this to stage and live performance, setting a moving dancer within a surreal 3 dimensional world, the sort that are quickly becoming commonplace in film. A live performer could interact with these worlds, or virtual sets, by moving within them and even triggering changes within them. These virtual worlds can have a surreal subtext that fits nicely with much of dance theatre.

We had the idea of projecting a digitally composed scene onto a white set, which would be physically set up to match the projection. For example, the image of a table standing on a carpeted floor with a brick wall behind could be projected onto a white box standing on a white floor plain with a white screen behind. The elements of the projection, (table, floor, and wall) would be appropriately sized and placed so to accurately match the elements of the white set. Dancers within such a set could be observed to inhabit the original virtual scene: standing by a table; on a carpeted floor; in front of a brick wall.

The advantages of this type of arrangement over traditional props and sets are numerous.

- Digital modelling, (creating objects that only exist in the created world of the computer) is much easier and cheaper than actually creating them for real. The white set can be re-used for a multitude of different digital scenes.
- Digital modelling, allows creation of objects that are completely unreal, surreal or couldn't even exist within our normal physical world.
- Scenes could be created on stage that would be difficult if impossible to orchestrate on a conventional stage: e.g.. bobbing rocks in a lava flow.
- Scenes can be animated, e.g. sea swelling, lava flowing
- Spatial continuity can be breached such that projected objects can appear to instantaneously change position on stage.
- Temporal continuity can be breached allowing scenes to be revisited using a narrative or visual tool to suggest that the scene is taking place in a different time frame.
- Scenes can morph or transform from one to another.
- Objects can morph from one to another.
- An object's scale can be played with. Placing a dancer in a set with projected objects that are recognisably large makes them look small.

The crux of this project was to investigate the interaction between a projected virtual world, which is both mutable and ephemeral versus a live performer and set, which are real and constrained by the normal laws of nature. In a culture where television and film are so dominant the general public are used to visual imagery that defies the laws of physics. They are familiar with sophisticated editing techniques that move the viewer around in space and time. But how would an audience perceive the solidity of a real performer within such a mutable environment? And most importantly how can we work choreographically combining the real and the virtual?

# Planning And The Pre-Project Process

Our intention in this project was to begin to explore the bewildering possibilities of combining dance, white set, digital imagery and conventional stage lighting.

In November and December 2000 we went some way to our goal by creating a 25-minute piece called 'NT\_001454'. This was largely narrative based in which a girl from the audience is cajoled into 'A Brave New World'. The piece used a white floor plain and 3 self-standing screens. This project aimed to develop this work by making the scenes more 3 dimensional and exploring approaches to choreography.

We wanted to work alongside other dancers and movement artists, who would bring their own ideas and skills to the project. This could allow us to approach the work from different angles and open up new areas of exploration. We decided to work with 4 other dancers/movement artists whom we would select based upon an application process.

From our previous work with 'NT\_001454', we knew it was hard for a performer on stage to see the projection clearly. Thus the ability to visualise yourself from the audiences point of view in the virtual scene becomes quite important. So we decided to ask applicants for suggestions for two virtual scenes with movement ideas. Flyers were printed and distributed and ads posted in Juice with a closing date 30<sup>th</sup> April 2001.

Originally the idea was to work with material and technology used in 'NT\_001454' but as we started actively working on the project, new ideas started to surface. We saw how we could develop the 3D set and the technology, particularly making it much more interactive. Also we became interested in creating some of the scenes visualised by the applicants.

Brian began technical research such as studying the computer package Director, four weeks before the project and from this created a few preliminary scenes.

We felt it was important to introduce participants to the technical detail of this project prior to its commencement. We asked successful applicants to a meeting at our place to view these preliminary scenes, meet us, each other, discuss ideas and to start to build the group dynamic.

One participant had raised the issue of copyright ownership. So the group agreed that ideas explored within the project would be the whole group's property. Any member could use any idea after completion of the project, with the proviso that they were credited back to their source. We agreed to provide basic help to the participants after the project if they wished to work with any of the scenes we had developed.

## The Selection Process

Only six movement artists applied to the project (four more enquired but did not apply). We suspect that the requirement for two scenic ideas and movement inhibited many from applying. The lack of financial assistance we know definitely stopped at least one of the enquirers from applying, and one of the applicants from accepting. Perhaps the technology 'scared' many dancers from applying. When finally making the selection one applicant could not be located thus we were left to choose the remaining four. It is interesting to note, as a side issue, of those that applied only one was British. This was not a problem, but why?

