

where I can see my house from here so we areKen Feingold
1993-95

A virtual masquerade party, a MOO with mirrors, a remote-control puppet-theater, a world of "waldos", one of the unbearable hells, or the beginning of a new form of public space... these spin off at the thought of this work, one which was conceived as live video became possible on the Internet several years ago. The inconceivable space between "here" and "there" collapses in an audiovisual materialization of the connection, and those who meet in that place "lose" their body along the way, inhabiting another when they arrive.

The first level of the encounter:

"...which one is me?..."

"...is that my reflection or is it you?..."

Three small robot-puppets, each with a video camera-eye, and microphone ears, are together in a mirrored space. In this version of the work, the mirrored space is in an exhibition site; its walls are high enough so that the robot-puppets can't see directly over them, but low enough so that viewers to the exhibition may watch them, and speak with them. Another version has the mirror-space in a closed room - which one could only enter through "cyberspace". Each robot-puppet is connected, via the Internet, to another space, elsewhere, in which their sight and hearing is seen and heard by a distant viewer-ventriloquist as projected video and amplified sound. In each remote space, there is a control device, consisting visibly of an opened attaché-case like object, revealing a joystick and a microphone. Utilizing the resources and tools of the Internet's Mbone and remote-control software I have put together, the viewer-ventriloquist may drive around the robot-puppet to which they are connected in the mirrored space, and when the remote viewer-ventriloquist speaks, their voice is "projected" through the robot-puppet, amplified within it, and moves the robot-puppet's mouth. In this way, three viewer-ventriloquists may meet in the fourth (mirrored) room. The space has physical limits for each robot-puppet, like national borders which they cannot cross, and their wires are only so long...vain tropes, perhaps, but reminders...

Maybe...creating a videoconference among three ventriloquist puppets would be enough to ask the guest ventriloquists - "What is there to say? Does it make a difference that you are not seen, but only your projection - which sees and speaks and hears in your place? Is it the 'I' saying 'Me' to 'It-You' (or its reflection)? That the one who stands in your place is not free to go where they wish, and that even as you move them 'freely' in their mirrored infinity theater, that there are borders? That they can see their wires but know not where they lead? And that in the space of the 'art exhibition' there is also a meeting of those who see but are not seen and those who learn to play the game with their projections?" - kf 1994

"Feingold's creations could be called meta-interactive art. This does not only refer to the richness of cultural associations they evoke (dada, surrealism, Duchamp, and Borges are among the main references), but also to the way Feingold treats technology. He often deliberately programs his works to provoke chaos and bewilderment, instead of achieving a neat and safe one-to-one interaction. This also became clear in Feingold's telerobotic installation 'where I can see my house from here so we are', where the remote participants have often extreme difficulties in deciding whether they are looking at another telerobot or at a mere reflection of their own 'telepuppet' in a mirror. For Feingold, interactive communication seems to be a hall of mirrors."

-Erkki Huhtamo, "Excavation Area", Intercommunication 14; Tokyo, Autumn 1995

This work was created with the assumption that the means of transmitting video, audio, and data from one location in the world to another will continue to change for the foreseeable future. Because of this, the actual artwork is comprised of its core elements - three motorized robot-puppets with video cameras, microphones, embedded microcontroller and other electronics, and three remote-control interfaces with embedded microcontrollers. The mirror-room structure and all of the wiring and cable-suspension interfaces required are also part of the core artwork. These are all provided by the artist.

The means for it's networked realization and for projection of video at the remote locations must be determined for the time and places of the actual installation. As it is like a kind of raw nerve, sending and capable of receiving analog video and audio, and simple serial data, it may be configured to work with any combination of hardware and telecom services capable of meeting its basic requirements:

central location with robots:

- 20' x 20' clear floorspace, minum
 - 3: Silicon Graphics Indy computers, or other with similar capabilities
 - appropriate telecom/computer hardware as required for service to be used
- network connection for each space:
when connected to the Internet = 1.5Mbps line, with CSU/DSU and Router
"closed-circuit" versions may be produced with local TCP/IP network
and appropriate LAN hardware and wiring

remote locations

- 3 spaces apart from each other and from the 'central location' (no sound or visual contact physically among them). Size depends on method of video display. Should be large enough for "immersive" video projection for one person, or may be small if a head-mounted display is used.
- 3: Silicon Graphics Indigo2 computers with Galileo boards, or other with similar capabilities
- network connection (as above)
- analog video projection or headmounted display

For its first realizations, the work has utilized the Mbone software for audio and video transmission over the Internet, and custom software for the transmission of control data. It was developed for use with Silicon Graphics computers capable of digitizing and outputting analog audio and video. The work may also be configured with other types of interfaces, such as those made to work with ISDN, or other types of PC or Unix computers.

All of the six network interfaces (one for each end of each robot-puppet), in whatever form, must be capable of digitizing analog NTSC video and audio and the three network interfaces on the remote side must also be capable of outputting analog video from a 640X480 portion of the screen.

The software for control data transmission was written for Silicon Graphics computers. It may be reconfigured for use on other systems. Video/audio software can be configured for Solaris, Linux, FreeBSD, and a few other specific systems.

