

WOODY VASULKA

The Brotherhood: Table III (Friendly Fire)

Table III from the Brotherhood series is a complex media construction, which utilizes various electronic, optical and mechanical devices. A computer controls the performance of the Table in a programmed sequence of events. Under certain conditions, the construction becomes open and available to the viewer's intervention. This work investigates the relationships between the physical components of the system, their function within context of mapping space, and, in its progress, the role of technology within the mythology of warfare.

In its core, this former bombing computer skeleton contains video and slide projection as well as the pneumatic mechanism for the four folding screens and slides-to-video optical crossover. Further from the core, the extended space consists of five translucent screens (and their skeletal supports), which can be viewed from either inside or outside of the installation. The gallery walls close the external shell of this hierarchical sequence of space relations.

The central formal principle develops around a beam of light/image, split and redirected into an extended projection space. Through built-in mirrors, a single video or slide projection beam is redirected towards five screens, positioned within a cubical space. The cube corresponds with a definition of Cartesian space, delineated by the three directional axis (x, y, and z). There are two families of images appearing sequentially in the installation: a set of stills, containing early designs of printed circuits (found objects), and scenes of moving images with characteristic targeting graphic overlay. The moving images, images of war and computer generated scenes, contain dynamics of physical disintegration. The interactivity between the images and the observer is also made available through a MIDI generating drum set, controlling sequences, speed, and direction of the visual material stored on laserdisk.

What are the questions a machine designed to navigate through space must ask? Where am I? Where am I going? How am I getting there? These concepts seem already built into this table unit, adapted from a bombing computer of the South-East Asia Campaign. And with this inheritance, the instrument enters a new contextual relationship, the legacy of killing. The subtitle of The Brotherhood: Table III, "Friendly Fire," is derived from a video record of an attack helicopter in the Gulf War where the crew of a friendly vehicle (tank) is massacred in a painful and meticulous war protocol. While presence of these images illustrate the efficiency of this procedure, they also address the ethical dilemma of technological warfare.

—David Mather

(See Reverse for Artist's Biography)

WOODY VASULKA

Artist's Biography

Woody Vasulka was born Bohuslav Peter Vasulka in Brno, Czechoslovakia in 1937. After graduating from a technical school, he was placed in a nearby factory. Dissatisfied with his lot, he tried for the Academy of Performing Arts in Prague to study film. Several documentary films later he graduated film school and moved to New York with his wife Steina, in 1965. For a few years, Woody worked as an editor for various large format, multi-screen projects. Upon encountering a half-inch video "portapack" in 1969, he quit film to dedicate himself fulltime to working with electronic media. In 1971 with Steina and Andres Mannik, he founded The Kitchen, an electronic media theater in NYC, then formed with Steina and Eric Siegel the group Perception, with the support of Electronic Arts Intermix. After some pioneering work in video, he moved to Buffalo in 1973 to become professor at the Center for Media Study. In 1976 he came upon a computer and, together with Jeffrey Scheir, built The Digital Image Articulator. In 1980 he left his teaching position for New Mexico where he has continued his investigation into "digital space." Since 1993, he is also a visiting professor at the Faculty of Arts of the Polytechnic Institute in his home town, Brno, Czech Republic.

In 1992 under a commission from Peter Weibel, the Vasulkas curated "Eigenwelt der Apparate Welt: Pioneers of electronic Art," an exhibition of early electronic art toolmakers for Ars Electronica, Linz, Austria, with a videodisk interactive catalogue. With Steina, Woody has been an artist in residence at the National Center for Experiments in Television (NCET) at KQED San Francisco. Woody has received funding from State Council on the Arts (NYSCA), Creative Artists Public Service (CAPS), the National Endowment for the Arts (NEA), the Corporation for Public Broadcasting (CPB), the Guggenheim Foundations, and the New Mexico Arts Division, and was also recipient of the 1992 American Film Institute's Maya Deren Award, and, in 1995, Siemens-Medienkunstpreis.

He has participated in major video festivals worldwide, given lectures, published articles, composed music and made numerous video tapes. Since his move to Santa Fe in 1980, he has completed two major video tapes, *The Commission* and *Art of Memory*, as well as three large scale installations, *Theater of Hybrid Automata*, and *Table III*, and *Table I* from his machine cycle *Brotherhood*.

Currently, Woody is working on the completion of his *Brotherhood* series with a commission of constructing three Tables for the InterCommunications Center in Tokyo. With Steina, they have maintained their presence on the international art scene over the years and through the present, as always, standing on the leading edge of artistic formulations of new media.

Brotherhood

a series of interactive constructions
by Woody Vasulka

A Statement:

The *Brotherhood* is a summary of media concepts presenting a specific domain of ideological and personal concerns. While the central theme of the *Brotherhood* revolves around the dilemma of *male* identity, it could be understood as arising from the general compulsion of mankind to re-organize Nature itself. This process is of course destructive to the natural order and leads to conditions of polarization and antagonism in various social and philosophical strata. It presents the *male* once again in the context of warfare as an expected and integral part of human evolution, in the construction and abandonment of human utopia, in perilous values of male sexuality. This work does not argue for a reformist agenda or a strategy of defence. It stands sympathetically on the side of the *male* but it cannot resist an ironic glance at his clearly self-destructive destiny.

While avoiding a single discipline, genre or style, the work tends to track clusters of systemic expressive primitives - those which seem human-like yet reside within the machine.

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The frustration at describing the modes of various media participation found in *Brotherhood* lies in a generic failure to interpret concepts like human or machine "intelligence." While certain electro-mechanical systems can contain a *volume* of cultural property, their usefulness or value can only be judged against the exclusive domain in modelling of certain human behaviors or in acquisition of procedural rituals. For example: *Table IV* possesses the faculty of performing physical letter writing under the control of a human voice via microphone, digital voice recognition and plotter system, thus emulating this rather complex human activity. In the past, the term *intelligence* would have been freely applied to the similar machine state. Burdened with too much meaning, it is being replaced by more somber terminologies such as *simple behavioral patterns* or the more fashionable *emergent properties of complex dynamical systems*.

But the *Brotherhood* is after all an abstract piece and does not lend itself to correct analyses. If art should participate in this context, the authentic technological extensions and constraints will clearly impose themselves on the work. As of yet this is the most complex work I have attempted with requisite knowledge of various crafts: electronics, optics, engineering and computer programming.

The Tables (General Description):

Project *Brotherhood* is a complex assembly of six smaller arrangements acting in a mutually coordinated manner as a series of Tables.

