

# e-Dance

## Relocating Choreographic Process

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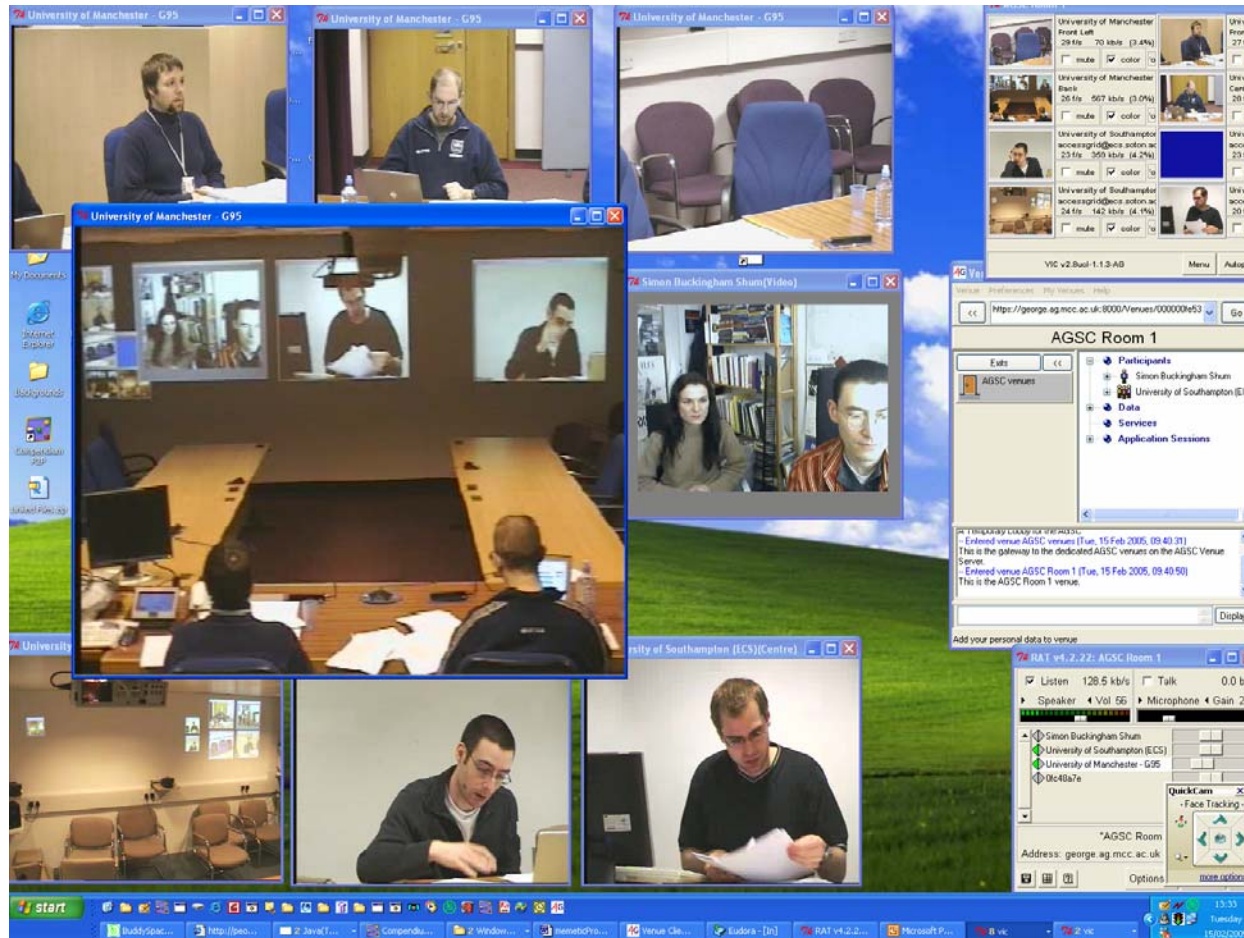
Simon Buckingham-Shum

*Knowledge Media Institute*  
The Open University, UK

# dance and technology



# Access Grid for e-Science meetings



# mapping e-Science discussions



Compendium is a visual hypertext tool for mapping discussions and collaborative modelling. See the [Compendium Institute](#) for details, and the EPSRC eScience funded [CoAKTinG Project](#) for its deployment in the context of Access Grid rooms

This site: [www.aktors.org/coaktin/eSci-Vi](http://www.aktors.org/coaktin/eSci-Vi)