Of the four chosen all looked excellent on paper and had different visual and movement backgrounds. So perhaps the initial selection process worked in encouraging applications only from those eminently eligible. However this did not take into account personality (clashes?), and unforeseen crises. Of the four movement artists who started the project only two completed. One artist left with regrets due to a personal crisis on Wednesday, after giving many ideas, much enthusiasm and computer-captured movement of herself, (which were incorporated into the showing). The other, Rustyna Edwards left us a phone message the day after saying she no longer wished to be part of the project. She had been away for 2½ of the working days already.

However, a media student Ulla had applied to help us technically as she was interested in learning about the technology and dance. She was a blessing and allowed us to achieve a huge amount of research in the short time we had. Brian could dance more and the technical side was sped up with her presence.

## Technical

When sitting down to write this report we asked ourselves how important was it to describe the technical side of the project. Firstly it is good to give some pointers to those who may like to work in a similar manner, but more particularly the technical methodology adopted brings with it freedoms and restrictions that in turn affect the creative movement side. So elaborating them is, we believe important.

Normally for film and video the separate elements are composited and rendered into the final video. The rendering can take anything from a few minutes to hours (if not days). Then if you want to change it the rendering process has to be repeated. For this project we wanted to change the projected image relatively quickly so that the whole creative process would flow more easily. Thus we decided to use a program called Director.

Director can combine and animate elements, which may include, images, animations, video & sounds (known as sprites in Director). Size and position of the sprites can be adjusted easily and then the new image projected immediately from the computer. Furthermore, behaviours can be added to sprites allowing them to be animated, e.g. a bouncing motion could be added to an image of an apple, allowing it to bounce endlessly in a scene. An interactive behaviour could also be added, e.g. changing the apple to an animation of an explosion. Now if clicked upon by the computer operator the bouncing apple would explode on cue.

If virtual scenes are to be used within a touring show, which is our aim, then given different stage sizes and projector positions etc Director would allow the scenes in a piece to be easily re-set for each new venue.

## Building the Scenes on the Computer

We brainstormed as many ideas as possible, and from these created scenes. Each element of the scenes were created separately and the final scenes were assembled in Director. For example, one idea was to have live performers against a projected wall avoiding large

projected spikes, which were violently piercing the wall. The separate elements (the sprites): the spikes, the wall, and the floor were individually modelled. The spikes were animated. The scene was assembled in Director so that when the computer operator clicked in a particular position on the wall the animation would play and the spike appear to rip through the wall.

Sprites were arranged in libraries of objects, backgrounds, behaviours etc... In this way elements of one scene could easily be used in others and allow the whole creative process to be as fluid as possible.

Objects and some backgrounds were modelled in 3D Studio Max, rendered against a key background colour without anti-aliasing (a process that smoothes out the pixelation of the image but leads to semitransparency at the edge of the key colour). The image was exported as a TIFF, a file format that contains a mask allowing the object to be cut out from the background in PhotoShop.

GIF animations were used extensively. Some GIFs were created in 3D Studio Max, some GIFs were downloaded from the Internet, and others from live action shot against a blue background with the background removed using AfterEffects. GIFs have the advantage over movie cast members (QuickTime or AVI) that they contain areas of transparency allowing them to be placed against a background. Their disadvantage is that they are limited to a small size (maybe 150 frames). This leads to projected movement sequences being either short or repetitive. This limitation requires further research in the future.

Landscapes, animated skiescapes, mountains, lakes were created in Bryce, a 3D landscape-modelling program. Stock stills such as starscapes and landscapes were taken from tutorial and Internet sources. Sample sounds were downloaded from the Internet. Special behaviours were written in Director to animate sprites allowing any object to bob up and down realistically or to swing to and fro. Other behaviours were written to provide special interactivity allowing sprites to be dragged so that for example chessmen would follow a dancer on the chess board and would size automatically, so when the dancer moved upstage the sprite would shrink.