The *Tables* are quadratic cage arrangements placed horizontally on metal table legs. Each Table contains instruments, able to produce, compose and display varied acoustic and visual structures. Additionally these clusters of technology exhibit a certain volume of behavior through digital programs or in reaction to a set of sensors associated with each Table.

Now TV
Table III (Functional Description):

Table III holds two picture delivery arrangements: the first is a specialized slide projector while the other is a video projector. Each of these systems is associated with a family of images that occupy a specific projection environment: the stills are confined to a small six screen layout while the moving images occupy an extended projection environment. Both kinds of projections share the identical pathway of a six-way beam splitter with the images distributed along six axes of cubical vectors to the six screens. During the still image sequence, the projection is intercepted by smaller screen/frames defining its own projection environment out of the general space. These small frames fold, freeing the projection path for the moving image sequence. This extended projection environment is defined by an arrangement of six projection screens, four standing on the floor plus one suspended from the ceiling. The character of the screen material lets the images appear on both sides, extending the installation's observation mode from the inner core to the outside. There the installation becomes an object with a multitude of interrelated images. The installation has additional functional elements of sound and interactivity. These provide a mode for determining the observer's presence and a certain level of participation.

Excerpt from a discussion between Woody Vasulka and David Dunn

WV: I've incorporated vast amounts of military equipment into this piece. If you read the label on this table it's called: "Case and Rack Assembly Bomb Navigational Control." It's crazy that these things come to my house so I took this and incorporated it into my targeting system because this is what it really is. It was designed to navigate bombs so I'm using it to navigate my pictorial corridors which are basically trajectories of invisible projectiles.

DD: So that's an overt connection to this idea of *Brotherhood* and the machinery of war.

WV: I don't hesitate to speak about it because while I have always been intellectually opposed to it, in fact I've surrounded myself with these war machines and have adopted them. In fact the RPT robotic head in *The Theater of Hybrid Automata* is made from a celestial navigation unit that navigated the bombers for the Strategic Air Command. When I brought it to Europe and showed it to one of my colleagues in Brno, he looked at it and said: "now I know what you are doing because I was an adviser to the Egyptian military about missile navigation systems." He not only recognized the Brotherhood but became a "brother" of the Brotherhood.

DD: So, in your mind, this is becoming explicit as content. For years you have been working with surplus from Los Alamos but it was media related as appropriated materials for your studio.

WV: Now its become very naked as the content itself.

DD: It's certainly upfront in terms of this surplus material being the detritus of that culture of war. Artists here have been raiding the Los Alamos scrap yards in order to make these metaphoric expressions as a kind of critique of the nexus of science and military cultures. But what you are doing is taking very specific cast-off materials and, rather than refashioning them into a sculptural expression, resuscitating the structural intentions of these devices as a kind of pure articulation of their generative ideology.

WV: It has exactly the same purpose, to amplify the mind of its creator: the male idea of the machine's destructive power. This thing, a vestigial bombing rack, carries the inspiration with it. When I saw it for the first time, I knew exactly that this was a piece of that soul. I didn't even know what it was until I read it later but I understood it intuitively. When I opened the box, there was a table with four legs and these racks which I later read were part of these bombing computers. I envisioned these guys sitting in the jungle, just before they went to Cambodia, programming these computers. They were probably dressed in fatigues, drinking beer, punching the code into computers mounted on these racks. So I'm trying to replicate exactly the spirit contained within this piece of metal. It is probably subconscious but very authentic: these were the machines for automatic bombing so that no one had to have the consciousness or responsibility of inflicting death. These codes are hidden to the general art strategies unless one descends to this level of intimacy where you recognize by strange instinct the role of these objects. I think it transfers subconsciously to the mind of the observer. It is this third level of involvement that really interests me rather than the obvious one.

Brotherhood,

File: Bintro.doc

a series of interactive constructions
(further referred to as "Tables 1-6")

by Woody Vasulka

A Statement:

The Brotherhood is a summary of media concepts presenting a specific domain of ideological and personal concerns. While the central theme of the Brotherhood revolves around the dilemma of male identity, it could be understood as arising from the general compulsion of mankind to reorganize Nature itself. This process is of course destructive to the natural order and leads to conditions of polarization and antagonism in various social and philosophical stratifications. It presents Male again in the context of the warfare as an exepcted and integral part of human evolution, in the construction and abandonment of human utopia, in perilous values of Male sexuality. This work does not argue for a reformist agenda or a strategy of defence. It stands sympathetically on the side of the Male but it cannot resist an ironic glance at his clearly self-destructive destiny.

While avoiding a single discipline, genre or style, the work tends to track clusters of systemic expressive primitives - those which seem human-like yet reside within the machine.

The frustration at describing the modes of various media participation found in the Brotherhood lies in the generic failure to interpret concepts like human or machine "intelligence." While certain electro-mechanical systems can contain a "volume" of cultural property, their usefulness or value can only be judged against the exclusive domain in modelling of certain human behaviors or in an acquisition of procedural rituals. For example: Table #4 possesses the faculty of performing physical letter writing under the control of a human voice via microphone, digital voice recognition and plotter system, thus emulating this rather complex human activity. In the past, the term "intelligence" would have been freely applied to the similar machine state. Now we know better. It had burden us with too much meaning. Its beeng replaced by more somber terminologies such as "simple behavioral patterns" or the more fashionable "emergent properties of complex dynamical systems."

But the Brotherhood is after all an abstract piece and does not lend itself to correct analyses. If art should participate in this context, the authentic technological extensions and constraints will clearly impose themselves on the work. As of yet this is the most complex work I have attempted with requisite knowledge of various crafts: electronics, optics, engineering and computer programming.

Tables (Descriptions)

Project *Brotherhood* is a rather complex assembly of about six smaller arrangements acting in a mutually coordinated manner. The assembly of instruments which carry this requirement is centered around the core of *The Theater of Hybrid Automata* and is constructed as a series of Tables.

The Tables are quadratic cage arrangements placed horizontally on metal table legs. Each Table contains instruments, able to produce, compose and display varied acoustic and visual structures. Additionally these clusters of technology exhibit a certain volume of behavior through programs and in a reaction to the sensors, associated with each Table.

St. Denis Score

Synopses:

This Score contains four Sequences, each composed of full 360 degrees RPT orbit with some exceptions.

In the first sequence, the environment is initialized and prepared for the first Move: The RPT head starts panning, proceeded and trailed by lights ON or/and OFF which illuminate briefly Targets, placed at these five main locations: (Home) North, East, Sky, South, and West. Each location has a speech comment.

