

moving design for lives *sans terre*

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submitted to the department of architecture in partial fulfillment of the requirements for the degree of master of architecture at the massachusetts institute of technology.

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signature of author

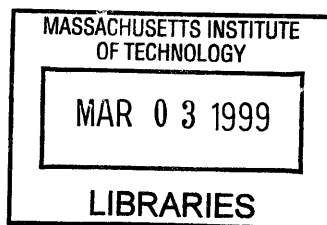
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moving design for lives *sans terre*

by nina chen

submitted to the department of architecture on january 15, 1999 in partial fulfillment of the requirements for the degree of master of architecture at the massachusetts institute of technology.

abstract

How may design address the contemporary conditions of movement, relocation, and change? Today, 25 million americans currently consider themselves to be free agents. That is, one out of six americans have abandoned traditional jobs and are moving from company to company, unattached to any particular employer or institution. This may partly account for the higher numbers of people who out of opportunity or necessity are relocating themselves geographically at such frequency and consistency that the traditional notion of home associated with stasis or the act of settling is challenged. Such mobile conditions raise complex questions of identity, continuity and sense of property, and challenge the relationship to one's environs.

Sans terre, which literally means "without ground", can also be taken to mean the ability to be at home everywhere. In questioning what the position of dwelling within mobility might be, the thesis embraces life sans terre as a positive potential, as a creative generative force. The exploration deliberately challenges the physical limits of the idea of home and tests the portability of its perception.

Precedents of dwelling in motion exist. Models of inhabitation as portrayed by american indians or nomadic tribes illustrate notions of expanded personal territory while involving the reduction of personal possessions. A proliferation of extended stay hotels now provide the role earlier caravanseri or monasteries once had. One modern medium yet to be explored, however, is the potential of current communication technologies. New relations to dwelling are now possible under conditions sans terre. This project attempts to channel technology into uses through which new associations and relationships between users, machines, nature, virtual life, physical beings, place, time, and space can be created. The thesis proposes that selecting the associations to form, positioning one thing relative to another may be considered equivalent to the act of dwelling, or the construction of one's home. The role of design is to strive to find ways to allow these self mandated connections to occur.

Once this goal is accepted, it becomes clear that in formulating a response, a solitary object acting alone can in no way provide an adequate solution. The single question of dwelling and mobility requires an entire bag of answers, a whole kit of tools for inhabitation. Architecture as building alone is not sufficient. A building in this scheme can only be understood within the context of an ensemble, a system of instruments of various scales working together. In concert, the proposed solutions strive to radiate different pulsations of time, perspective and scale, pertinent to the dweller.

thesis supervisor: peter testa
title: associate professor of architecture

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I. project background

25 million

A question about a condition motivated this project rather than a specific site or program. Looking around and conversing with others, it seems that higher numbers of people are moving around more these days. Mobile living appears to be a way for many. The thesis doesn't delve into why this is happening - instead it takes this condition as a modern given and asks how design can respond. Under forces of movement, relocation, and change, what happens to the sense of home and the understanding of dwelling? Through the consideration of these questions, the role of the designer begins to emerge, as well as the choice of medium and method.

In a recent article for the New Republic, Daniel Pink wrote that there are now 25 million americans who have declared free agency. This means that one out of six people in the United States have abandoned traditional jobs and are instead moving from job to job, project to project, unattached to any particular employer or institution, relying more on themselves, and living by their own wits. Richard Sennett, in Der flexible Mensch die Kultur des neuen Kapitalismus , attributes this increase in lateral career movement to the culture of the new capitalism. Flexibility, he proposes, is a key concept of global capitalism that creates a demand for workers who are always prepared to change work positions as well as living places. He raises many valid concerns about whether the short term goals of the market are in conflict with human needs for continuity, reliability, or development and labels this condition of uncertainty and lack of long-term friendships and connections as "Drift".

Successfully juxtaposing the terms of dwelling and drift would seem to be the goal that many take on today. I recently met a young Indian couple. He was working in a software company, she was an orthodontist. They had moved to Dallas some months ago. When I asked them how long they intended on staying there, they told me that they weren't sure - perhaps a couple more years. They said that they didn't know where they might move to next. I was curious to know what their aspirations were - didn't they want to someday settle down and own a house? To my surprise, they answered that many of their friends dreamed of striking it rich by forty and then going off to travel!