## Interactivity of Director

The interactivity of Director provided a whole new area of exploration. Cues could now be spatially specific allowing some parts of a projection and the virtual scene to change on a specific cue activated by a computer operator while leaving the rest unaffected. *Now instead of a linear cue path typical of a conventional lighting arrangement, each virtual element could literally have its own behaviour.* For example in the virtual scene of a chessboard, the bishop projected onto a dancer could have the property of melting spontaneously and then reappearing as a large candlestick. Other pieces on the same board could have their own properties, pawns turning into moving people. And the timing of these events could be *independent*. Allowing different elements of a stage set-up to change independently could mean a whole different approach to the creation of theatre and to dance theatre (because of its inherent surreal potential). We found ourselves wondering how much stage technology had effected dance. A technology that required things to happen in sequence meant that the performance had to be orchestrated that way.

# The FinalScene List

Because of the time and the learning curve involved in creating the projected material as much of the work as possible had to be done prior to the commencement of the eight days at Chisenhale. We created a variety of elements that could be pulled together as certain pre-prepared scenes. Other scenes were created during the project from footage shot at Chisenhale. Miscellaneous but interesting elements were added to the cast libraries such as cages and stormy animated skies. We could play with recombinations of the sprites to create new scenes at Chisenhale or tweak a pre-prepared scene.

The final complete scene list was:

- 1) **Growing Shoots** – Blue earth projected on screens through which shoots start to grow
- 2) **Lava & Rocking Step-Stones** – Orange Lava Lake with mountains behind and black stepping stones in the lava (upon which people can jump from).
- 3) **Body Sea** – A heaving sea of bodies against a night sky (in which the dancers move).
- 4) **Draggable earth** – an animation of a rotating earth that can be moved by the operator.
- 5) **Fishtails from doorway** – a doorway on stage-right can be approached, opens & closes on cue by the operator then a fish swims out from behind the door to stage left.
- 6) **Chessboard** - The floor becomes a chessboard with a bishop and two pawns which can independently move ( and can be projected on dancers and moved to follow them). As they move away to a horizon they shrink. The bishop can melt on a mouse click by an operator and then reappear.
- 7) **Snow shower** – animated snow shower against mountain background
- 8) **Swinging babies** – large orange droplets containing a foetus swinging from ceiling
- 9) **Roman Temple** – Green grass with roman temple in background with two pedestals in front (upon which dancers can stand (on white boxes) to become moving statues).
- 10) **Spikes in Wall** –a brick wall through which large spikes can suddenly burst cued both in time and space on the wall by a click from the operator's mouse.
- 11) **Machine** – Large abstract machine like elements pound and thrust on separate screens.
- 12) **Bouncing Fruit** – Oranges and apples bounce endlessly against a blue sky to be blown up by a click from the operator.
- 13) **Puppet hands** – Large hands appear on different screens chosen by the operator doing different gestures (that can invisibly control dancers on stage).
- 14) **Robyn's conversation** – Robyn (Simpson) 6 short movement sequences projected onto a screen next to a real dancer. The sequences can be cued and re-cued, via the computer operator, from the real dancer to give the impression that they are having a movement conversation.
- 15) **Floating furniture** – a stagnant lake on which bobs a strange assortment of domestic furniture (not used).

# The Creative Process

*Don't be too critical of an idea – just try it- it will probably evolve and take you on some new pathway - have faith in the creative process – and have fun too.*

We decided to work intensively with selected scenes for the first few days. Daily we reviewed our progress. After warm-up we discussed any ideas that had come to us, and how we felt about the project. This gave a strong framework in which to settle the group dynamic. A different member of the group led the warm-up each day. This proved useful in many ways. It got us into our bodies, allowing us to approach the rest of the day from a stronger movement standpoint. We discovered each other's movement basis and de-emphasised the inevitable facilitator-participant roles.

We had only 8 days at Chisenhale. This time was an incredible opportunity to combine lighting, dancers, computer and video technology in a large studio space. We decided it was more important to discover how this virtual technology could work with movement over a wide range of scenes and ways of using the interactive capacity of the computer as opposed to developing detailed movement material with a just a few scenes. Once we had seen how things look in range of contexts then we could work more intensively with movement another time extrapolating the final stage effect. This project would be initial research that would suggest future directions for further research, whether choreographic, technical or combined.

We started off exploring the Temple Scene. This simple scene gave the group a chance to see how effective the virtual set idea could be. It amazed us, our idea worked. Two or more of us became statues who moved with a slow fluid dynamic. This was a good overall group warm-up to the technology. One of us was the main director for each scene, but during our investigation we encouraged each person to alternate between moving and standing out to help direct the group. This helped each of us form an idea of how things looked from an audience's perspective and let this inform our movements on stage.