The second Sequence has a great similarity to the first one, except here in the brief pauses when camera glimpses at the targets, short scenes of landscapes are intercut from the Disk. Again, the Voice box comments, but this time the comment are assoteric, referring to regions of North America. (Copy the protocol of the Calib(ration) program)

The third Sequence deals with Camera/Sphere Chase: The Four Quadrants of the Sphere are examined in horizontal (pan) and vertical (tilt) movements suggesting the conceptual unity of the installation space. Here the transition between (dimly lit) images of the camera and images from the Disk could be linearly mixed.

Fourth Sequence involves participation of Lightning, the Buchla Musical Instrument where the Instrument Transmitters traverse the space, hitched on the RPT Head. As the Lightning is activated, the Midi evokes the memory locations of verbal count (1 to 23) stored in the Sampler. Additionally, "through" Midi signal calls the associated images from Disk. After this, the installation is ready for a repeated cycle.

WOODY VASULKA

9/17/93

The Brotherhood:
An Assemblage of Six Interactive Constructions

The Brotherhood groups together concepts from my struggle to define intelligence. Is intelligence simply behavioral, is it a reflex, or can machines actually synthesize higher codes, exhibiting behaviors we unequivocally define as "intelligent"?

Beneath this pursuit, the true subject of this work is the dilemma of the male in the late 20th century. The theme of *The Brotherhood* could also be understood in terms of man's general effort to restructure or reorganize the natural order of things, meaning Nature itself. This process is, of course, destructive to the natural order and inevitably leads to polarization and a deepening of antagonism within a profound philosophical strata. My work, in *The Brotherhood*, is not a struggle to define a correct posture or position, nor does it seek to reform in any way. This work stands on the side of man, carrying with it a perpetual sympathy for his clearly self-destructive destiny. If nothing else, there is within this work, a sentimental epitaph to be read loudly.

Alluding to no single discipline, genre, or style, the work tracks a certain cluster of expressive machine primitives — those which seem most human-like. Although often rationalized and exercised occasionally in my own previous installations, the nature of these machines is difficult to define in terms of their desired performance and purpose. Since this work is an investigation of intelligence, and demands the investigative atmosphere of human-to-machine and machine-to-human interactivity for its unfolding, I don't know yet what will be revealed in this process.

Nevertheless, this is probably the most involved work of mine with rigorous demands on my knowledge of various crafts, including a knowledge of evolved electronics, optics and engineering. Also, it addresses my difficulty with the inability of language to describe systems. Systems electro-mechanically controlled by a code absorb or contain a certain volume of cultural property, which up to now rested exclusively in the domain of human behavior or acquired ritual. For example: Table Four possesses the faculty of physical letter-writing directly from human voice via pen and paper, thus it emulates or

contains the knowledge of a rather complex, and provocative, human-derived activity.

In the past, the term intelligence was freely applied to machine states. But now we know as a term it is too loaded, burdened by too much ambiguity and meaning. It has become fashionable to refer to all "intelligence-like" manifestations as emergent properties of complex dynamic systems.

All these constructions are concerned with the representation, sensing, and surveillance of space, redefining its dramatic functioning. Evaluating the syntactic relationships of media positioned in space contributes to our search for an expression and a contemporary report on space as it is currently, under the control of technology. This project is a rather large assemblage of smaller arrangements and constructions acting in a decentralized manner, each producing patterns and clusters of initiatives independently. The assembly of instruments is constructed as a series of Tables, stand-alone satellites each expressing and responding to a designated mode.

The Original Table:

Table One: I found a large surplus plotting table at Joe Forth surplus supply yard in Buffalo in the mid-1970s. The table itself is unusual. It contains 17 x 17 cells each holding a pair of incandescent bulbs. One bulb is connected to a general illumination scheme, the other is point addressable. Over the thick matted glass a strip of Velcro adhesive drafting paper has been attached, on which the ordinary drawing pen was transported, powered by a pair of AC motors. The plotter's positional feedback was accomplished with a pair of 20 turn potentiometers, locked into XY coordinates. I suspect the instrument was a originally a wargame toy for plotting air intercepts.

I stripped the unit to its bare bones, replaced the AC motor by the steppers, and my assistant Bill Heckel designed the new scheme for table illumination and control. It shall be run by a small PC computer.

The program consists of this: The traversing arm of the plotter defines a small monochromatic trajectory. The ⁵observer looks down on the table for this particular purpose. I have selected a series of metal-edged slides of early integrated circuit mask designs — just a portion of a remarkable collection of artifacts I found in large number at Ed Grotus' salvage yard. The text on the cassettes holding the slides refers to two names associated with the early Los Alamos project.

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summary

Description:

The tables are certain quadratic cage arrangements placed horizontally on table-like legs, each carrying an assembly of instruments, able to produce, composed and display varied products of esthetic structures, static or time based by means of electro/opto/acoustics under control of centralized and decentralized computers.

These clusters of technology exhibit certain volume of behavioral manifestation through programmes and presence of sensors, associated with each table location.

All these constructions are concern with the representation, sensing and surveillance of space, redefinition of dramatic functioning of space transformation, in the syntactic relationships of media positioned in space and their contribution in our search for contemporary report on and expression of spaces under control of technology. The project Brotherhood is rather large assembly of smaller arrangements and constructions acting in a decentralized manner, producing patterns and clusters of initiatives which in their more successful moments could be characterized as behavioral. The assembly of the instruments which carry this requirement is centered around the core of Theater of Hybrid automata and is constructed as a series of Tables, stand alone satellites, able to express its designated mode.

Table 1:

The origin:

I have found this large surplus plotting table (xx x xx) at Joe Forth surplus yard in Buffalo in mid seventies. The unusual feature of the table is the table itself. It contains 17x17 cells each holding a pair of incandescent bulbs. One is connected to a general illumination scheme, the other is point addressable. Over the thick matted glass a strip of Velcro drafting paper has been transported, on which the ordinary drawing pen was located by a pair of AC motors. The plotter positional feedback was accomplished by a pair of 20turn potentiometers, locked into XY xxxxxx. I suspect the instrument was a wargame toy to plot an air intercept.

I stripped the unit to bare bones, replaced the AC motor by the steppers and my assistant Bill Heckel designed the new scheme of table illumination and control. I shall be run by a small (286) PC computer.

The program:

[finish table descriptions]

The traversing arm of the plotter carries now a small monochromatic camera which can reach each 17x17 light cell under programmed trajectory. It is looking down on the table for this particular purpose. I have selected a series of metal edged slide of early integrated circuit masks designs, the remarkable collection of artifacts, which of a large number I have find at Ed Grotus salvage yard. There are two names associated with this early Los Alamos project, xxxxxxxx and xxxxxxx. The text on the cassettes holding the slides refers to xxxxxxxx and xxxxxxx.