## National eScience Centre Visualization for eScience

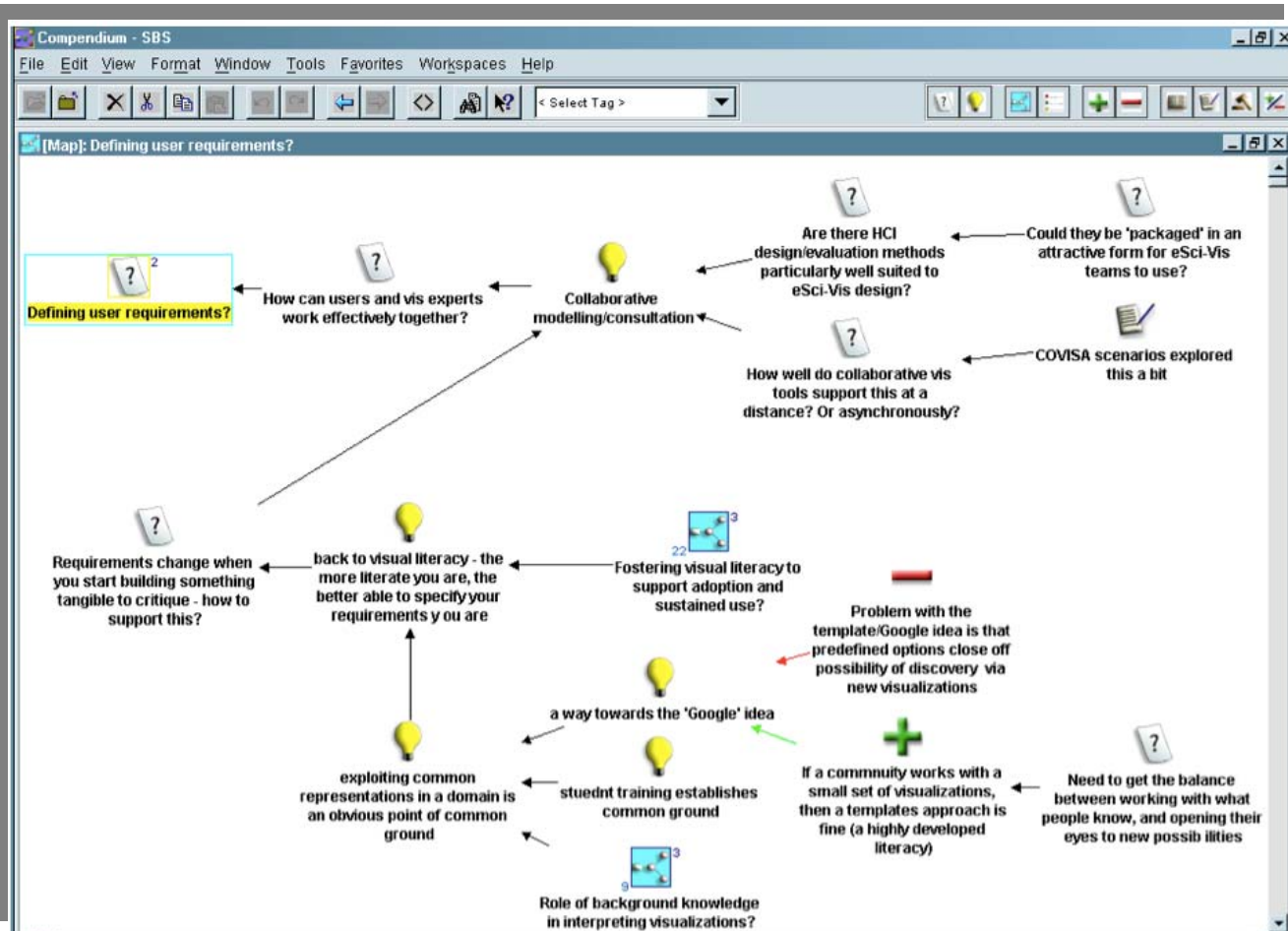
**Background note:** As part of the workshop, Simon Buckingham Shum ([slides](#)). Compendium Working Group 4 (Human Issues), and in the Long Term Priorities for the eScience Visualization

### Compendium Maps

#### Human Issues working group

- [Visual Maps](#) (Interactive VML) - required
- [Linearised Outline](#) (HTML)
- [XML](#) (Compendium DTD-compliant)

Closing session: Working Group priorities





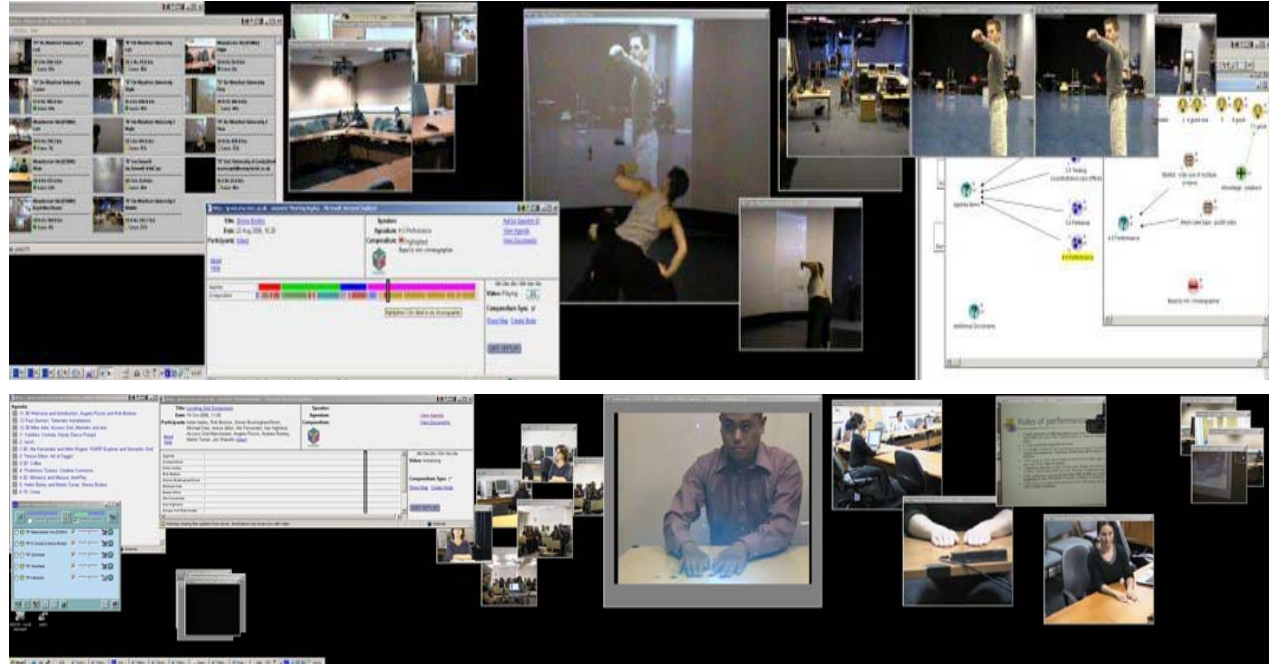
# meeting replay interface

The screenshot displays a meeting replay interface with the following components:

