



# InterPARES 2 Project

International Research on Permanent Authentic Records in Electronic Systems

## Case Study Proposal

### *Waking Dream*

### Focus 1 - Arts

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## Description

Waking Dream is a performance piece for two people using multiple theatrical elements. The performance uses infrared light, remote controlled equipment, wireless and wired video, head mounted display, soundtrack and four distinct performance areas. The main technical complexities of the piece include:

1. Significant portions of the performance are in complete darkness making video capture difficult.
2. The performer controls the projection using a remote control device that she carries; this provides highly synchronous events that are not choreographed
3. infrared light is used in three distinct ways:
  - a. one performer is illuminated in a completely dark room while she dances, her dance is projected by video for the audience;
  - b. the second performer is illuminated with IR while the first performer wears a head mounted camera to capture his image in the dark (this is also projected;) and
  - c. the audience is illuminated with IR light while the first performer walks amongst them wearing a wireless head-mounted camera that is seen on a video projection.
4. One performer wears a wireless head-mounted camera and head mounted display. The video camera image is transmitted wirelessly for projection on stage.
5. Custom software and hardware is used to provide seamless integration of remote controller and three video sources. The video source is controlled by the A/V technician. The remote controller controls a mechanical device that covers the lens of the projector via the software.

The piece has been performed at Nadine theatre in Brussels, Belgium, Nov. 9, 10 and 11, 2001 as well as at the International Symposium on Electronic Arts (ISEA2002) in Oct. 30, 2002. The piece includes all the complexities of live performance for the purpose of archival. It also has technical components and interactive elements that are becoming more integrated with performance in general. The technology and standards needed for encoding, archiving, representing and resynthesizing this piece are representative of the future advanced methods for live performance.

The study will be concerned with:

1. identifying the documents associated with the work including non-digital and digital such as software, hardware designs, audio etc.
2. articulating the requirements for performance authenticity for the piece
3. building a performable, authentic realization of the project
4. developing a method for the future storage, retrieval, migration, and access to the work.

For additional information see: <http://hct.ece.ubc.ca/research/wakingDream.html>.

## **Rationale**

The study deals with some of the complex elements of live theatre along with multimedia and interactive involvement of performers. The piece's infrared elements, where the audience is in darkness, are difficult to archive. Likewise, the mix of live wireless, wired and pre-recorded video with performance present many challenges that the InterPARES 2 project needs to address. A longer term obstacle that will be encountered is the techniques for encoding live performance combined with multi-media elements. In the case of Waking Dream video coverage, for example, will not work since elements are in the dark. The use of interaction interfaces by performers, bringing control of theatrical elements onto the stage, also introduce structured improvisation which is also complicated but may be a mainstay of future performance as technology pervades live works. Thus, Waking Dream combines some of the most complex technologies to create an experience for the audience. This project will attempt to archive this experience.

The investigators have also created other works that contain complex technologies for performance, installation and experience. These will also be used to inform that process.

## **Methodology**

The following techniques are suggested as approaches for the project:

1. interviews with the artists and performers in the piece
2. develop a methodology for recording one performance (expected in May, 2003 in Montreal, PQ)
  - a. multiperspective video techniques
  - b. instrumented performers for tracking in darkness
  - c. recording of software behaviour based on event timing
3. develop S/W standards based on post-hoc specification of functional and non- functional requirements
4. develop means for encoding the hardware functionality including:
  - a. Head mounted display
  - b. Wireless video (including state of the art transmission properties which introduce noise to the transmitted signal that is used during the performance)
  - c. Remote RF trigger d. IR illuminator
5. perform testing on archival material to assess representation from both the artists' point of view and contemporary audiences' point of view.

## **Research Team**

- Lead investigator: Sidney Fels (artist and technician)
- Co-investigators: Sachiyo Takahashi (artist and performer), Florian Vogt (performer and technician)
- Archivist: to be determined
- Technical support: to be determined

## **Timeline:**

Jan/Feb 2003: interviews, technical archival issues investigated

Mar/Apr 2003: acquire technical devices, prepare for event

May 2003: event in Montreal, PQ

Jun-Aug, 2003: interpret data and refine

Sep-Dec, 2003: report and test archival robustness