

Holmes, Douglas B. *jn4.gesture: An interactive composition for dance.* Doctor of Musical Arts (Composition), May 2003. Essay, 69 pp., 20 illustrations, references, 28 titles; DVD, 10 minutes.

*jn4.gesture* is an interactive multimedia composition for dancer and computer designed to extend the possibilities of artistic expression through the use of contemporary technology. The software produces the audiovisual materials, which are controlled by the movement of the dancer on a custom rug sensor. The software that produces the graphic and sonic material is created using a modular design. During run-time, the software's modules are directed by a scripting language developed to control and adjust the audiovisual production through time. The visual material provides the only illumination of the performer, and the projections follow the performer's movements. The human form is isolated in darkness and it remains the focal point in the visual environment. These same movements are used to create the sonic material and control the diffusion of sound in an eight channel sound system.

The video recording of the performance was made on April 22, 2002. The work was produced in a specialized performance space using two computer projectors and a state of the art sound system. Arleen Sugano designed the costumes, choreographed and performed the composition in the Merrill Ellis Intermedia Theatre (MEIT) at the University of North Texas.

The paper focuses on the design of the program that controls the production of the audiovisual environment. This is achieved with a discussion of background issues

associated with gesture capture. A brief discussion of human-computer interface and its relationship with the arts provides an overview to the software design and mapping scenarios used to create the composition. The design of the score, a graphical user interface, is discussed as the element that synchronizes the media creation in “scenes” of the composition. This score delivers a hybrid script to the modules that controls the production of audiovisual elements. Particular modules are discussed and related to sensor mapping routines that give multiple mapping control to computer function enabling a single gesture to have multiple outcomes.