What and where is home in this picture? The capacity of the one family house to embody the perception of home is limited. Until now, dwelling



gypsies, encarta encyclopedia, 1998

has in most cultures been associated with forms of settlement, of stasis. But if staying in one place is no longer feasible, or even desired, then the notion of dwelling must be reconciled with the condition of movement. Many complex issues arise out of this situation.

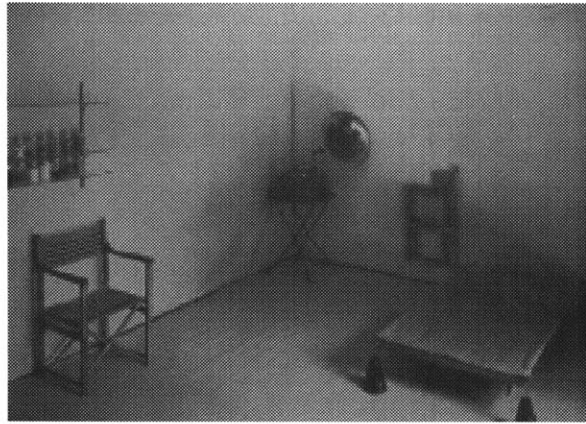
One thing that might characterize dwelling and mobility is a tendency to live in a permanent state of temporary inhabitation. Upon arriving, one already knows (sometimes consciously, sometimes not) that one might leave. A stay of three days is probably inconsequential. What happens when these three days are repeated every two weeks? How long does one stay in a place before it constitutes as residing there?

When it is clear that a stay is temporary, what demands can be placed by the inhabitant on the surroundings? And conversely, what can, what should the environment demand from the temporary inhabitant?

Meaning is often aggregated through a continual duration of time and care. When a duration is limited, what can be invested? Within movement, what can be aggregated? Amidst dislocation, what is continual?

The notion of home is closely linked to one's identity. For how many people is the question 'where are you from' difficult to answer? The identity of the person who has lived in various places is multilayered, an open convergence and selection of sometimes contradicting local truths. 'Where are you from?' indirectly asks to what place one belongs, and this belonging defines a part of one's identity. The ambiguous composition of many modern identities may explain the reluctance or difficulty in giving a clear answer to what seems to be a simple question.

When inhabitation is in flux, to what place, to where does one belong? Or conversely, what places belong to you? This question, not only a matter of identity, extends to the sense of property necessary for one to take on responsibility towards what surrounds one. In the end, defining what belongs to those living in motion becomes an environmental question, for who takes care of things that don't belong to them? A person who owns, tends. A person who owns a house tends for the house. What kind of house does a person in movement own?



hannes meyer, "die Wohnung"

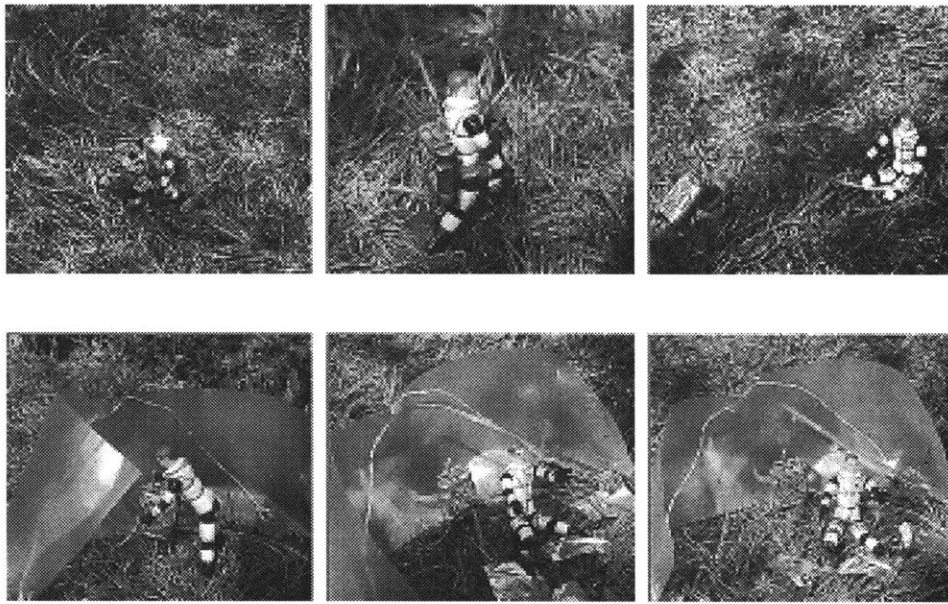
Can one own some part of everything everywhere? This may be what is necessary for lives sans terre. *Sans terre*, meaning without ground or home, could, in a good sense, mean having no particular home, but begin equally at home everywhere. Henry David Thoreau, in Walking, sites *sans terre*, the ability to be at home everywhere as the secret for successful sauntering, for those who mean to understand the art of walking.