- Video Grid:** A 3x2 grid of video windows showing participants: "R\* RS Sla...", "R\* Univer...", "R\* Manch...", "R\* Manch...", "R\* Simon ...", and "R\* Univer...".
- Diagram:** A central diagram titled "ScreenStreamer: Compendium" showing a flowchart of the meeting process. It includes nodes like "Can we parse blank lines to identify agenda items?", "More usable initially", "Ben: We will make entry of agenda items free text, separated by a blank line...", "Clara: The video controls on Record page should be just Record and Stop...", "Pressing Play will launch MX, along the screen, it provides its own controls which the user will use", "What should happen with Compendium when you press play?", "If user has Web Launched Compendium, or Compendium already running, then connect to the jabber group for MX communication", and "In Comp for convenience".
- Metadata:**
  - back Title:** [Memetic Meeting 2005-12-15 \(Imported\)](#)
  - Date:** 15 Dec 2005, 09:37
  - Participants:** Michelle Bachler, Simon Buckingham Shum, Ben Juby, Clara Mancini, Darius Michaelides, Andrew Rowley, Roger Slack ([sites](#))
  - Speaker:** Ben Juby
  - Agendum:** 2.0 Memetic interface mockup (Clara's email of 14 Dec)
  - Events:** Selecting node
  - Nodes:** ? How to make agenda items editable easily?
  - Author Speaker ID:** [View Agenda](#), [View Documents](#)
- Timeline:** A horizontal timeline at the bottom showing the duration of the meeting (00h 36m 22s / 02h 06m 12s). It lists participants and their active periods: Agenda, Compendium, Michelle Bachler, Simon Buckingham Shum, Ben Juby, Clara Mancini, Darius Michaelides, Andrew Rowley, and Roger Slack.
- Controls:**
  - Video:** Playing (with a play button icon)
  - GroupSync:** Offline (selected), Online
  - Mode:** Master (selected), Slave
  - Receiving:** Yes (selected), No
  - [sync node](#), [create node](#)

# piloting Dance and Memetic

- **Stereobodies** - JISC VRE project CSAGE, University of Manchester/University of Bedfordshire
- **Performativity/Space/Place: Locating Grid Technology** - AHRC e-Science workshop, University of Bristol



## Key research questions

- **From e-Science to choreography** - what unique opportunities does the distributed Access Grid environment provide for developing new approaches to choreographic composition and process and within this context how can we find new, appropriate and meaningful methodologies for capturing and modelling practice-led research?
- **From choreography to e-Science** - how can choreographic knowledge and sensibility help to shape e-Science practice to make its applications more usable within the field of performance arts practice-led research as well as the broader Arts and Humanities context?

# e-Dance activities

- |                        |              |
|------------------------|--------------|
| • Project Sandpit      | Sept 2007    |
| • Project Planning     | Oct-Nov 2007 |
| • Research intensive 1 | Dec 2007     |
| • Research intensive 2 | Jan 2008     |
| • Research intensive 3 | Feb 2008     |
| • Research intensive 4 | April 2008   |



# project sandpit



- September 2008 at University of Bedfordshire
- Two-day event for project participants
- Explore ‘interdisciplinarity’
- Methodological frameworks
- Project set-up

# project sandpit





# e-Dance application

T  \*


0

Like a melody – four performers in counterpoint ideal!

T  \*    T  \*

0    0

3D solo    Looping



0

switch between these at a point determined by dancers

T  \*

0

Beautiful opening – foreground/background

 \*

0

Floor patterns interesting

T  \*

0

Amalia very constant

 \*

0

Close proximity – contact

 \*

0

Collision

 \*


0

Lisa's loop – rhythmic structure – calmer quality

T  \*

0

Determines relationship rhythmically

 \*

0

Loops causing symmetry in spacing – chance or intended?

# research intensive 1

- December 2007 at University of Bedfordshire
- Three-day practice-led workshop for researchers and dancers
- Explore creative potential of AG as a performance environment
- Set-up system at Bedford
- Generate material/data that could be analysed at next intensive



# research intensive 1

- Co-present improvisation and composition
- Generating choreographic material for the frame/screen
- Initial exploration of networked system using webcams



# research intensive 1

- Co-present
- Synchronous
- Formal use of space(s)
- Windows as 'frames'
- Abstract movement/non-verbal performance



# research intensive 1

- Non-co-present
- Synchronous
- Social use of space(s)
- Windows as 'Windows'
- Pedestrian movement/ verbal dialogue



# research intensive 2

- February 2008 at University of Manchester
- Two-day practice-led workshop for researchers
- Review and evaluate material from Research Intensive 1
- Identify software development priorities
- Explore the creative re-use of video material

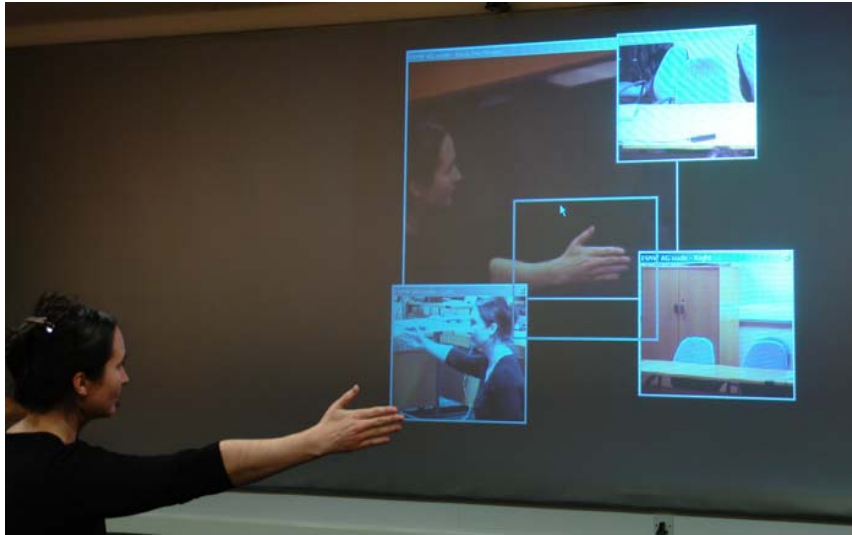


# research intensive 2



- Reviewing video material from Research Intensive 1
- Exploring the interface possibilities
- Composition of projected screen material

# research intensive 2



- Developing improvisation skills in 'playing' the Access Grid
- Practice-led engagement with multiple windows in live relay that prescribed a spatial framework for live material
- Engaging in iterative cycle of a-synchronous movement responses to pre-recorded material from Research intensive 1

# research intensive 2



- Composite on-screen image comprising pre-recorded streams and 'live' virtual response
- Spatial composition of the windows – motion and temporal disruption of the material

# research intensive 3

- March 2008 at University of Manchester
- Two-day practice-led workshop for dancers and researchers
- Focus on choreographic potential of distributed AG
- Explore shift from improvisatory to compositional 'playing' of the environment
- Begin to formulate methodology for non-co-located compositional practice