From the Temple Scene we progressed on to the Body Sea. This involved more contact and was technically more difficult to orchestrate with the white set and the lighting. We returned to this scene several times over the week in order to achieve a result we were satisfied with.

On this 2<sup>nd</sup> day we also introduced a spinning earth that could be moved around by the operator. A game of football emerged with legs sticking up from the sea of ideas. Here the fun really began. We saw that a fun attitude to improvisation was in many ways more productive than a serious work approach. Humour often enabled us to make absurd creative conceptual leaps adding to the free flow of ideas.

We encouraged the group to work constructively rather than destructively, giving suggestions rather than criticism. We worked with the notion that nothing is actually wrong. We tried as many ideas as possible resisting the urge to argue or analyse an idea's integrity - ideas would often lead to something else.

Each scene gave rise to very different movement styles and interaction, some humorous, some abstract, some more surreal, and some relatively narrative.

Owing to underestimating the amount of cabling required we initially set-up the lighting so only the downstage portion of the stage was used. Half way through the week we started to feel that we really needed to use the whole stage. We dispatched Ulla for more cabling and reset the lighting further upstage. We covered the floor in white sheeting taped down well and hung a cyc. sheet against the upstage wall to complement the 3 self standing screens we already had. The new layout of increased depth gave a much-enhanced sense of perspective and dimension.

During lunch breaks we would look back at video of the morning's work. We noted things we liked, suggested new ways of working, and new directions to take. How many alternative realities could be super-imposed on each scene through movement?

We had asked people to bring a selection of music and worked with a variety of tracks for each scene. We could have been more experimental with this. The music was played from CD. With more time and better computers it would have been possible to play music directly from the computer allowing us to select from an enormous range of music. Although during the week we did begin to use incidental sounds stored on the computer.

Towards the end of the week and at the end of the showing we decided to work with what we called 'Whole World Improvisation', improvisation of the entire set-up. Dancers could move the set and props while improvising, change costume, the computer operator (Ulla) could change scenes and play with animating sprites at will and change the music. This was done as an experiment and produced some interesting combinations that otherwise may not have happened.

On Friday of the week we started to gather together ideas from our work for our showing. We decided to show each of the seven scenes we had worked intensely on and to follow this with a session of whole world improvisation. In putting the Showing together we investigated various methods of transforming from one scene to another.

The Showing grew easily out of our research and ended up a far more seamless and interesting collection of set ideas and movement than was anticipated.

## **Looking back**

- Contiguous image split up on white set gives feeling of dimensionality
- Shadows do not greatly interrupt scene
- Interactivity worthy of further investigation
- Ideas of more intricate white sets

Constant surprises did happen during the project. Contiguous images that fall on an irregular white set which splits the images up gave a quasi dimensionality that really fascinated and added to the surrealness. The falling shaft worked well with a central screen placed upstage of the other two pulling the eye to the centre and down the shaft.

We found shadows could actually add to the whole picture and did not greatly interrupt the dimensionality, even though the projector was at a low angle and produced large shadows.

As the project progressed we discovered more ways to use the interactive potential between the computer visuals and live performance. We think this is worthy of deeper investigation.

We had many ideas that we didn't have time to investigate such as using suspended props and sheets in the white set.

## Costumes

- In white dancers become part of the scene
- In black dancers look completely separate
- Colours could separate dancer and scene

For the most part we wore white during the project. We also tried experimenting with black. While wearing white you would disappear into the scene especially with no side lighting, with black costumes the projection would totally disappear on the person making them stand out completely. Even the difference between white skin colour and pure white is significant, making projection that falls on skin appear weak compared to white costumes. Working with different colours to separate performer and background could also be interesting.

## Digital

- Use of Director eases creative process
- Two computers would ease process flow
- A dedicated technician important to project
- Co-facilitator also important

The use of Director enabled a faster manipulation of the digital imagery. The creative process of the digital art was, to a degree, worked in tandem with choreographing and creating movement. Digital scenes suggested by movement could be created within a short space of time.

Despite this however we were aware that much time was still spent with dancers / movers waiting for the computer visuals to be re-worked. The continuous fluid process of movement creation was broken. Having two computers, one playing scenes while on another modifications can be made would make the process more streamline.