Practicing the art of walking may be a modern skill to cultivate. If the universality of any one model of thought is no longer probable, and the cohabitation of different systems of thought is accepted, then the person living in mobility has an advantage. In such a model, to be in full possession of a multiple, to be able to see on a large scale would require traversing as much space (geographical and non-geographical) as possible. A personal trajectory, rather than aimless, undirected drift, would become instead a journey that weaves together multiple times and spaces - life *sans terre* may offer a situation that has the potential for the formation of entirely new associations. A person, in moving, in constructing a world, selects, discovers, receives, stores and exchanges both energy and information, and in choosing things to set into relationship to oneself, gives meaning to them, owns - dwells.

In stasis, one digs and builds vertically, as Heidegger suggests. In movement, one weaves in all dimensions, making knots, forming intricate, far reaching, imaginatively woven webs.

What is required in order to be at home, to own some part of everything everywhere? Some precedents of dwelling *sans terre* exist, providing clues. Gypsies, American Indians, nomadic tribes all demonstrate notions of inhabitation that involve expanded senses of personal territory along with the reduction of personal possessions. Earlier networks of caravanseri or monasteries offered possibilities for passage across vast amounts of space. The questions Hannes Meyer raised with his interior "Die Wohnung" of nomadism, the collective, and the virtual continue.

The doll's house designed by Jean Nouvel is fascinating for its mixture of the portable and the generic housing the very personal, objects of memory and meaning - home. Peter Cook's project, Nomad, is also interesting for as it proposes the portability of a self constructed personal environment.



peter cook, nomad, 1968, concerning archigram

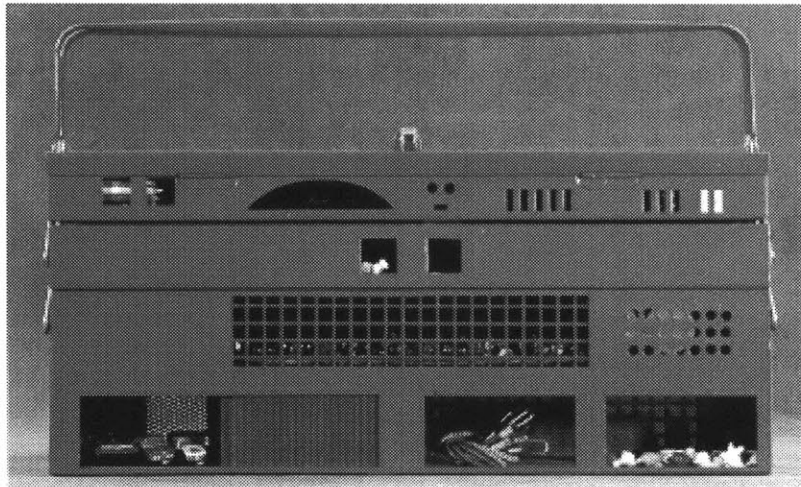
One modern overlay yet to be explored, however, is that of the current communications technologies. The substance of information technologies - light, time, energy, signals, sounds, the constant of a network - offer rich materials for individual constitution of space. These modern mediums, when overlapped with the natural and the extremely tactile, can create new hybridized natural, architectural and technological conditions. Digital technology, normally economically driven can also be, under the hand of design, be culturally, experientially directed.