# research intensive 3

- Co-located dancers learning to 'play' the multiple image-spaces of Access Grid
- Configuration of cameras prescribed and mediated the actual space
- A form of live filmmaking



# research intensive 3



- Each dancer worked in isolation in a different AG node
- Generating compositional material to create synchronous feed-back loop

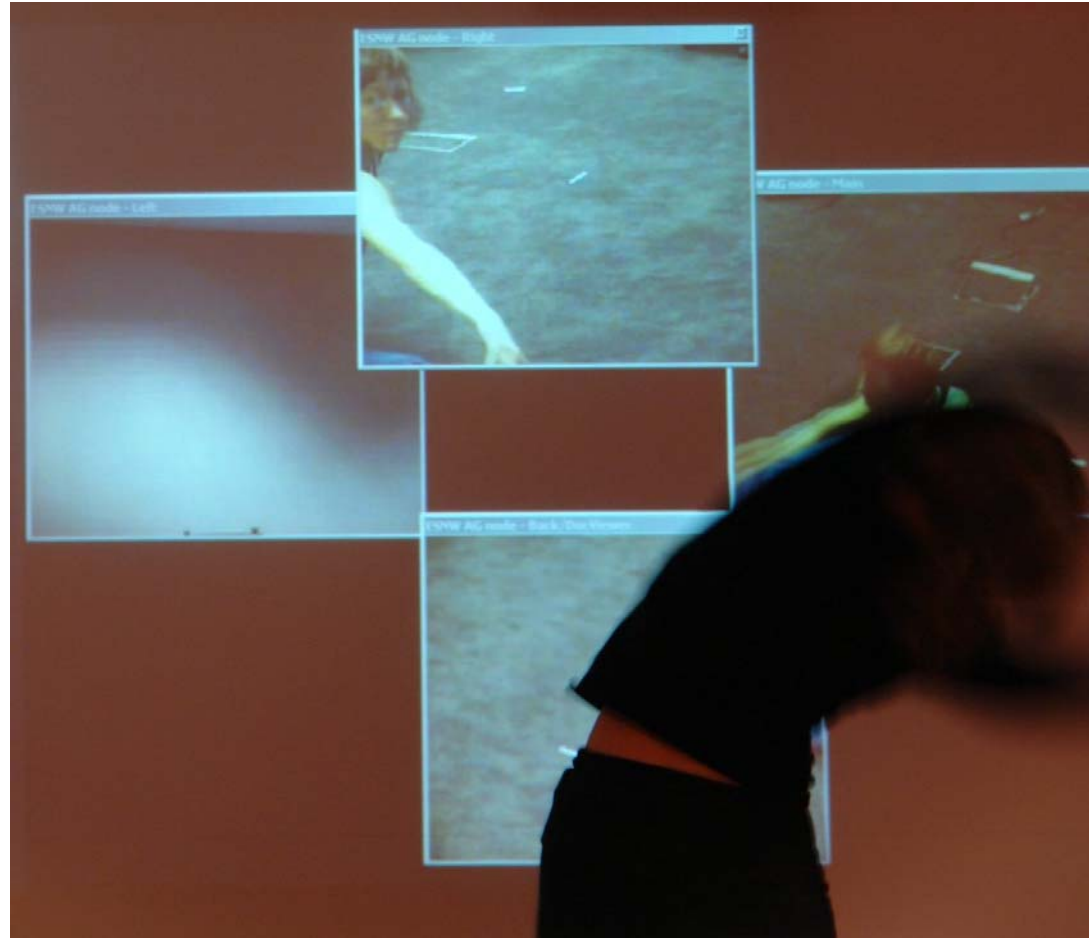
# research intensive 3



- Different configurations of windows were explored as a means of fragmenting and creating composite bodies
- Dialogic structures emerged