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notes on the video documentation

this copy: VHS, NTSC, 6 minutes, normal audio, in english

master tape: BetacamSP, NTSC, 6 minutes

rights:

Permissions would need to be obtained to broadcast or cablecast the Discovery Channel "nextStep" and the CNN segments at the end of the tape, if they are to be used.

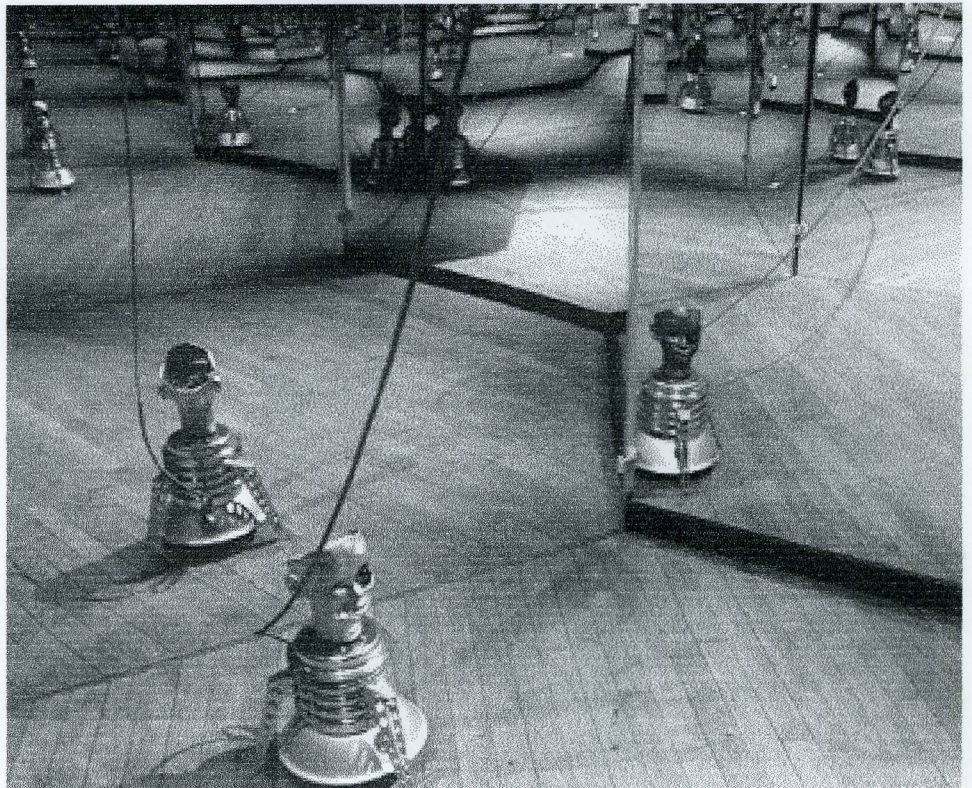
All other rights are with Ken Feingold. Permission is given to use these segments as described in the Prix Ars Electronica Competition Rules.

extensive
documentation

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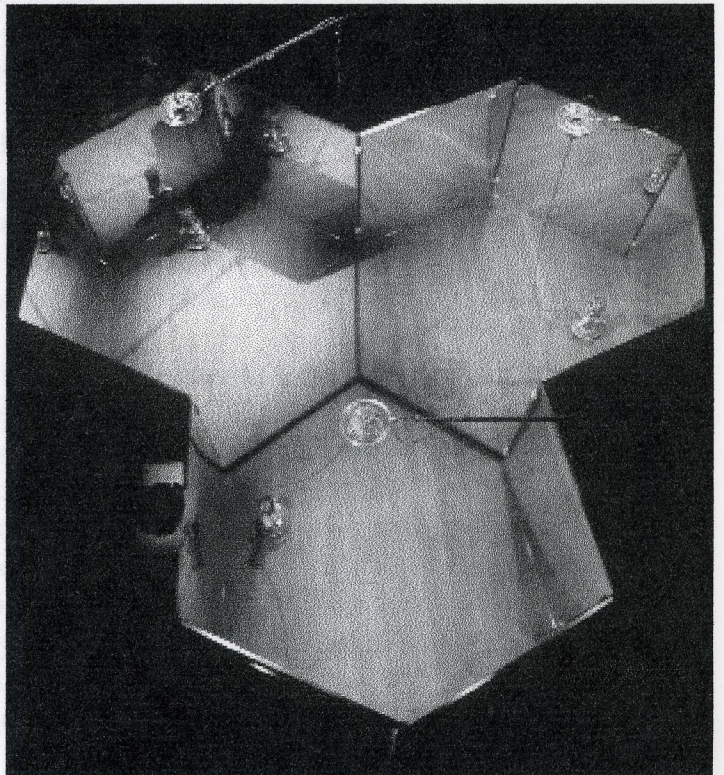
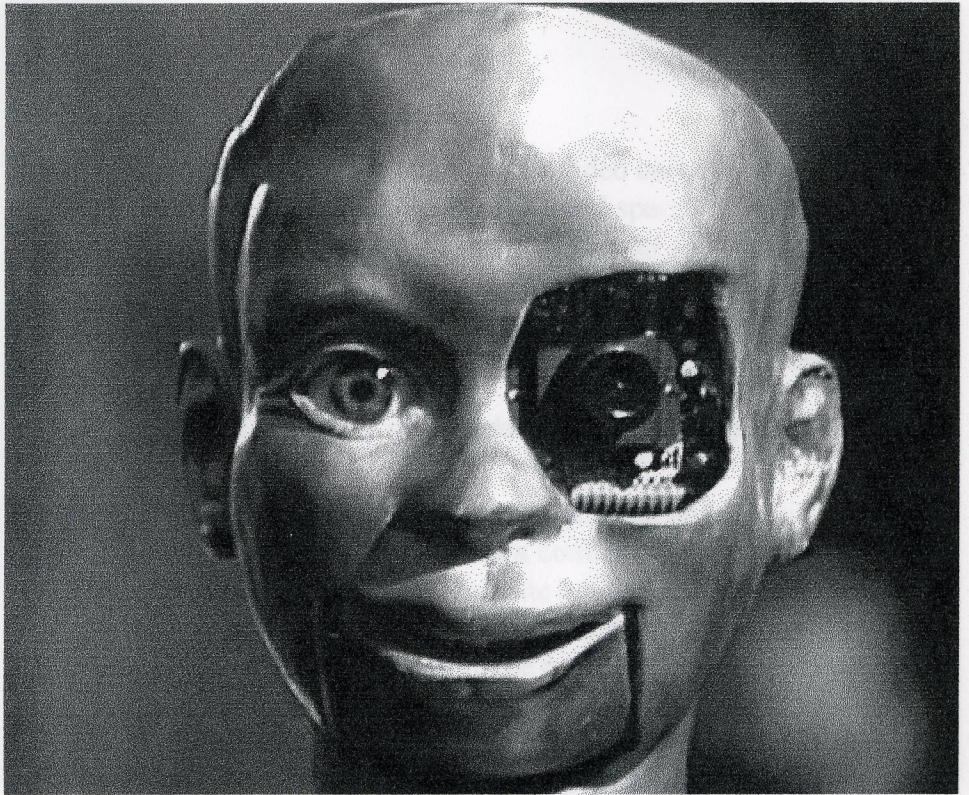