The Table Seem to suggest a form of pictorial memory, which I plan to evoked by the musical scheme. It certainly is conscious of the exact location within each cell of the table matrix.

Size and weight

Table-1 (adapted plotting table)

Inputs: XY stepper motor coordinates
General illumination table control
Point (17x17) illumination table control
Strategy of motion

Outputs: Point (camera) location within the (17x17)
table matrix
Esthetic performance of the motion scheme
Light trajectory and pattern of the light
table (in coordination with movements and
positioning of the camera)

Code exchange: RS-232, Midi, Score

Table-2 is a clear flash back to the sixties. Steina went to Vienna to study more violin with her teacher and I and Alphons Schilling have moved to former Rauschenberg loft on Front street. We both have been experimenting with the movies, we both knew there was something fundamentally wrong with cinematic frame or rather with any frame around the image. We put the camera on turntable begin to struggle wit the space. Alphons when not angry, was a magnificent companion. He showed me the ropes of the art world, against my will, he pulled me across the schism the socialist upbringing have inflicted on me.

Table-4 (adapted Letter writhing Machine-DATASCRIBE II)

History: Found on the L.A. Surplus yard 1992, purchased for \$3 in good working order. Went through further adaptation. Continuous ink feeder from medical plastic container added, sound pick-up of stepper motors added, continues feed of writhing medium

What about the title of this work, THE BROTHERHOOD?

I kind of take all titles or literary relationships semi-seriously. On the other hand, (in my mind, the only truly significant event this time on earth...) I believe that the only thing truly significant in my mind about this time on earth is reflecting on the idea of warfare, or on what you might call the "male domain," the imposition of male dominance. It all comes down to the question of warfare's (~~warfare, plural, not-gentive~~) being an aberration or ~~its~~ (their) being an integral part of human nature in the relations (organization between individuals and societies?) between people and nations. I experienced this male dominance as a child during World War II. That experience imprinted on me (a great number of ~~dilemmas~~ or great many dilemmas, not a great many) and I sort (which I sort of suppressed...) of suppressed them for a long, long time. For a long time, I took assylum in the formalist (formalist) preoccupations with the phenomenology of video, so, of course, (but of course) it all had to come back at me. (Skip: And now I have to deal with it. Of course,) it is conscious/unconscious; it is planned/unplanned. (, but) But it is the only thing I find worthwhile, and it (But where it manifests itself most critically and clearly) is linked to what might be called the "intelligence of the machine." So I use a lot of instruments of warfare to examine my definition of space.

Many of these pieces have their technological starting point in surplus military technology, which also was connected, I believe, with the beginnings of the cybernetics movement.

design and constructed.

Input: Keyboard, Voice to Code (speaker independent speech recognition resulting in drawn characters - words, File source

Output Functions:

Letters/text drawing

Generating of musical sounds (from the stepper motors)

Pick-up of table activity by a camera, projected

Scheme: Observer interactive

associated hardware:

Pen Inkfeeder

Writhing medium transport

Video Camera

Video projector

Projection Screen

Computer with speaker independent software

Microphone with stand

Lights with interface

Environmental Sensors

Sound Sampler (sound storage/retrieval)

The Brotherhood

The Brotherhood is an installation involving "tables" of interactive instruments featuring intelligent machine responses. The tables (#1-6) are actually quadratic cage arrangements placed horizontally on table-like legs, each carrying an assembly of instruments able to produce, compose, and display various results of esthetic structuring, static or time-based, by means of electro / optic / acoustics under the control of centralized and decentralized computers.

These clusters of technology exhibit certain behavioral manifestations through programming and utilizing the presence of sensors, which are associated with each table location.

This construction is concerned with the representation, sensing, and surveillance of space, and with redefining the dramatic function of space. New syntactic relationships are developed based on the way various media interrelate and are positioned in the space, the whole contributing to our search for a contemporary report on and an expression of space as it exists under the hegemony of technology.

— Woody Vasulka, July 1993

~~MEMO~~
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last page my write up
oops!!!

The table itself seemed to suggest a form of pictorial memory, which I plan to evoke with a musical scheme. It maintains consciousness of the exact location within the table matrix of each cell and its activities.

Further Tables:

Table Two: a clear flashback to the sixties. The Turntable. Steina had gone to Vienna to study more violin with her teacher. Alphons Schilling and I had moved into the former Rauschenberg loft on Front Street. We had all been experimenting with the movies. We knew there was something fundamentally wrong with the cinematic frame or rather with any frame around the image. We put the camera on a turntable and began to struggle with that space. Alphons, when not angry, was a magnificent companion. He showed me the ropes of the art world against my will. He pulled me across the schism my socialist upbringing had inflicted on me.

Table Four: the adapted letter-writing machine. Found in the L. A. Surplus yard 1992. Purchased for \$3 in good working order. We put it through further adaptation. Continuous ink feeder from medical plastic container added, sound pick-up of stepper motors added, continuous feed of writing medium. Completely observer interactive.

(other tables to be described)

Brotherhood, Table III by Woody Vasulka

Technical notes for the Computer/Video installation
(for presentation at gallery Manes, Praha, Czech republic in
July 1994)

Basic description of installation:

In the center of installation is the Table. It consists of:

- 1) two projectors, video and slide projector,
- 2) optical arrangement of an image-to-six-directions beam splitter
- 3) the main pneumatic beam splitter repositioning mechanism
- 4) four pneumatic actuators erecting or leveling four small projecting screens placed at the edge of the Table
- 5) computer to pneumatic valve controller interface

On the periphery of the installation placed on the floor stand four projection screens made of polystyrene, capable of showing images on both sides of screens in equal strength. Above the installation a fifth screen is suspended from the ceiling grid.

The installation is operated by a computer based electronic system, occupying a small instrument rack.

The Exhibit Space:

When an ideal space is available (8x8x4 meters or larger), the installation functions in its two viewing modes; an inner space projecting apparatus and a cubical arrangement seen from the outside.

The smallest space in which The Table can operate is a square room 6x6x3.5 meters (high). In this emergency space, (the actual installation takes 4x4x3.5 meters of space which includes the instrument Table and projection throw distance, screens). The installation is positioned diagonally to the room walls in order to utilize maximum space for audience movement. When optimal space is available, it is arranged parallel to the walls.

The room has to meet only one physical condition to receive the installation; the top screen, lights and speakers are suspended from the above grid, for which suitable attachments must be made. It could be in any form such as eye screws or hooks, placed in the center of the room parallel to the walls in a square 1.5m on each side. This

grid needs to support about 25kg. The other four screens are supported by stands standing on the floor. The space should be totally dark. All necessary light is generated by the table and two lights suspended from the ceiling grid. The wall should be painted grey or black or should be draped with dark curtains. This also applies to the ceiling.

