

The Theatre of Hybrid Automata

I am seeking funds for a specific project entitled "The Theatre of Hybrid Automata".

In the recent past, I have been involved in a series of large works: "The Commission", "Art of Memory", and "The Brotherhood". All of these works have attempted to define unique narrative systems by electronic means. These videotapes were produced with hybrid technology, specifically my collection of analog and digital tools of diverse origins. In "Art of Memory", I began to seriously think about *Image as Object*, a concept which brought my work with video to a temporary crises.

Although I have constructed digital tools and worked with a computer since 1976, my encounter with 3-D imaging software has changed substantially my thinking about the medium. Unexpectedly this confrontation with virtual space has thrown me back towards questions of physical space.

What are the tools of the computer in physical space? One must enter the land of robotics, motion control, machine to machine communication, systemic feedback loops, handshakes, stepper motors, time code interlocks, MIDI/to other code interfaces and, eventually, back to the acoustical, mechanical, optical and purely synthetic computer graphic world.

Given the previous assumption, the core of this project is the concept of an Electronic Stage: a computer organized performing system, where the computer stores, coordinates and executes images, sounds, motion control parameters and additionally, provides a full sensor-based remote interactive environment for stage-to-performer and performer-to-stage command/control communication.

I have collected from the atomic junkyard of Los Alamos a set of hi-tech components and devices which comprise the backbone of my electro/mechanical stockpile and new creative playground. This playground is intended to transform the detritus of abandoned technology, in dialog with the state of the art, towards the articulation of potential aspects of the future evolution of a technological culture.

Although this project will generate videotapes, computer programs, memory based images, scores and scripts, audiotapes, photographs, and aesthetic documents of the processes involved, it is not focused upon a singular work or composition. This particular funding request is directed towards the legitimization of a private working environment for media research as an art work unto itself. The construction, operation, modification and maintenance of systems in concert with their necessary software development constitute the aesthetic domain as an environment which I desire to define as the art.

In keeping with this concern I intend to exhibit the systems and products of this environment as a total experience. This exhibition will encompass the actual robotic elements as sculptural objects, the aesthetic and technical documents as scores for action, and the resultant video and computer

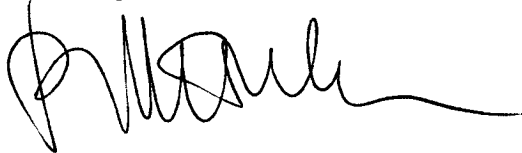
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images as maps to the exploration of this private media environment.

My ambition is to "...initiate a cultural interface between the creative processes of writing, imaging, composing and scoring for a new media stage, operating autonomously or interactively under human control. My ambition is to clarify the specialized media nomenclature such that an individual can participate creatively and intimately with more rigorous control, to organize the stage and to execute their vision more authentically. This new understanding would contribute towards the specification of the future genres, and more enduringly stable creative strategies..."*

In Santa Fe, August 18, 1989

Woody Vasulka

A handwritten signature in black ink, appearing to read 'Woody Vasulka', with a long horizontal flourish extending to the right.

*) Excerpt from article "The New Epistemic Space" (included)

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aspects. On the other hand, the conceptual framework becomes continuously challenging, particularly in the extended line of practice in media from photography-film-video-computer and this in a confrontation with realist-illusionist discourse in the tradition of cinema and in the basic and most challenging phenomenological aspect of this new synthetic principle, the critique of the perceptual and esthetic dominance of the camera (obscure).

The Project

The formal challenge of this project, as in my work before, lies in the confrontation with cinema. Cinema operates in the natural or man-made world in two basic sets of vectors, those pointing outward from the point as a camera on the tripod or, as a camera looks at a point, a protagonist, from the infinity of viewpoints. For telling the "story" these two great cinematic principles strategically reduced to human domain viewpoints may comprise the form of a cinematic syntax.

This basic and conventional description of the organization of cinema is violated by a multiplicity of creative strategies. Many opposing tendencies from the hands of experimentalists have been performed, for example, the way painters challenge the tradition of renaissance space in our century and the way film suggested many other kinds of formal autonomy.

Yet the two great cinematic vectors, even if set in the mutual choreography of motions, sizes and selections, cannot escape the paradigm of their operation. As the dependence on the light/space, the practicality of the systemic arrangement describes its powers and limitations.

As this work describes the (pictorial) operation of cinema it begins to intrude over the boundaries of cinematic space and cinematic mobilities. From simple extension, perspective space, where a viewpoint is logged within the solid object, for example, to the logical transformations of Boolean functions, where once established, parameters of space, motion, light and textures become a subject of modal expression, generic to the machine, thus questioning our perceptual habits.

This experiment to be performed in a graphic space, has its counterpart in the actual space. By accepting the necessity of establishing a creative playground, by involving myself in building forms of robotic devices, by being controlled by the parameter of the computer graphic space, I find myself in a situation, where one can no longer operate in a specialized pictorial branch, where a new summary of space now available, (indeed pioneered by a whole generation of the past thirty years) in more unified form of tools, where all representation of media from visual illusion to acoustic generation and location combine with stage-like presence and control, prescribed and organized by the computer.

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around the camera (obscure) operation with the suggested cinematic syntax. Given this renaissance space, one inevitably starts searching for its origin, and the methods developed by De La Francesco, Batista, or Durer. In fact the "Package" re-ignites the dormant dialogue, the modernist's rejection of the restraining rules of perspective. In summary, the new tool brought me up to a clear backward looking view of spatial treatment.

From the previous work in video and computer, I have accepted the hybrid method where the camera is responsible for a 3-D definition of space, and where the computer abstracts spatial texture or 2-D frame organization. This line of work is incomparable in 3-D generated space. In such a space, each element of representing space is constructed or can be reassigned, so the basic reality or (photo/cinematic truth) is questioned.

This first and severe dilemma resulted in building mechanical robotic devices capable of carrying the camera, controlled by the same software, constructing and dynamically operating within the space. The concept finally focussed to a notion of an electronic stage, where the confrontation of both electronic and actual stage space could take place.

As it happened, during my stay in Amsterdam in the spring I met a Dutch choreographer, Bart Stoyf, who has just abandoned a large and impressive project of dance performances with a mechanical arm capable of interacting with dancers (lifting them, for example) containing the nuclei of sensing and responding modes, with interactivity of sound and light by the video cameras.

The project eventually ended in manual control mode, since computer interface and programming became insurmountable. Besides Bart's grasp of the electronically defined and operated stage, he brought in another aspect of stage control, an instant rearrangement of stage sets by means of computer controlled pneumatics.

My reason for staying in Amsterdam (at Steim) was to establish a control between the voice and the robotic camera head. Early fall, we plan to use these conceptual devices in theatrical experiments with Joan La Barbara in the "Electronic Opera House" project where other space and media-interactive devices are to be tested.

The Time Scale

Each frame of a complex object containing not only surface images but light and shadow, may take up to 45 minutes to present in full on the screen. This basic experiment requires fundamental rearrangement of one's working habits and puts in question the whole direction of making images in this fashion, it reduces the volume of one's yearly work from hours to seconds, it infringes on one's beliefs and ethical dogmas. It advocates the possibilities of purchasing faster time for money, giving up the autonomy of one's environment for "next door" professional facility, participatory solution of a mediator/operator, to short-cut the process of learning, to exchange the blue collar for the white, to spend time on raising funds instead of the man against machine struggle.

Indeed, the validity of making images by machine, is hardly challenging in contemporary cultural formulation except perhaps in its scientific visualization