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introduction

Three robot-puppets, each with a video camera-eye and microphone ears, are together in a mirrored space. The walls of the space are high enough so that they cannot see over it, but low enough so that viewers in the exhibition space may watch them, and speak with them. Each robot-puppet is connected, via the Internet, to another space, in which their sight and hearing is seen

by *(an interactive video-telerobot installation for four spaces and the Internet)*
another-

er viewer-ventriloquist as projected video and amplified sound. In each remote space, there is a control device, consisting visibly of a joystick and microphone built into an attaché case. The viewer-ventriloquist there may drive around the robot-puppet to which they are connected in the mirrored space, and when the remote viewer-ventriloquist speaks, their voice is "projected" through the robot-puppet, amplified within it, and moves the robot-puppet's mouth. In this way, three viewer-ventriloquists may meet in the fourth (mirrored) room. The spaces within the mirrored construction have physical limits for each robot-puppet which they cannot cross.

The work is conceived of as a permanent installation with travelling elements. The mirrored construction with the robots should have a permanent location, while the interfaces may be set up in public or private spaces wherever the appropriate telecom services are available.

Perhaps this videoconference among three ventriloquist puppets can reflect my questions: "Does it make a difference that you are not seen, but only your projection - which sees and speaks and hears in your place? Is it the 'I' saying 'Me' to 'It-You' (or its reflection)? That the one who stands in your place is not free to go where they wish, and that even as you move them 'freely' in their mirrored infinity theater, that there are borders? That they can see their wires but don't know where they lead? And that in the space of the 'art exhibition' there is also a meeting of those who see but are not seen and those who learn to play the game with their projections?"