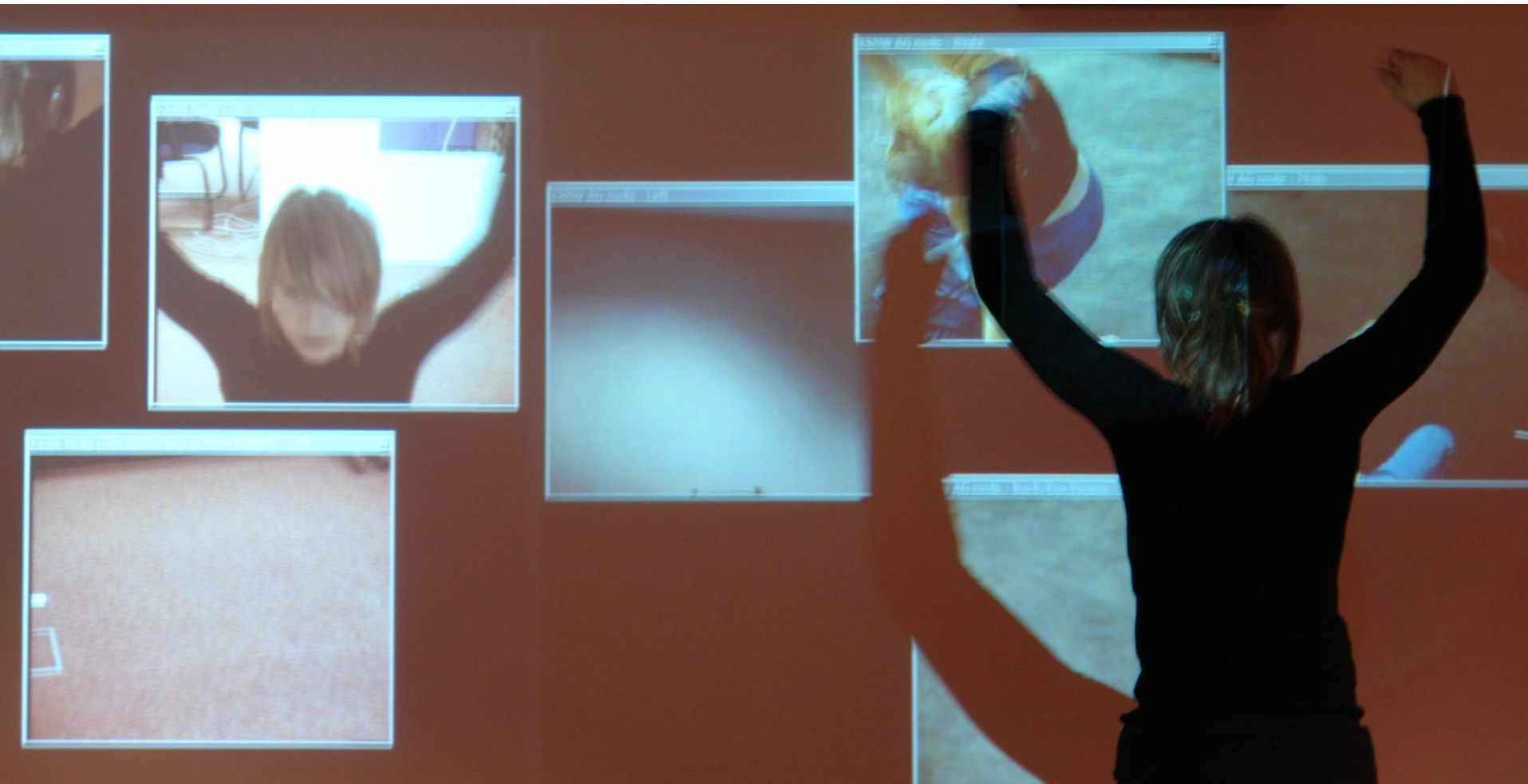
# research intensive 3

- Distributed choreography of 'live' virtual duet
- Compositional significance of the interrelationship of windows





# research intensive 3



# research intensive 3

- Iterative cycle exploring pre-recorded material from distributed duets
- Gestural improvised response
- Discussed subjective experience of the performers in relationship to the environment



# the e-Dance design space

- Choreographers/artists consider desired outcomes with specific audiences to a degree, but the internal coherence of a piece is paramount
- (ditto for programmers?)
- Human-centred computing is also creating an internal world, but considers the audience from the start: external coherence.

Users	Activities						
	Performance creation	Annotation of process	Annotation of product	Recording	Replaying	Performance Tech. Spec.	Space Tech. Spec.
Choreographers							
Performers							
Teachers							
Researchers/PhDs							
Students							
Technicians/Operators							
Dramaturgs							
Audiences							
Reviewers							
Librarians/Archivists							
Funding Bodies							
Dance Agencies							
Government							
Installers							

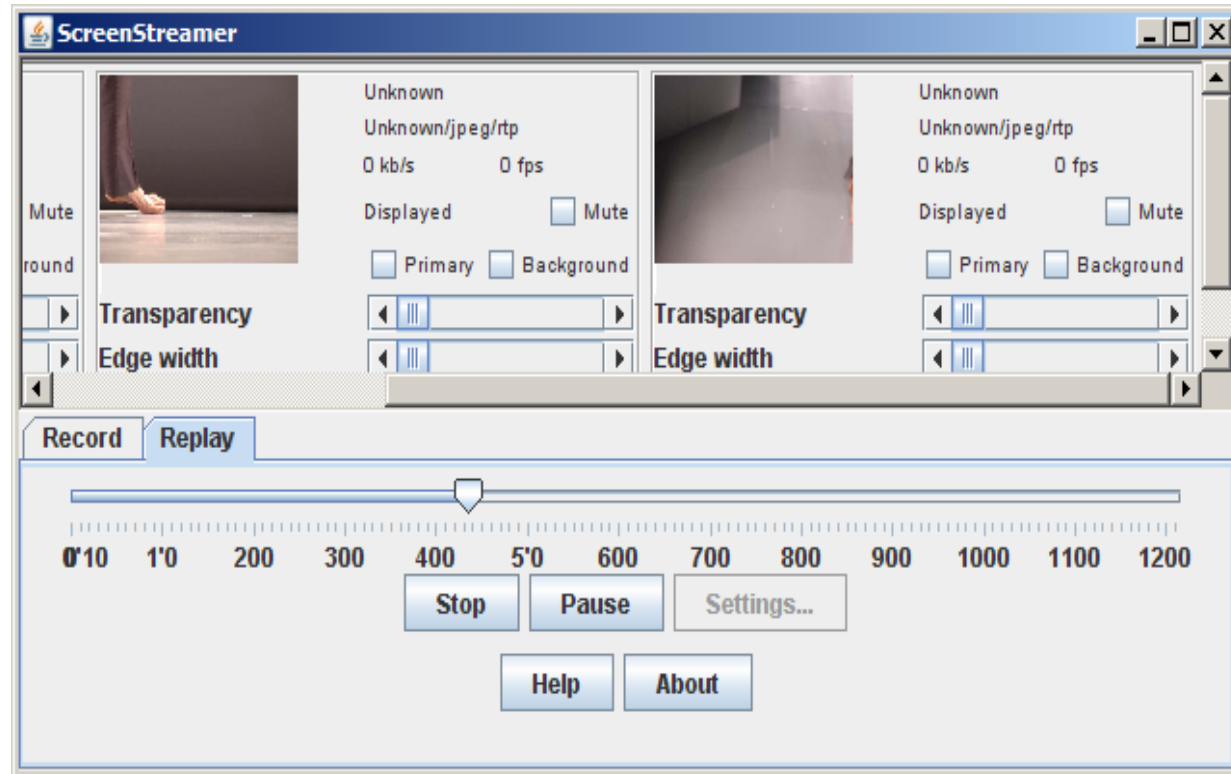


# research intensive 4

- April 2008 at University of Bedfordshire
- A week-long workshop for dancers and researchers
- Investigate various understandings and applications of spatial concepts to the process
- Create compositionally complex response to AG environment for co-located theatre setting
- Explore/evaluate software developments
- Use of DV cameras with firewire – enabling greater flexibility of camera proximity, orientation and motion
- Discuss metadata requirements for on-line documentation