The importance of Ulla, the computer operator and technician, not originally budgeted in the project became very apparent. Her presence and range of skill gave Brian more freedom to direct the project and dance. Also having Robyn as co-facilitator was important and could have been used more. She took the group in movement work while Brian and Ulla did the technical modifications.

## Lighting

- Use of lighting essential to project
- Side lighting accentuated dimensionality of scene
- Side lighting rigged accurately on scaffolded outriggers
- When touring virtual scenes company requires own boom rigs

The use of lighting in this project was essential. In many senses the projector is a sophisticated lantern. So how it works in conjunction with other light sources on a three-dimensional set is paramount. While the projection provides identity and texture to the set, it provides no dimensionality. Indeed relying solely on front light flattens dimensionality. Well-focused side lighting can accentuate the dimensionality of the set without diminishing the effect of the projection.

Side lighting became dominant, because down, back or top lighting would wash out the front projection or impinge on the screens. This is a direct reversal of most lighting configurations and many theatres are ill equipped to handle this. In the project we were able to rig long scaffolded outriggers from the Chisenhale booms to position the side lanterns accurately. The upshot of this is that unless a company working with virtual scenes wants to be at mercy of theatres' inadequate booms or lack of floor stands they should carry tripods and scaffolding allowing them to create their own flexible boom arrangements.

Even though we were using a powerful projector all lanterns could only be used at low power (30-60%). The light from lanterns run at low power is much redder than at full power and this effects the choice of gels when designing lighting for this kind of show.

The projector itself can be used like a lantern. A white circle in the projected image will have an effect similar to a follow spot but with all the flexibility we have outlined, eg it could be interactive, following a dancer, it can change in size and colour etc.

## Movement

- Most movement in project derived from visual narrative
- Scenes could be generated for specific movement material
- Closer relationship of movement and interactive scene

Much of the movement in the project was derived from the narrative and motion of the visual imagery used. We realise that we could have taken the movement exploration much further. Movement could be created independently and a virtual scene generated as a set for the dance. Movement generated from a dancer could be captured and incorporated into the projection creating the virtual scene. More of the live performer's movement could be used as cues to trigger changes in the virtual scene.

## Digital Material

- Much of projects visual material representational
- Freely combining visual elements can have powerful effects
- Digitally generated visual material creates certain aesthetic
- Alternatively use real objects, or combine them with digitally generated

Much of our created material was representational, i.e. depicted objects or types of places recognisable by an audience. Such material comes with strong associations and creates a strong context in which the movement is held. The Temple scene creates a strong context for the dancers to be sculptures. In other cases the context can be abstracted. The Body Sea at first looks like a conventional rolling seascape until you realise that the ocean is a body picture. While on one hand having such strong representational material can bind movement, having the ability to freely combine visual elements could create bizarre, humorous, frightening and powerful metaphoric combinations that could be reflected in movement.

Most of the visual material was modelled or composited digitally, because of the need for expediency and flexibility. A wooden table can be modelled in minutes and viewed from any angle. Much quicker than finding stock pictures of tables and cutting them out. However reliance on digitally created material creates a certain aesthetic. Real scenes and objects, such as shopping malls, parks and trees could have been used in isolation or combined with modelled components.

## Conclusion

In many ways this project was the first step on a long road. I suppose it is not surprising that when working with the blend of media of dance, digital, sound, and light that your going to find an overwhelming range of possibilities to take the work. In one week of intensive work we achieved more than anticipated. The discussion after the showing was extremely rewarding giving us new contacts and new ideas.

## Future Ways to Go

- To work with an established group of dancers as choreographers directing their movement within designed sets.
- Inviting applications from established companies for short pieces that we can then set in virtual scenes.
- Investigate the potential of moving the audience through a virtual scene or landscape as though a camera tracking through the scene. How could we move with this to make the motion of the audience look convincing?
- Incorporate a weekend workshop at end of projects so interested dancers can become familiar with technology and working / dancing with it.

## Notes for Another Project

- 1) pay dancers
- 2) pay for pre-project time
- 3) get technical support (pay Ulla)
- 4) use our / Chisenhale's projector
- 5) have 2/3 monitors: for technical operation, for displaying the digital images to the technician and one for the dancers
- 6) paid workshop
- 7) make fliers less complicated and less intimidating to attract dancers and indicate showing times clearly

8) get Juice not to put add for dancers in the technical section

The project was neither paid for nor paid the dancers. We thought that this was thus a tremendous opportunity for dancers interested in exploring this technology, but it may be that dancers saw it as unpaid work rather than as a free workshop.