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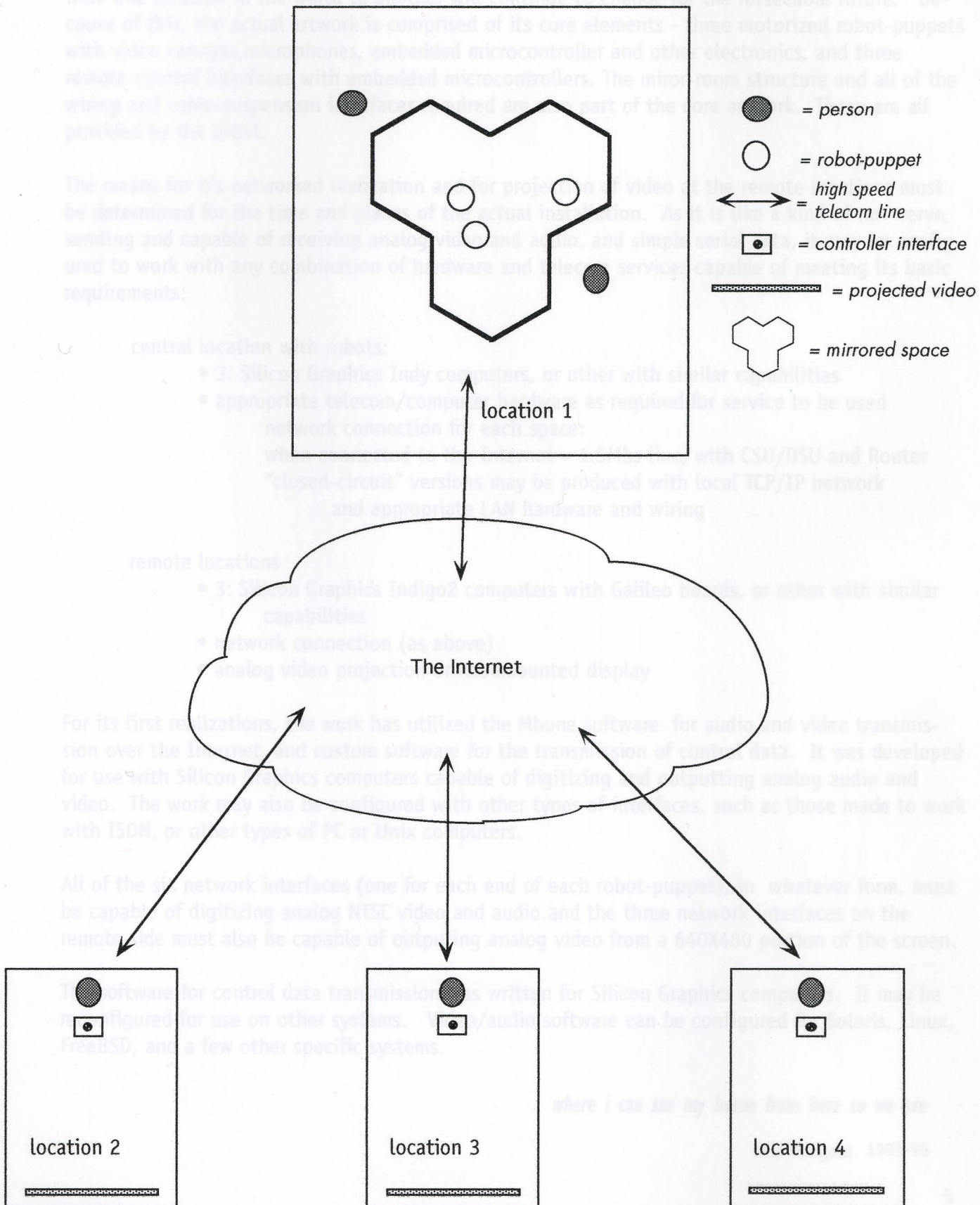
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network/space overview