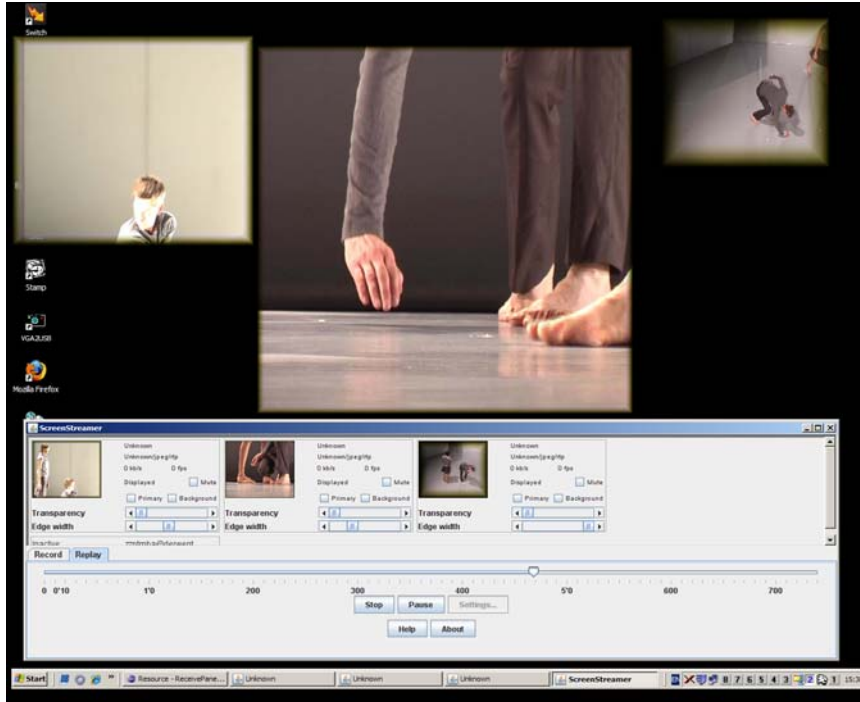
# research intensive 4

- Development of interface for 'ScreenStreamer'
- Record/replay
- Timeline
- Improved window display controls