Before the entrance and/or exit to the room there must be a light trap installed, made out of curtains or from a solid black material.

The installation has periods of loud sounds, so this should be considered in selection and arrangement of the room. The floor should have matte non reflective surface, preferably dark carpet.

*** Check European sizes on air tanks

For practical reasons, the whole installation has been shipped with all necessary components and details except the Power transformer and cylinder of compressed air with a supply pressure regulator (dual pressure regulator with display). Both items are standard industrial equipment and should readily available from local suppliers of compressed gasses. It is possible to supply the air from a small air compressor. It should be far enough away from the installation so that no sound interferes with audio from the room. A supply line would have to be provided from the compressor to the installation.

The requirement of electrical power is 110 or 120VAC (volts of Alternate current) of about 2000 Watts (2Kw) of continuous operation. The transformer output should have a provision to attach bare wires for our connection. The size of the air cylinder should be as large as possible to provide as least a week of operation without changes. A spare tank should be on hand to provide an uninterrupted supply of air.

List of necessary instructions to keep the installation
"Brotherhood " operating

Air:

The air or nitrogen gas should be held to the operational pressure of about 750 millibars (or 10 psi). There should always be a surplus gas cylinder on premises to facilitate a seamless changeover. If the frames do not erect during the slide projector sequences check tank pressure, valve openings and supply pressure.

There should be daily log kept to assure the closing and opening the main air valve (to consume the air loss due to overnight minor leaks). This also assures the change over of the air supply on time. If the consumption becomes excessive, check the air system for a major leaks.

As of today Sunday 29 May, the usage seems to be about 20 bars per day. A tank at this rate will last six or seven days. This current tank will need to be replaced Tuesday 31 May.

The Video projector:

(Sharp, LCD Projector, Model XG-2000)

Unfortunately, the Video projector has a specific operational feature. It has to be, before the major power shutdown, switched manually off to let the projector bulb be cooled off by the timed fan. It takes a couple of minutes and is automatically terminated. Only then the main power should be shutoff. Once off, the switch on the projector must be depressed (each morning) again manually to start its operation. There is no spare for the projection bulb. In case of trouble contact The Vasulkas, Inc. by phone (505) 471-7181 or by fax: (505) 473-0614 for a Federal Express replacement.

The Slide projector:

(Standard Kodak Ektagraphic, Model AF-2)

When a light bulb needs to be replaced, take off the lens of the slide projector and the slide tray. Then maneuver the projector body forward to the bottom mirror and remove the tray. After that, pull out the projector and open the bottom door to change the bulb.

Troubles: Occasionally, the bulb terminals do not make a proper contact. Push the bulb against the base. If no success, then turn the bulb slowly against base until light comes on. There is a spare bulb (ENG) in the spare part shelf. Always run the bulb on lower intensity (switch). You need to re-calibrate the slide projector position after

it has been moved. Go to slide Nr 1 on the tray. It contains a calibration target. Move the projector until all images are centered and focussed on the (small) frames. You can erect the small frames manually by forcing them up when air supply is turn off.

Sound:

The sound of the installation consists of three sources. The laserdisk player, (Ch1 mono), from an Audio sampler (Peavey) (Left-Stereo) and from a Drum machine (Aleses) (mono). The sounds are combined through an mixer, which has two channel output connected to the stereo input on the Power amplifier through Video labeled inputs. Two speakers distribute the sound.

Audio settings:

The main source of sound comes from the Laserdisk. The setting on channel labelled MUSIC of the mixer is set to level 3. The level of the sound should rather strong and convincing.

The second sound comes from the Microphone via Pitchrider. Pitchrider codes the tones from the microphone into a midi code and sends this to the Alesis Drum Machine and further to the computer. The computer then advances the sequences of video coming from the laser disk player. Depending on the tone received it also plays the sampled dialogues from the Peavey Sampler. These samples are also recalled during the slide projector sequences.

The third sound also comes from the Alesis drum machine from the drum pad. The sound is produced by hitting the drum pad and is assigned to the Cymbal-like sound. It sends a midi code to the computer will changes the playback speed of the video laser disk.

We recommend each morning that this Microphone and Drum Pad be tested briefly by the person turning on the system by touching the drum and making the microphone alive. Both should produce well audible response.

The Mixer:

The mixer has three input setting sliders.

The Master is set at level 10

The Music is set at level 3

The Audio is set at level 10

Lights:

These a two lights controlled by the computer. The first is directed toward the table and the other toward the microphone and drum pad. These a spare light fixture on the space part shelf in back room with key held by Mr. Bernd Busch of the Forum. The light directed to the Drum pad and Microphone fades out during the slide sequences when video interactivity is suspended.

Computer

If the installation ceases to function the whole system must be restarted during the Morning Startup procedure after first SHUTTING OFF VIDEO LASER PLAYER in main room. See EVENING SHUTDOWN and MORNING SHUTDOWN

If all these procedures fail it is still possible to operate the Laserdisk player by manually pushing the play button. The computer need to be turned off by pushing the rear shutoff button.