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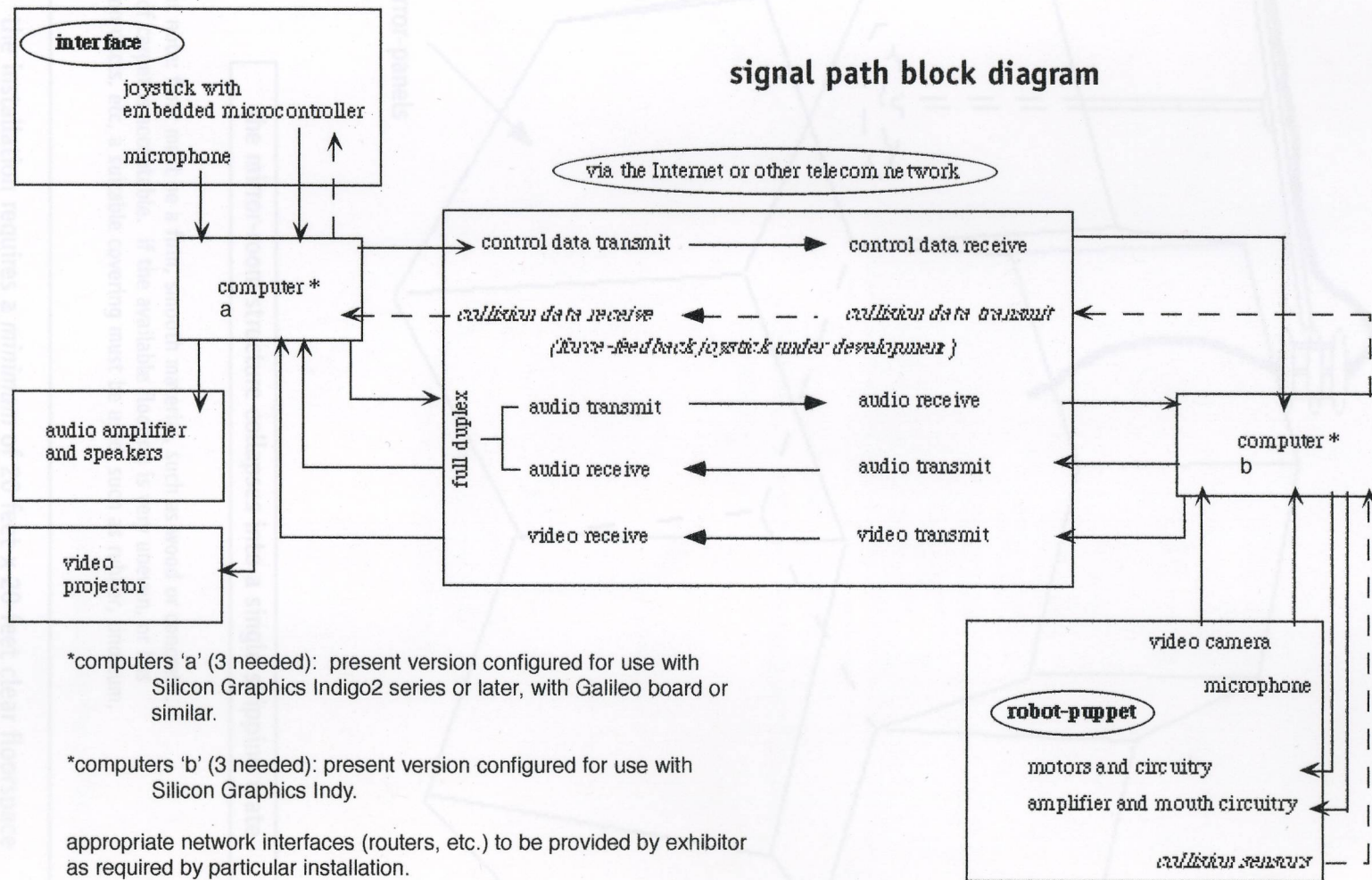
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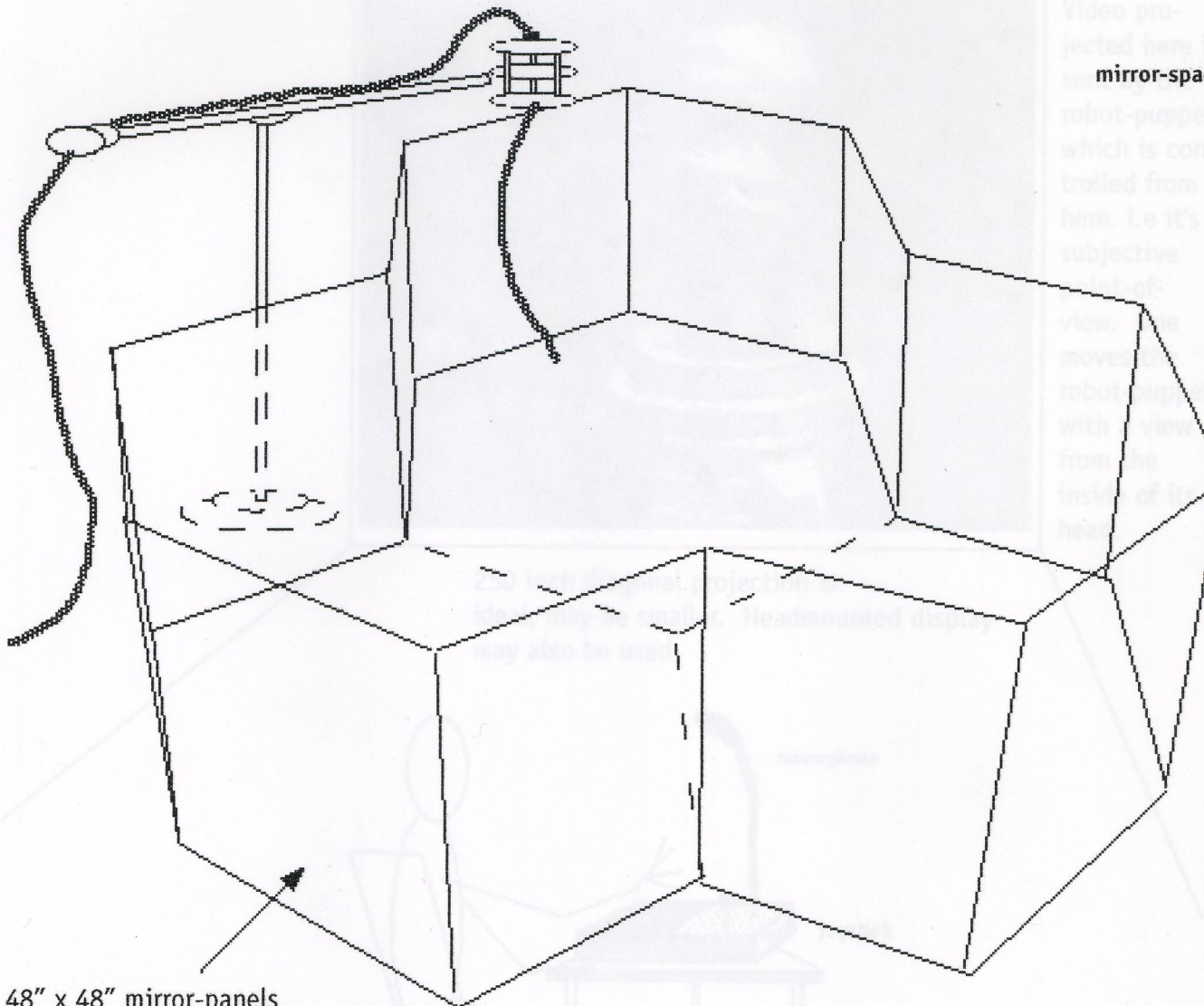


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these are 48" x 48" mirror-panels

the mirror-room structure collapses into a single shipping crate

important note: floor must be a firm, smooth material, such as wood or concrete. no form of carpet is acceptable. if the available flooring is very uneven, or has ventilation ducts, etc, a suitable covering must be used, such as rubber, linoleum, or cork.