## **Final Word from the Facilitators**

We would really like to take this opportunity to thank everyone who helped make this project a success. The dancers for bringing their creative spirit, their skill and their energy. Ulla, the technician for being one of the most helpful, willing and widely skilled technicians we have ever worked with. To the Chisenhale team for being so welcoming and accommodating. To Rebecca Skelton for a really useful and friendly debriefing session and to the audience at the showing for their lively questioning.

This was a rare opportunity to stretch to the boundaries of our imagination... and beyond...Thankyou Chisenhale.

Brian & Robyn

al'Ka-mie

# Appendix

## Appendix A – Original Proposal

### Chisenhale Proposal, December 2000 – The Virtual/Real Interface - Proposal

<b>Contact:</b>	<b>Name:</b> Brian Curson <b>Phone:</b> Home: 020 8977 9167, Mobile: 07956 357 679 <b>email:</b> bcurson@freenetname.co.uk	<b>Address:</b> 70 Bucklands Road Teddington Middlesex, TW11 9QS
<b>Time requirement:</b>	Any consecutive 7 days from 10.00am to 5.30pm during April, May and June 2001, in the main studio with access to blackout, video camera and playback. Proposed showing on the last evening.	

**Who's involved:** This project would bring together six dance artists. Brian Curson and Robyn Stuart would facilitate and direct the research project. Brian has worked extensively with lighting design, technical production and computer arts including recently video and 3D modeling. Robyn has specialised in creating visual performance art. Four other dance artists will be selected from applicants who will have responded to adverts for people willing to improvise and explore movement in relation to a projected computer generated virtual space.

**The Idea:** This project proposes to investigate the interface where the real world of the performer collides with the virtual world of the computer. It would explore the relationship between the physical body and the technologically created environment that the body finds itself within and that contemporary society relies on so heavily.

This work comes out of a performance piece developed by Brian and Robyn, where a performer danced and related with a virtual set that was created by projecting computer generated imagery and animation on three moveable screen segments. In this piece Brian created surreal creatures and bizarre landscapes using modern computer modeling tools such as 3D Studio MAX and Bryce. Their intention now is to facilitate a project that would involve other dance artists researching and investigating the movement possibilities with these and other scenes. This would extend the work in two respects: it would extend the range of creative input and it would allow research using a greater number of dancers in the space. Simultaneously the invited dance artists would gain an opportunity to work with computer technology and possibly stimulate their own private creative processes.

This work involves scenes being created and animated on computer and then projected on the live performance space directly from the computer. Using a program called Director the animated scenes, and images can be combined and recombined together seamlessly to create a score that can be developed by the group. The program can also control the sequence itself, randomly presenting animated material creating a bizarre ever-changing world in which the performers can improvise. Thus the 6 artists can play with the way they relate in movement (choreographed or improvised) to these combined scenes.

Fundamentally a projection only becomes a reality when it falls upon a reflective surface. So the shape, fragmentation and position of the reflective surfaces in the performance space onto which various parts of the image falls, effect how the two-dimensional image literally can take shape. For instance, an image of three objects side by side falling on three separate screen segments placed some downstage and some upstage of each other gives the impression of depth – real performers can pass behind one segment and in front of another. What has begun, as a 2 dimensional image becomes a 3 dimensional reality. As the total reflective surface becomes more sophisticated the angle of projection and position of the projector becomes more significant. It becomes similar to lighting design, with the projector being an animatable light source or lantern.

So the group will also research the organisation of the performance space in several ways: firstly using the three free standing screens that have already been constructed, secondly using sheets placed upon the floor and thirdly using props constructed from white sheeting and garden canes. Onto each of these the image could be partially or wholly projected. The artists may move between the screens thus entering and exiting the virtual world or protrude limbs through slits in the screens or sheeting on the floor. Dance artists may become bodies draped in white, which create interesting shapes for the projected imagery to fall upon. By changing the colour of what is worn, the artists may blend into the projected material and for example become distorted or disappear, or stand out in contrast away from the projection.

It is intended that all participants get a chance to direct or facilitate the movement work happening within the 'virtual set'. This role would be rotated around the group. The number of artists interacting with the 'virtual set' at any one time would also be varied. Artist could also suggest different 'virtual sets' in which to setup or which Brian may be able to quickly create new animated sequences.