MORNING STARTUP

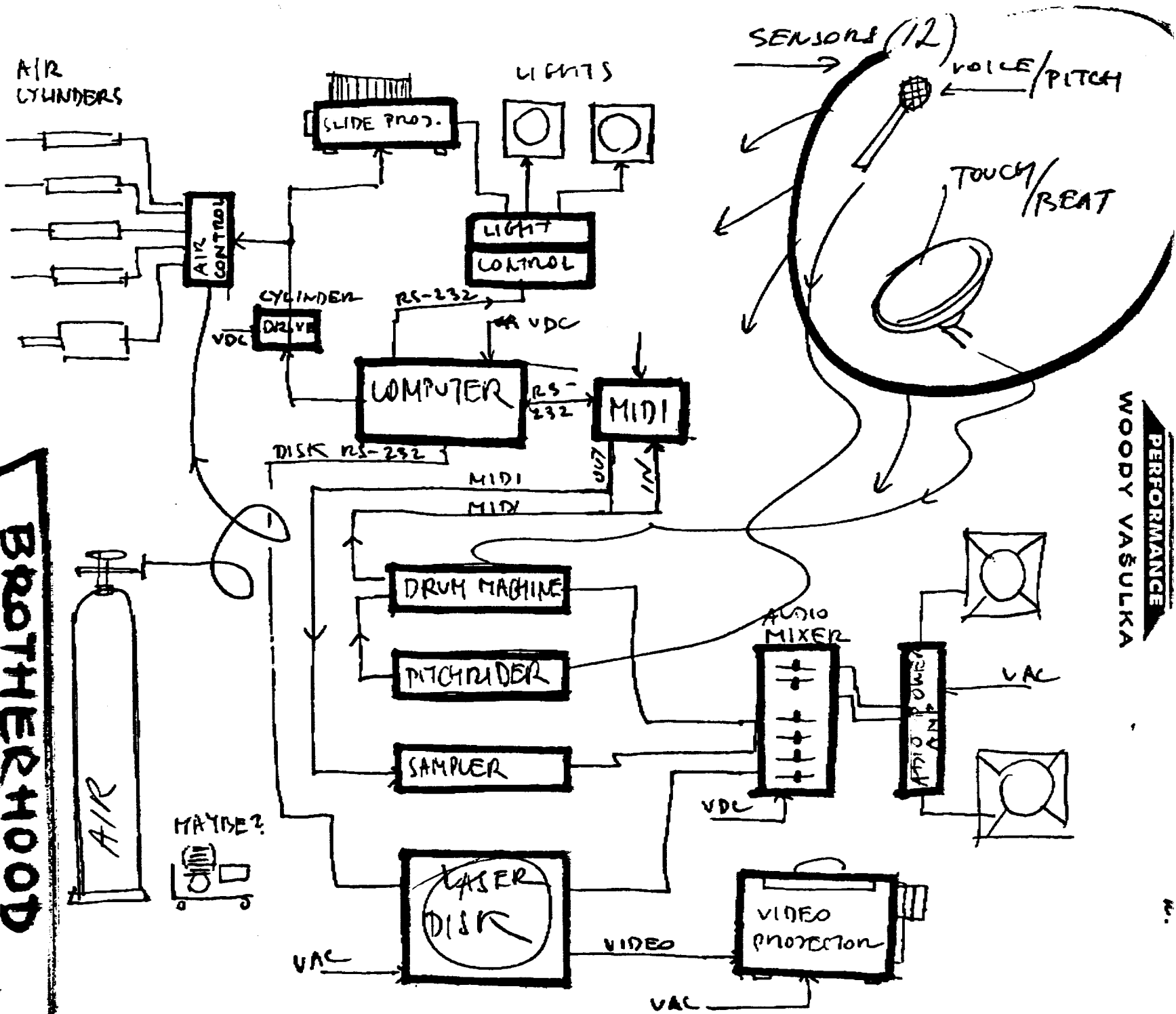
1. Turn on 110V power strip marked with number. (Nr 1)
2. Open two valves on air tank. Pressure should be a level indicated on gauge. (Nr 2)
3. Turn on computer by pushing and holding button located left rear of laptop. (Nr 3)
4. Turn on Video Projector in main room (Nr 4)

EVENING SHUTDOWN

1. Turn off Video Projector (Nr 4)
2. Wait 3 minutes.
3. Turn off 110V power strip marked with Nr 1.
4. Turn off computer by pushing and holding button located left rear of laptop. (Nr 3)
5. Close two valves on air tank. (Nr 2)

Woody or Bruce can be reached at 0042 5 43 21 14 48 which is the number of the Art Department of the Polytechnic at Brno. Czech Republic. If need messages and FAX could be sent to Thomas Ruller at 0042 5 33 71 65.

PERFORMANCE
WOODY VAŠULKA



BROTHERHOOD
TABLE III (BLOCK)

VIDEO-MULTIMEDIA-PERFORMANCE ATGLICR. FAKULTA VÝTVARNÝCH UMĚNÍ, VUT
KVIĚTNÁ 34, 602 00 BRNO, CZECH REPUBLIC. TEL/FAX (42-5) 43-21-14-48

F A X

THE VASULKAS

F A X

TO: _____
 To: Baley
 DATE: _____
 From: Woody Vasulka
 RE: Shipment to Czech Republic

CRATES	height	width	length	weight(Kg)
2 - 2200s	69 cm	61 cm	64 cm	43
4 - 2200s	69 cm	75 cm	117 cm	70
2 - 8000s	64 cm	62 cm	64 cm	56
5 - 8000s	69 cm	66 cm	122 cm	115
5 - 8000s	69 cm	66 cm	122 cm	115
Lyon Wood	74 cm	52 cm	169 cm	116
Metal	61 cm	83 cm	12 cm	76
Wood (Mirror)	54 cm	15 cm	86 cm	16
Wood (Mirror)	54 cm	15 cm	86 cm	20
Plastic Tube	11.5 cm diameter x 191 cm long			10
Plastic Tube	11.5 cm diameter x 191 cm long			10
TOTAL				647

(We may add to the existing crates additional material of about 10Kg)

Contents:

#2200s and 8000s refers to two different models of Pioneer Laserdisk players, each estimated for a replacement value of \$300 for a total of

\$5,400

"Lyon wood" and "Metal" contains an art exhibit titled "Machine vision" with replacement value for both crates.

\$22,000

Two "Mirror" boxes contain split beam mirror assemblies @ \$400 each

\$800

Plastic Tubes @ \$300 each (screens & frames)

\$600

Disk Synchronizer, replacement value

\$900

Media, (7 Laser disks) replacement value

\$2,100

TOTAL value estimated at US \$31,800

Konference při výstavě **Nová média ve výtvarném umění**

místo konání: Goethe Institute, neb větší přednášková síň

dobu konání: první týden v prosinci /výstava bude otevřena 1.12.1995/

organizátoři: Goethe Institute a SCSU-Praha s pomocí rady poradců.

Na pozvání amerických účastníků konference
přislíbili participovat: Trust for Mutual
Understanding /Richard Lenier/ a USIA
/Leslie Hight/

Téma konference a pozvání účastníci byly a jsou předmětem společných schůzek organizátorů. Tyto diskuse by měly být uzavřeny po schůzce 11.5.1995

Dosud byla navržena tato temata:

✓ 1. Fórum umělců /vyhnout se hlubokým filosofickým úvahám a soustředit se konkrétní popis a výklad uměleckých děl/ OK

✓ 1a. Fórum českých umělců by mělo podat informace o současné i historické produkci v Čechách: kinoautomat, Pešánek a další.

1b. Fórum zahraničních umělců by ukázalo mezinárodní příklady umělecké kreativity v oblasti nových médií.