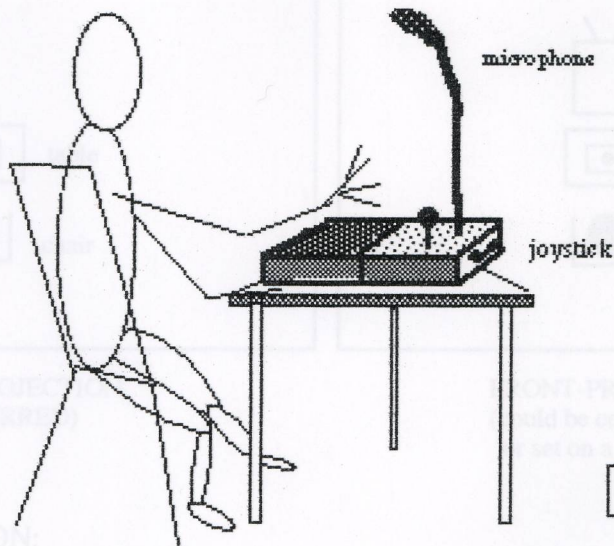
the installation requires a *minimum* of 20 feet x 20 feet clear floorspace including minimal space for circulation of viewers.
it must be lit from above. theatrical focusable lamps are preferred.

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Video projected here is sent by the robot-puppet which is controlled from here, i.e. it's subjective point-of-view. One moves the robot-puppet with a view from the inside of its head.

250 inch diagonal projection is ideal, may be smaller. Headmounted display may also be used



remote-control room

REAR-PROJECTION:

Dimensions variable - for 200" diagonal video, room must be approx 30 ft in length
for 70" diagonal video, room must be 13 ft in length

ALTERNATE PLAN:

VIDEO PROJECTOR MAY BE MOUNTED ONTO WALL OR SCREEN SURFACE.
FOR 70" PROJECTION, ROOM MUST BE 13 FT IN LENGTH.
FOR 200" PROJECTION, ROOM MUST BE 30 FT IN LENGTH.
IT COULD ALSO BE SET ON A VERY LOW TABLE BETWEEN THE INTERFACE AND THE SCREEN.

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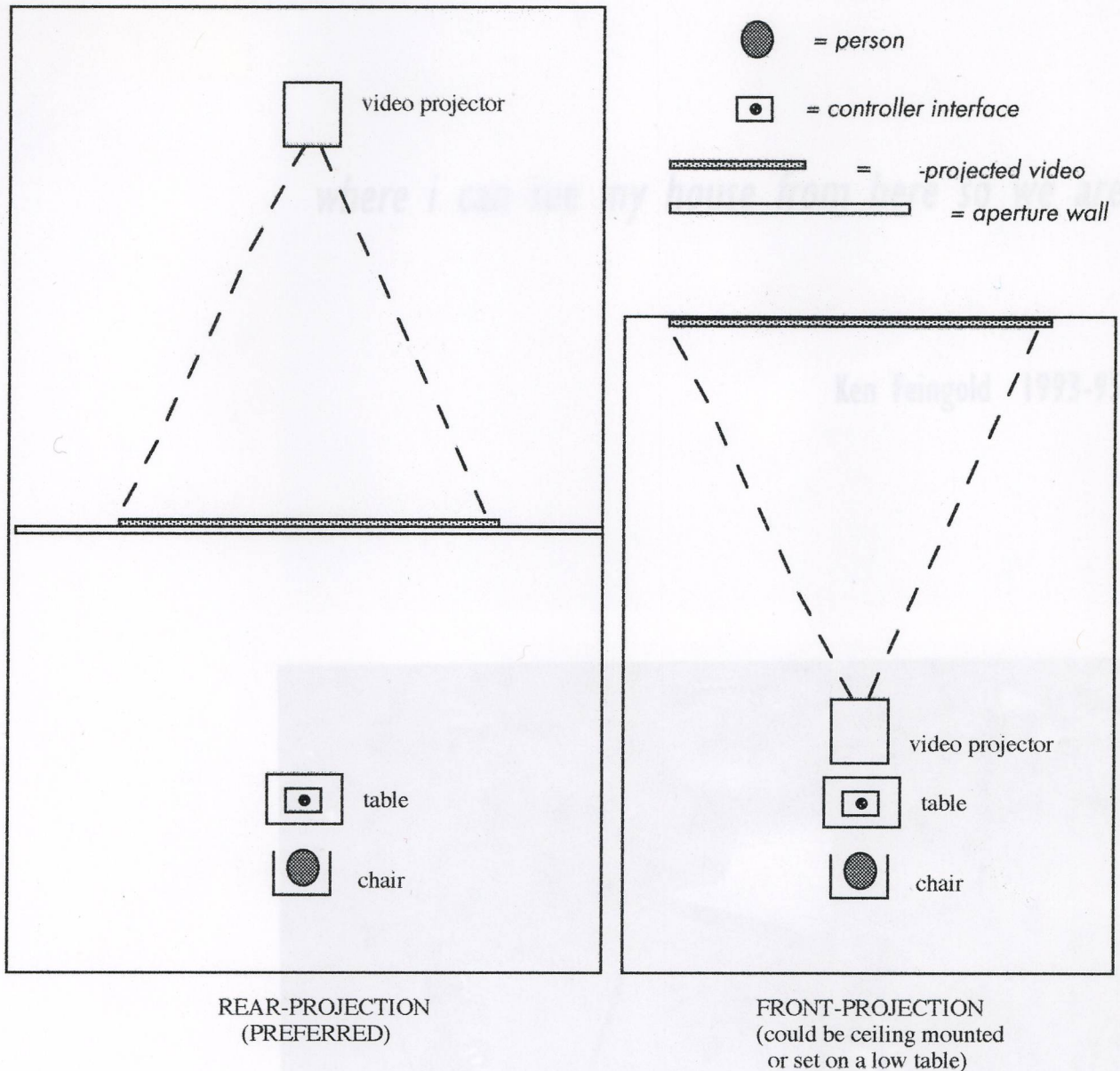
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Remote Control Space - General Plan