Proposed Program for research:

**Day 1:** To setup the computer, video projector, lights, blackout and screens. To get to know each other and just play with some improvisation. To discuss the overall aims and ideas of the research and to look at Brian's animated material.

**Day 2 & 3:** To improvise with still images or very short animated sequences. To explore different ways of designing the projected space and consequently ways in which to physically interact with it.

**Day 4 & 5:** To work with longer sequences of computer generated material. To play with structured improvisation in relation to the 'virtual set'. To develop and review the previous two days work and see how it can be expanded.

**Day 6 & 7:** To play with improvising to randomly projected images and longer sequences selected by the computer. To choose some of the more interesting research results and recreate their essence for the showing.

Advertisements for the dance artists and the showing would be placed on dance notice boards and in juice and through Chisenhale mailing and email lists. The 4 dance artists would be primarily selected from CV's and a covering letter explaining why they wish to participate in this project. Brian and Robyn would select the applicants mostly in relation to their enthusiasm and creative and improvisation experience rather than technical ability in dance.

Appendix B – Original Budget

<b>Proposed Budget</b>		<b>Total</b>	
<u>Equipment</u>			
Video Projector for 1 Week	Supplied by Plunge Club	<b>100.00</b>	
Cyc screen	Supplied by Plunge Club	<b>0.00</b>	
Lighting, 6 channel package	Whitelight	<b>100.00</b>	
Additional Blacks	Blackout	<b>62.00</b>	
Computer	Supplied by Brian	<b>0.00</b>	
Video Recorder	Supplied by Brian	<b>0.00</b>	
Video Camera	Supplied by CDS	<b>0.00</b>	
Video Playback	Supplied by CDS	<b>0.00</b>	<b>262</b>
<u>Pay for Directors</u>			
Brian Curson	1 x minimum wage	<b>150.00</b>	
Robyn Stuart	1 x minimum wage	<b>150.00</b>	<b>300</b>
<u>Props</u>			
String		<b>3.00</b>	
Canes (for prop construction)		<b>24.00</b>	
Sheeting	Supplied by Robyn	<b>0.00</b>	<b>27</b>
<u>Publicity</u>			
Paper		<b>20.00</b>	
Postage		<b>50.00</b>	<b>70</b>
<u>Video Tapes etc</u>			
Tapes and Media		<b>45.00</b>	<b>45</b>
<u>Travel and Transport</u>			
Car Hire (9 Days)	Easyrentacar	<b>100.00</b>	<b>100</b>
<b>Total proposed Budget</b>			<b>£804</b>

## Appendix C – Actual Budget

<b>Actual Budget</b>				<b>Total</b>	
description	ref	detail	supplier/source		
<u>Equipment</u>					
Video Projector for 1 Week			Plunge Club	<b>200.00</b>	
Cyc screen			0797 082 1165	<b>0.00</b>	
Lighting, 10 profiles & cabling	15	8x 16/30 profile 2x 20/40 profile 6x 15m 8x 9m 4x Galco adapters	Whitelight (7731 3291) 57 Filmer Road Fulham, SW6 7JF COD + £100 deposit	<b>79.90</b>	
Additional Cabling	16	8x 15m	Whitelight (7731 3291)	<b>24.62</b>	
Additional Blacks	12	4x 3m3m blacks Invoiced in advance	Blackout (8944 8840) 280 Weston Road, SW19 2QA	<b>65.80</b>	
Gels			al'Ka-mie		
Computer			al'Ka-mie	<b>0.00</b>	
Video Recorder			al'Ka-mie	<b>0.00</b>	
Video Camera			CDS	<b>0.00</b>	
Video Playback			CDS	<b>0.00</b>	<b>370</b>
<u>Pay for Directors</u>					
Brian Curson		based on minimum wage £150 (balanced with final budget)		<b>57.81</b>	
Robyn Stuart		based on minimum wage £150 (balanced with final budget)		<b>57.81</b>	<b>116</b>
<u>Props</u>					
Canes (for prop construction)			al'Ka-mie	<b>0.00</b>	
Sheeting			al'Ka-mie	<b>0.00</b>	
Glue gun	01			<b>10.98</b>	
Material	03			<b>6.00</b>	
Fishing Line	04			<b>7.98</b>	
Baloons	05			<b>3.98</b>	
Lining paper	06			<b>2.25</b>	
Fishing Line	10			<b>4.25</b>	
String	10			<b>2.63</b>	<b>38</b>
<u>Publicity</u>					
Paper		For CDS		<b>5.00</b>	
Paper	11			<b>6.22</b>	
Postage (to mailing list)	13			<b>14.28</b>	
Printing	02			<b>1.00</b>	
Printing	08			<b>12.80</b>	<b>39</b>
<u>Video Tapes etc</u>					
2x5x8mm Tapes	09			<b>25.98</b>	
2x5xE180 VHS Tapes	09			<b>7.98</b>	<b>34</b>
<u>Travel and Transport</u>					
Car Hire (9 Days)			1Car1, 1/6/01 - 11/6/01 10 Days + 1 free day from loyalty card	<b>164.00</b>	
Petrol	07			<b>22.74</b>	
Participants travel expenses	14	£20 * 4		<b>80.00</b>	
Ulla travel expenses	14	£20		<b>20.00</b>	<b>287</b>
<b>Total Budget</b>					<b>£884</b>