2. Jak nová média ovlivňují společnost i umění? Jak ovlivňují nebo vyjadřují rozvoj demokracie?

2. Nový sociální statut umění. Umění a firmy. Umělec se dnes nerealizuje jako nezávislé svobodné individuum, ale ve splupráci s firmami, ve vazbě na komerční vědeckou a jinou neuměleckou sféru. Speciálním případem takové neumělecké činnosti, s kterou se umění, zejména umění nových médií, dostává do styku je vojenská technika. Umění tu využívá zejména vysoce pokročilý vývoj nových technologií. České umění je v této oblasti zvláště zejména dvěma světolznámými výrobky: Tamara radar a Semtex. 2

Možní účastníci zmínění v diskusi:

Paul Di Marinis, vyjádřil velký zájem aktivně participovat ve zmíněných tematech

Keiko Sei navrhuje:

Margaret Morse →
Jeanne C. Finley
Doug Hall }
Chip Lord }
Chris Hill }
Luis Bek →

Michal Bielický navrhuje:

Christa Sommerer
Antia, Art+Com
Monica Fleischmann

Paul Di Marinis navrhl:

George Legrady
Mike Naimark
Gerd Lovink /?/

Návrhy umělců pro výstavu Nová media 1995

✓ **Libor Benda, tel, fax: 040/517 319**

Tamara hledá ženicha

10 x 4 m

projektor Barco, projekční plocha

Silicon - Onyx Reality Engine 2

Tesla Pardubice

Virtual Reality Association, Total Vision a.s.

různé varianty max. 70 000,-Kč

2. návrh: **Tleskaná animace**

interaktivní projekt

48 750,- Kč na realizaci

✓ **David Cajthaml, tel: 644 15 81**

interaktivní laser

transport 20 00,-Kč (zápůjčka Německo)

8 x 6 m

✓ **Lubomír Čermák, tel: 54 34 76**

Měsíční vysílání

85 000,-Kč /55 000,- monoverze/

výška 230 sm

max. 40 qm

✓ **David Černý, New York, tel/fax: 212/22 87 592**

Frustrující televize, Telky

10 x 10 m

40- 50 000,-Kč mimo zapůjčení 16, monitorů velikost?

✓ **Raduz Činčera**

Sferický kaleidoskop

možnost prezentovat kinoautomat

zpřesnění

✓ **Federico Diaz, tel: 42 85 081**
Inkubátor myšlenek
6 x 4 x 4 m
Silicon Grafics, Indigo II. - fa Alias
projektor - ProMoPro
150 000,-Kč

✓ **Vojta Dukát, tel: 05/33 50 51**
elektronicky manipulované černobílé fotografie
rozpočet dodá

✓ **Michal Gabriel, tel.23 14 644**
Virtuální socha, spolupráce Lucie Svobodová
video, velkoplošná projekce 100 000,-Kč
animace 350 000,-Kč, natáčení objektu 90 000,-
plocha asi 25 m2, roh
Factory Art

⊗ **Jaromír Gwužd (Lysáček, Surůvka)???**
Dokumentace, prezentace činnosti vrcholového sportovce coby umělce
videokazeta, PC program, brožura, laser tiskárna, asistent,
kamera.
hypotetický ideál kalokagathie
rozpočet ???

✓ **Martin Janíček**
Pohledy
tmavší prostor
LCD panel, projektor EIKI - fa Softyr

✓ **Monika Karasová, tel: 73 49 17 (Karásek)**
DOOM 3 D animace
2-3 x 2-3 m ?
Intersim zápůjčka nejasná

2. návrh: Zvuková instalace, 9 homolí
9 světelných zdrojů
zvukové pole
tmavá místnost

✓ **Pavel Kopřiva**

Mezi

číselné a vizuelní atmosféra
telef. linka, PC, audiovizuální přístroj
5x5m místnost, temná
Meteorologický ústav
projektor Eiki, Softyr
100 000 Kč ? možná méně

✓ **Jiří Příhoda**

video projekce ???
návrh dodá

✓ **Langer/Pukl ???**

performance
dokumentace na zdi?

✓ **Tomáš Mašín, tel:25 28 65, 78 22 310, fax:781 14 90**

Hotel (počítačově animovaný film)
neupřesněný způsob projekce
příspěvek na výrobu vítán
spolupráce jeho firmy a dalších jiných, zajišťuje samostatně

✓ **Tomáš Ruller**

Semtex Art

1,5 x 1,5 m, vitrína, stůl
Manipulovaná televize
-lahvovaná televize
-radioaktivní televize
- **tele zbran**
100 000,-Kč

✓ **Lucie Svobodová, tel: 37 16 24, 37 22 14**

Velkoplošný kybernetický plakát

4x4m

holusion, prostor podobný jeskyni

tisk 15 000,-Kč

/Virtuální/ realita je sen

prostředí, prostor interaktivně reagující na diváka

/náklady ??????

Factory Art, popř. další firmy

finance maximální

✓ **Zdenek Sýkora**

Obrazy

✓ **Petr Svárovský, AVU tel: 37 36 46**

Child

virtuální elektronická bytost, reaguje pohybem, změnou tvaru,
hlasem

5x6 m místnost

Silikon, Reality Station nebo Onyx Reality Engine 2

fa Alias, SG

100 000,-Kč

✓ **Rychard Tymeš, tel: 0**

Světelná hudba,

interpreace zvuku laserem

náklady 20 000,- Kč

✓ **Jaroslav Vančát ???, tel: 0305/22522**

pedak. fak. 02/249 15 617 1.428,361

Struktury

skupinová instalace snímaná v procesu vznikání

✓ **Miloš Vojtěchovský,**

Orbis Pictus Revised

transport zápůjčky z Karlsruhe ZKM

náklady dodá, transport, pojištění, cestovné náklady pro
techniky...

✓ **Ivan Vosecký, tel:**

HOLZER

Světelné běžící reklamy

kritika nových medií ve smyslu reklamy a konzumní informatiky

umístění instalace na výstavě a další reklamy v metru a na
veřejných místech

zpřesnění dodá

✓ **Janka Žáčková, tel: 53 77 181**

minimalistická 3 dim. animace

projekce velikost ? nejasněno

monitory ?

Amy Dolin, nejasné zda bude mít čas

Martin Feikus, AVU, tel: 37 36 46, student

Petr Pasterňák, nemůže pracovat ze zdravotních důvodů

Elen Řádová, tel: video

David Christoph? video

In the fall of 1993, the Soros foundation sponsored the showing of The Theater of Hybrid Automata for INVEX-93.