REAR-PROJECTION:

Dimensions variable - for 200" diagonal video, room must be approx 30 ft in length
for 70" diagonal video, room must be 15 ft in length

ALTERNATE PLAN: VIDEO PROJECTOR MAY BE FRONT-PROJECTED

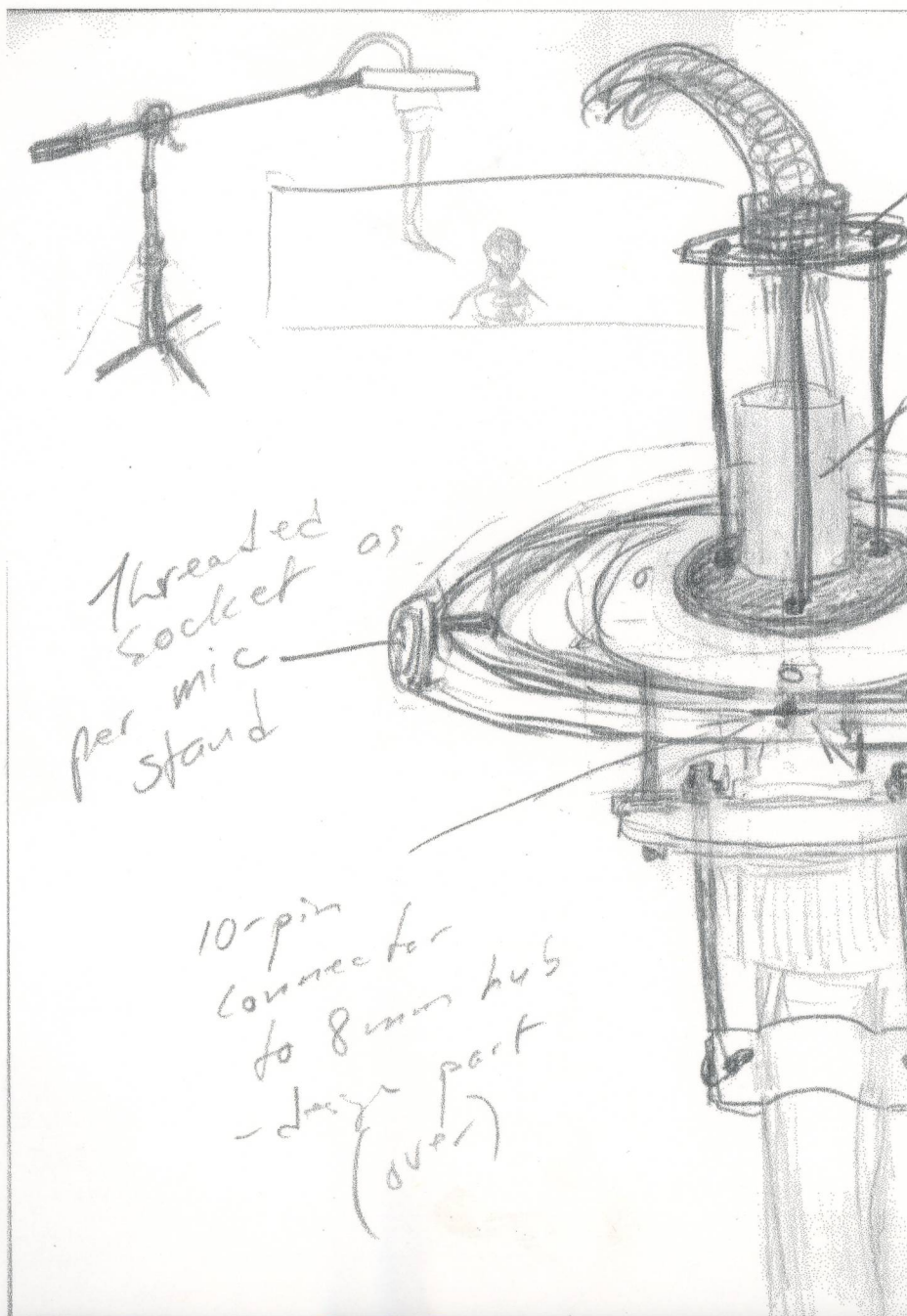
ONTO WALL OR SCREEN SURFACE. IN THIS CASE,

FOR 70" PROJECTION, ROOM MUST BE 10 ft in length

FOR 200" PROJECTION, ROOM MUST BE 20 ft in length.

IT COULD ALSO BE SET ON A VERY LOW TABLE BETWEEN THE INTERFACE AND THE SCREEN.