## **Programme: The Virtual / Real Interface**

*Brian Curson and Robyn Stuart of al'Ka-mie*

With Movement Artists: Daniela De Paulis and Helga Stromberger  
(Robyn Simpson unfortunately her live representation absent but digital self fully active)

Technical Support by Ulla Wirzenius

### *9 June Sharing*

This 7-day project investigated the interface where the real world of the performer collides with the virtual world of the computer. Five dance artists and one technician explored and developed stage landscapes created by digital imagery projected on 3 dimensional white sets and then linked 'dance' movement to these sets. We aimed to interweave the real and the virtual - each respecting the other.

We only touched on the huge potential of this new and exciting medium. The aim was to try a variety of ways of creating and interacting and linking with these sets and develop a score to improvise to. This Showing depicts scenes that exhibit the interactive nature of the medium. The live performer can dictate the timing of events on stage rather than being ruled by a non-stop sequential video projection. Generated directly from the computer projected objects are moved about within the projected scene. Sound effects have been linked to the movement of digital objects via computer. During a performance an offstage director or the computer can call up different digital images at will or randomly to which the dancers respond spontaneously. It is easy to scale digital objects via computer so those images can be matched to objects or people anywhere around the stage. Indeed the whole nature of the interaction between live performer and set and video projection can be manipulated easily at any stage of the creative process allowing a choreographer greater flexibility.

### **Scenes**

- The Chess Game
- Daniela's Painting (Scene change)
- The Puppet Hands
- The Doorway
- Conversations with Robyn
- The Falling Shaft (Scene change)
- The Rolling Body Sea
- The Temple
- The Growing Shoots
- Improvisation to random images

*Supported by Chisenhale Dance Space*



## Appendix E – Equipment used in this project

### Computer

<b>Processor</b>	Cyrix, equivalent to Pentium I, 233MHz
<b>Memory</b>	90Mb
<b>Hard disk capacity</b>	40Gb, (1.5Gb was used for the project)
<b>Video card</b>	ATI 3D Pro Turbo PC2TV

### Lighting

<b>Control Desk</b>	Zero 88 Lightmaster XLS
<b>8 x</b>	Zoom Profile Prelude 16/30 500W
<b>2 x</b>	Zoom Profile Prelude 28/40 500W
<b>6 x</b>	50' extension cables
<b>8 x</b>	30' extension cables
<b>Additional 8 x</b>	50' extension cables (requested 30')
<b>4 x</b>	Grelcos 2 way adapters
<b>2 x</b>	6 way dimmer packs

### Audio Visual

<b>Camara</b>	Sony Video 8 XR Handycam f=4.1-73.8mm Night Shot 0 Lux
<b>Projector</b>	Epson LCD EMP 3500

### General

<b>Cyc</b>	provided with projector approx 4m x 2.5m
<b>Sheeting</b>	approx 6m x 8m
<b>Blacks</b>	2 of 10feet x 10feet, 2 of 10feet x 15feet
<b>Props</b>	1 roll of wall paper backing, transparent gel rolls, 1 packet bamboo sticks, 1 physio ball, 2 packets white balloons
<b>Extra equipment</b>	glue gun, 3 reels of Gaffa tape,
<b>White Clothes</b>	2 pairs of tights, many white tops, 3 all-in-ones, 1 pair of gloves, white trousers, white stretchy velvet material 2m x 1.5m