This installation had previously shown in Linz, Austria and Ferrara, Italy and Paris, France. Since then it has been exhibited at:

Jun 17-27: Federal Exhibition Hall in Bonn, Germany
Jul 7-Aug 10: Manes Gallery, Prague, Czech Republic
Nov: V-2 Gallery, Rotterdam, Holland

B R O T H E R H O O D - T A B L E III

Of the six Tables, number three was the first to be built. Completed in April of 1994, it has been shown at the following sites:

May 26-Jun 15: Federal Exhibition Hall in Bonn, Germany
Jun 21-25: Ars Electronica, Linz, Austria.
Aug 28-Sep 4: Lace, Los Angeles, California
Oct: Moravska Gallerie, Brno, Republic
Nov: V-2 Gallery, Rotterdam, Holland

Both these installations (plus a third one) are slated for an exhibition in the Palace of Exhibitions in Rome, Italy in early 1995, and at the Museum for Modern Art in San Francisco in early 1995.

Brotherhood, Table III by Woody Vasulka

Technical notes for the Computer/Video installation
(for presentation at gallery Manes, Praha, Czech republic in
July 1994)

Basic description of installation:

In the center of installation is the Table. It consists of:

- 1) two projectors, video and slide projector,
- 2) optical arrangement of an image-to-six-directions beam splitter
- 3) the main pneumatic beam splitter repositioning mechanism
- 4) four pneumatic actuators erecting or leveling four small projecting screens placed at the edge of the Table
- 5) computer to pneumatic valve controller interface

On the periphery of the installation placed on the floor stand four projection screens made of polystyrene, capable of showing images on both sides of screens in equal strength. Above the installation a fifth screen is suspended from the ceiling grid.

The installation is operated by a computer based electronic system, occupying a small instrument rack.

The Exhibit Space:

When an ideal space is available (8x8x4 meters or larger), the installation functions in its two viewing modes; an inner space projecting apparatus and a cubical arrangement seen from the outside.

The smallest space in which The Table can operate is a square room 6x6x3.5 meters (high). In this emergency space, (the actual installation takes 4x4x3.5 meters of space which includes the instrument Table and projection throw distance, screens). The installation is positioned diagonally to the room walls in order to utilize maximum space for audience movement. When optimal space is available, it is arranged parallel to the walls.

The room has to meet only one physical condition to receive the installation; the top screen, lights and speakers are suspended from the above grid, for which suitable attachments must be made. It could be in any form such as eye screws or hooks, placed in the center of the room parallel to the walls in a square 1.5m on each side. This

grid needs to support about 25kg. The other four screens are supported by stands standing on the floor. The space should be totally dark. All necessary light is generated by the table and two lights suspended from the ceiling grid. The wall should be painted grey or black or should be draped with dark curtains. This also applies to the ceiling.

Before the entrance and/or exit to the room there must be a light trap installed, made out of curtains or from a solid black material.

The installation has periods of loud sounds, so this should be considered in selection and arrangement of the room. The floor should have matte non reflective surface, preferably dark carpet.

*** Check European sizes on air tanks

For practical reasons, the whole installation has been shipped with all necessary components and details except the Power transformer and cylinder of compressed air with a supply pressure regulator (dual pressure regulator with display). Both items are standard industrial equipment and should readily available from local suppliers of compressed gasses. It is possible to supply the air from a small air compressor. It should be far enough away from the installation so that no sound interferes with audio from the room. A supply line would have to be provided from the compressor to the installation.

The requirement of electrical power is 110 or 120VAC (volts of Alternate current) of about 2000 Watts (2Kw) of continuous operation. The transformer output should have a provision to attach bare wires for our connection. The size of the air cylinder should be as large as possible to provide as least a week of operation without changes. A spare tank should be on hand to provide an uninterrupted supply of air.

List of necessary instructions to keep the installation
"Brotherhood " operating

Air:

The air or nitrogen gas should be held to the operational pressure of about 750 millibars (or 10 psi). There should always be a surplus gas cylinder on premises to facilitate a seamless changeover. If the frames do not erect during the slide projector sequences check tank pressure, valve openings and supply pressure.

There should be daily log kept to assure the closing and opening the main air valve (to consume the air loss due to overnight minor leaks). This also assures the change over of the air supply on time. If the consumption becomes excessive, check the air system for a major leaks.

As of today Sunday 29 May, the usage seems to be about 20 bars per day. A tank at this rate will last six or seven days. This current tank will need to be replaced Tuesday 31 May.

The Video projector:

(Sharp, LCD Projector, Model XG-2000)

Unfortunately, the Video projector has a specific operational feature. It has to be, before the major power shutdown, switched manually off to let the projector bulb be cooled off by the timed fan. It takes a couple of minutes and is automatically terminated. Only then the main power should be shutoff. Once off, the switch on the projector must be depressed (each morning) again manually to start its operation. There is no spare for the projection bulb. In case of trouble contact The Vasulkas, Inc. by phone (505) 471-7181 or by fax: (505) 473-0614 for a Federal Express replacement.

The Slide projector:

(Standard Kodak Ektagraphic, Model AF-2)

When a light bulb needs to be replaced, take off the lens of the slide projector and the slide tray. Then maneuver the projector body forward to the bottom mirror and remove the tray. After that, pull out the projector and open the bottom door to change the bulb.

Troubles: Occasionally, the bulb terminals do not make a proper contact. Push the bulb against the base. If no success, then turn the bulb slowly against base until light comes on. There is a spare bulb (ENG) in the spare part shelf. Always run the bulb on lower intensity (switch). You need to re-calibrate the slide projector position after

it has been moved. Go to slide Nr 1 on the tray. It contains a calibration target. Move the projector until all images are centered and focussed on the (small) frames. You can erect the small frames manually by forcing them up when air supply is turn off.

Sound:

The sound of the installation consists of three sources. The laserdisk player, (Ch1 mono), from an Audio sampler (Peavey) (Left-Stereo) and from a Drum machine (Aleses) (mono). The sounds are combined through an mixer, which has two channel output connected to the stereo input on the Power amplifier through Video labeled inputs. Two speakers distribute the sound.

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MORNING STARTUP

1. Turn on 110V power strip marked with number. (Nr 1)
2. Open two valves on air tank. Pressure should be a level indicated on gauge. (Nr 2)
3. Turn on computer by pushing and holding button located left rear of laptop. (Nr 3)
4. Turn on Video Projector in main room (Nr 4)

EVENING SHUTDOWN

1. Turn off Video Projector (Nr 4)
2. Wait 3 minutes.
3. Turn off 110V power strip marked with Nr 1.
4. Turn off computer by pushing and holding button located left rear of laptop. (Nr 3)
5. Close two valves on air tank. (Nr 2)

Woody or Bruce can be reached at 0042 5 43 21 14 48 which is the number of the Art Department of the Polytechnic at Brno. Czech Republic. If need messages and FAX could be sent to Thomas Ruller at 0042 5 33 71 65.