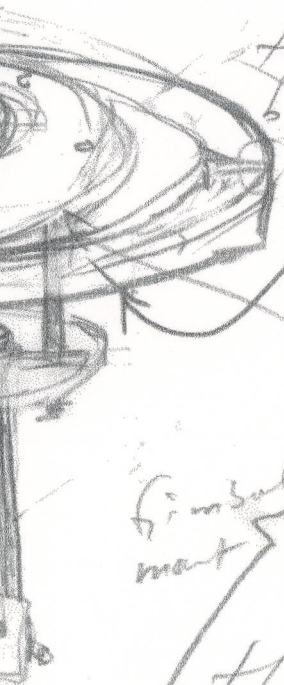
THREE SPACES LIKE THIS ARE REQUIRED



"where i can see my house from here so we are"
Ken Feingold; drawing for cable slip-ring gimbal, 1994

flage / fem 10 pin
connector

slip ring
has its own mounting flage
- mounts in center then mounts
to bearing plate



turntable
ball-bearing plates
turntable top fixed
to Simsa flage
lower
rotates

lower plate

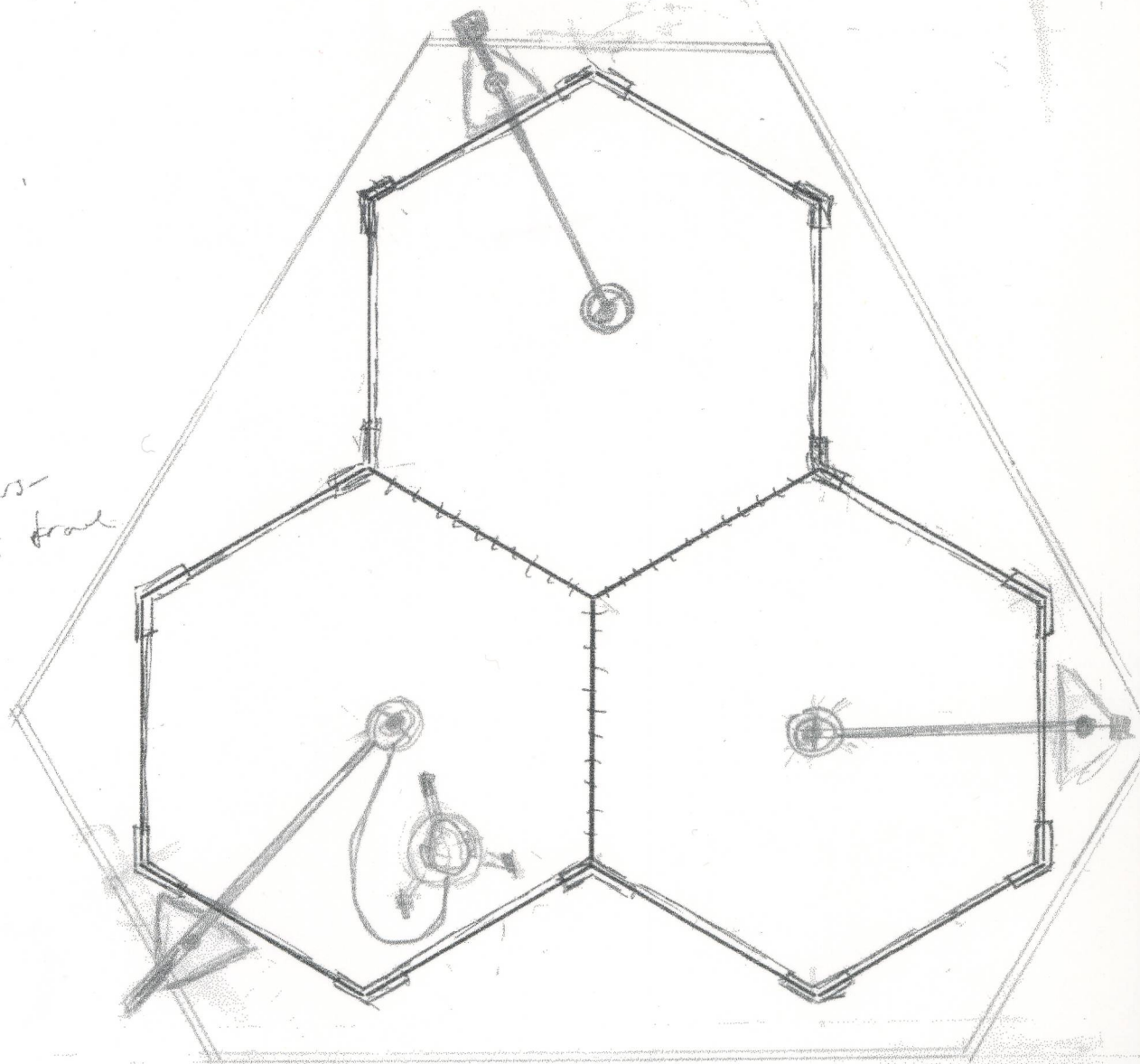
Simba
mount
on lower
flage - thick
w - hinge pins

that one on
another / 90°

hinge pins

12: 4'x4' mirror panels
24 connectors

rep's
set screws
into alum frame



aluminum
4:

"where i can see my house from here so we are"
Ken Feingold; drawing for mirror-space (detail); 1994