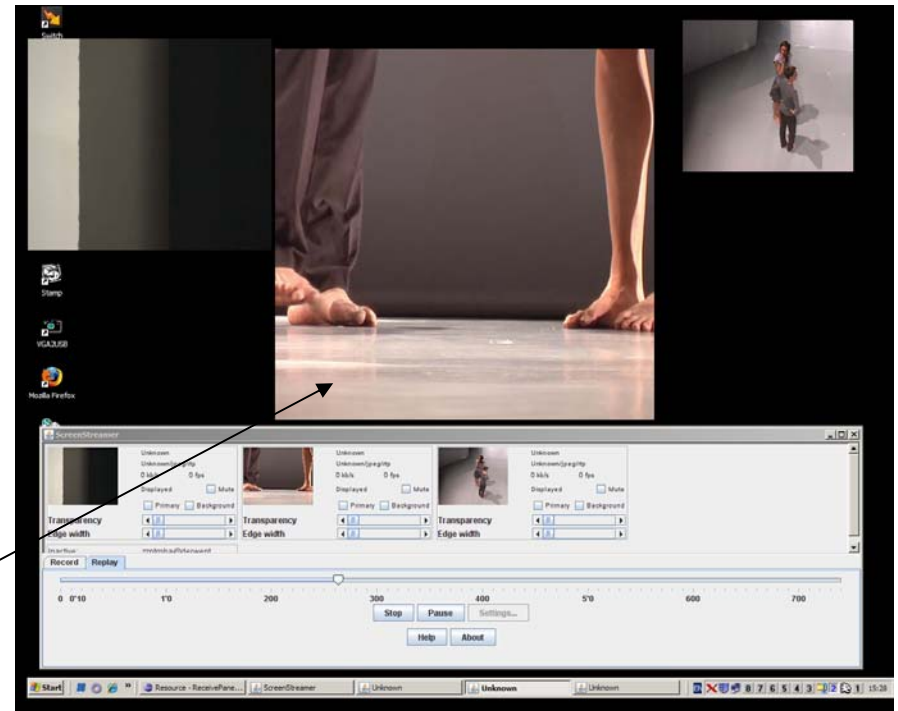




# research intensive 4

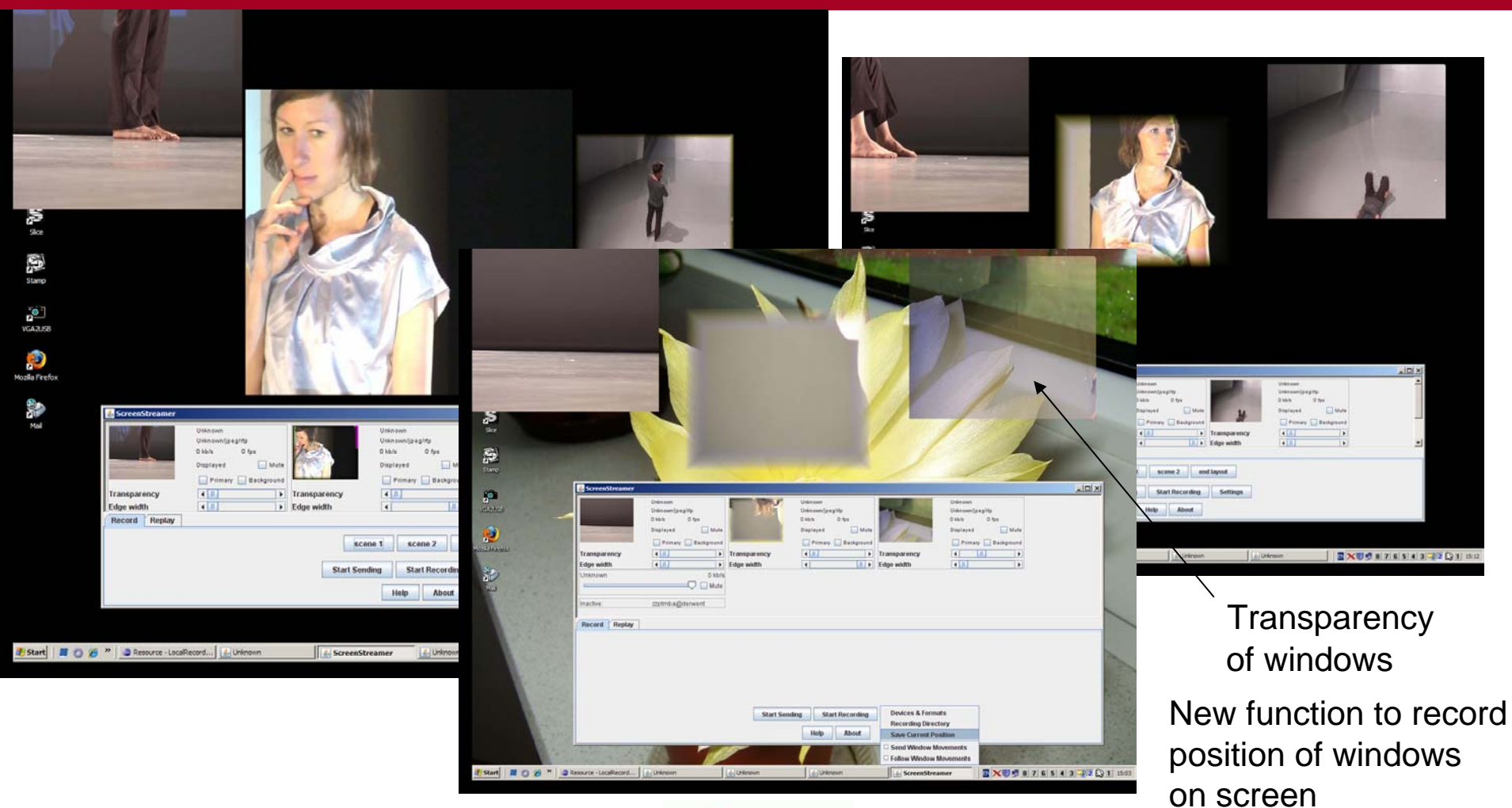


Soft frame



Removal of 'Windows' frame

# research intensive 4



# research intensive 4



- Increased complexity in camera orientation
- Generative process explored proximity, orientation, scale and dialogic structure
- Structuring process explored narrative space, virtual/actual space, presence/absence, 'place'
- Four phases within duet composition consolidating existing knowledge and developing spatial understandings



# research intensive 4

## Phase 1

- Duet as distributed solos
- Four windows divided between performers
- Three cameras provide multiple images of one dancer,
- One camera for the other performer





# research intensive 4

## Phase 2

- Solo material
- Verbal commentary mapping spatial relationship
- Presence/absence
- Scale of windows and image-space creates sense of 'close-up'





# research intensive 4

## Phase 3

- Co-located duet
- Verbal commentary on 'place'
- 'To scale' of windows



# research intensive 4

## Phase 4

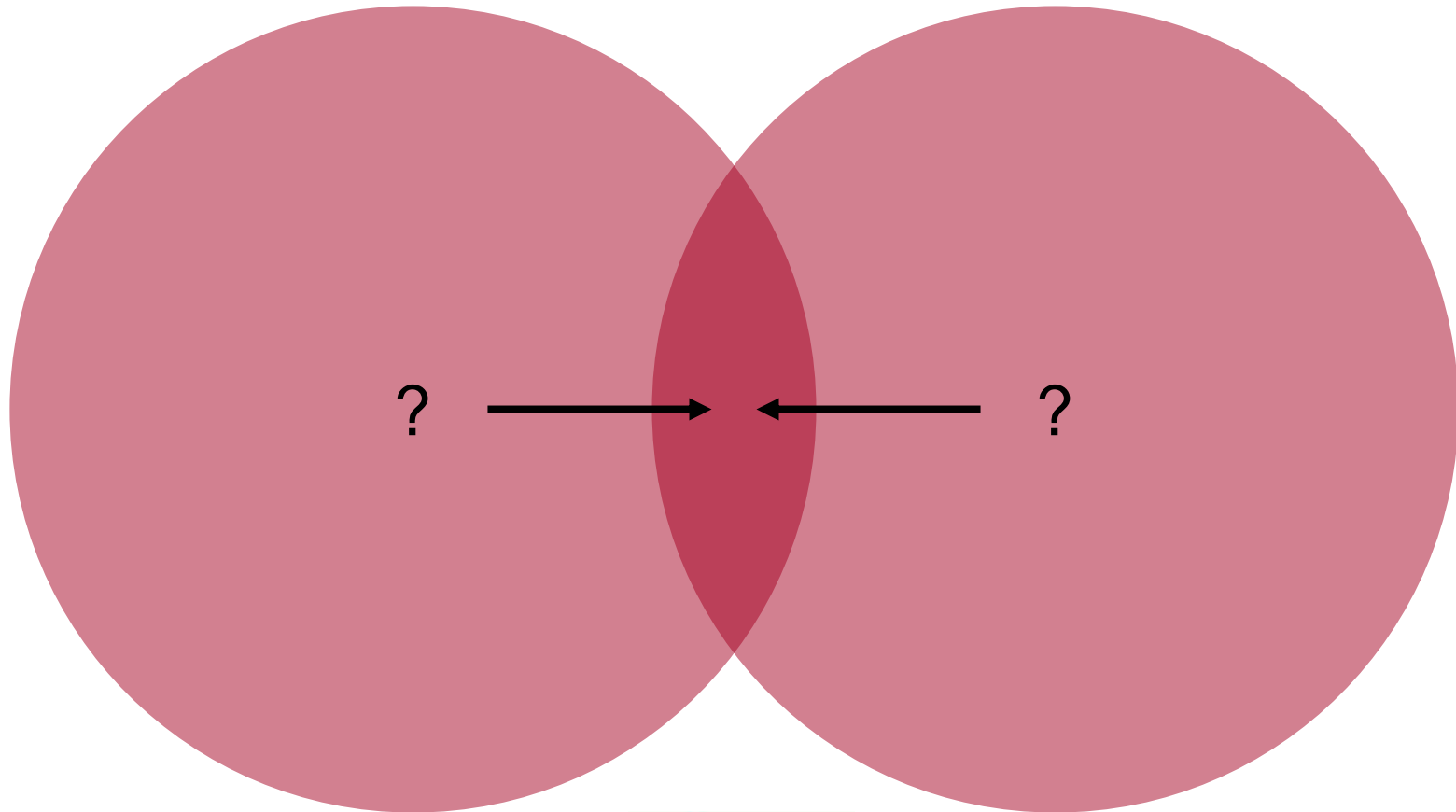
- Co-located duet
- Multiple versions of windows increase the fragmentation and multiplication of the image-spaces



# towards cross-disciplinary language ...tensions and synergies

choreography

e-Science



# “coherence”

## choreography

- Internal compositional structures
- External structures of meaning
- Solo director as creative energy
- Primacy of performance product and event (and publications)
- Multiple access points for meaning

## e-Science

- Machine and human-generated metadata/indices
- Debate and argumentation
- Peer-reviewed
- Hypermedia paths and maps
- Web 2.0 emergent meaning/tagging/use
- Publications and demos
- Datasets

# questioning “the pristine object” (making process visible)

## choreography

- Literal vs representational spaces
- Self-conscious media
- Revealing creative process
- (hiding process for IP reasons)

## e-Science

- Trust
- Data provenance
- Design rationale
- Participatory design
- The transparent, consistent interface
- (hiding process for IP reasons)



# Dissemination

Papers presented and/or published:

- (2008) "e-Dance: Relocating Choreographic Practice as a New Modality in Performance and Documentation", **ISEA (International Symposium of Electronic Arts)**, Singapore, July
- (2007) "e-Dance: Relocating Choreographic Process", **New Performance Paradigms International Symposium**, University of Salford, UK, November
- (2007) "Relocating Choreographic Process: The Impact of Collaborative Memory and Grid Technologies on Practice-led Research in Dance – a preliminary report", **DRHA2007(Digital Resources in the Humanities and Arts) Annual International Conference**, Dartington College of Art, UK, September
- (2007) "e-Dancing: The impact of VREs on defining new research methodologies for embodied, practice-led research in choreography and performance" **UK e-Science All-Hands Meeting Annual Conference**, Nottingham, UK, September.

Abstract submitted for:

- Access Grid Retreat 2008
- DRHA 2008
- All-Hands Meeting 2008

## Principal Investigator:

- **Helen Bailey** Centre for Applied Research in Dance, University of Bedfordshire

## Co-Investigators:

- **Simon Buckingham-Shum** Knowledge Media Institute, The Open University
- **Sita Popat** School of Performing Arts & Cultural Industries, University of Leeds
- **Martin Turner** Manchester Computing, University of Manchester

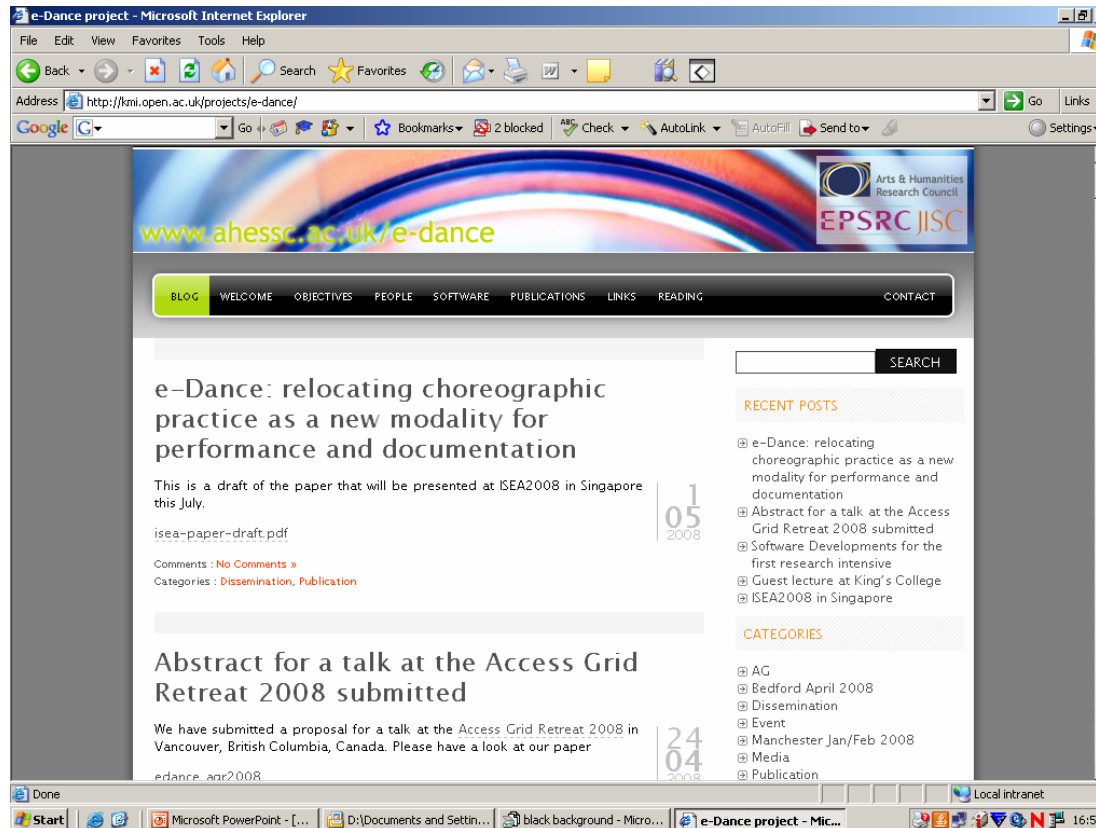
## Research Assistants:

- **Anja LeBLanc** University of Manchester
- **Andrew Rowley** University of Manchester
- **Michelle Bachelar** The Open University

## Dancers:

- **Catherine Bennett** Centre for Applied Research in Dance, University of Bedfordshire
- **Nicola Drew** Centre for Applied Research in Dance, University of Bedfordshire
- **Amalia Garcia** Centre for Applied Research in Dance, University of Bedfordshire
- **James Hewison** Centre for Applied Research in Dance, University of Bedfordshire

# e-Dance



[www.ahessc.ac.uk/e-dance](http://www.ahessc.ac.uk/e-dance)