This then, is the goal of the thesis, in responding to the question of dwelling and mobility: embracing life *sans terres* as a positive potential which allows for the creation of new association and relationships between users, machines, nature, virtual life, physical beings, place, time, and space. Selecting the associations to form, giving things a meaning, positioning one thing relative to another is equivalent to the act of dwelling, or the construction of one's home. Design strives to allow these self mandated connections to occur.

If one result from mobility is the loss of relations, especially those touching closest the notion of home, then the design response should address the reestablishment of those lost relations. Better yet, design should provide an opportunity to establish new relations to dwelling now possible under conditions of mobility. Design is a means through which new meanings can be created.

Once this goal is accepted, it becomes clear that in formulating a response, a solitary object acting alone can in no way provide an adequate solution. The single question of dwelling and mobility requires an entire bag of answers, a whole kit of tools for inhabitation. Architecture as building only is not sufficient. A building, in this scheme, can only be understood within the context of a whole ensemble, a system of instruments working together.

Thus, a network of tools was the solution that offered itself. A network seemed the only viable way of providing some continuity or connection within shifting circumstances. And in our current economic structure, only a company of sorts could address the question with the micro and macro scales required. For this reason, in an entrepreneurial spirit, the architectural proposal come under the guise of a new global company, *snowray*.



jean nouvel, doll's house, 1983, jean nouvel - architecture and design

The company presents a matrix of services, environments, and products that the user may then make use of and configure to his or her own understanding.

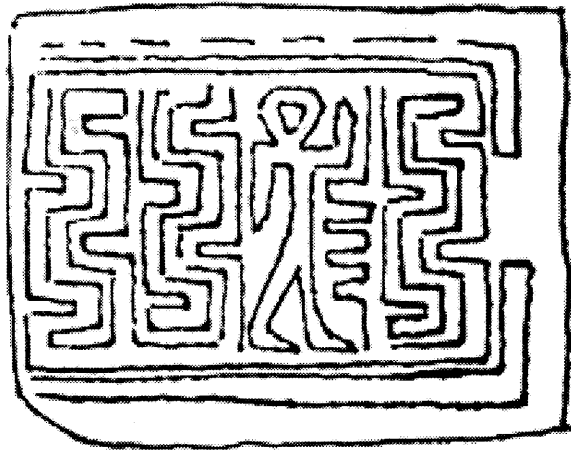
All the goods were conceived in response to a specific kind of information that it might give a person living *sans terre*. They strive to form relational positions with each other - none of them works in isolation. Each employs bodily, mechanical, and electronic forces to allow the individual constitution of home. Working together, they radiate different pulsations of time, perspective and scale, pertinent to the dweller.

scales addressed



1. Network. *snowray* will be a parent company investing in and offering a specific type of real estate aimed primarily at housing. In addition, it offers personal storage capabilities (physical and virtual) as well as private shipping services. *snowray* challenges usual notions of property ownership by allowing normal mortgage payments or rents to channel into shares of the company. For this kind of “homeowner”, this guarantees no “lost money” and also a certain standard of building service and support, not only in one place but in carefully tended places all over the world.
2. Typology. The properties will be characterized by unique programmatic combinations which strive to serve populations both in flux and stasis as well as careful selections of locations near public transportation systems, valuable support services and building quality. A delicate balance of program to serve not only the immediate residents but also the local community will be sought, as well as locations near local transportation systems.
3. System. Like Metropolitan Storage located on Massachusetts Avenue, which has been providing quality storage for over a hundred years, the company will safe-keep personal belongings while the owners are elsewhere. Recognizing the critical role these “safeboxes” play in the preservation of memory, the position these places might begin to assume within a community is questioned as *snowray* storages are located closer to housing areas in contrast to most self-storage places which are located at neighborhood outskirts. These places may begin to take on different qualities, becoming not just “storage containers”, but “treasure houses”.
4. Unit. Perhaps the most critical aspect of contemporary dwelling will be that of orientation. To stand up to the claim of providing “clear coordinates” , *snowray* unhesitatingly utilizes building materials, communication equipment and other devices to combine historical, geographical, human, natural and material forces into the design of cultivated environments of memorable quality.
5. Equipment. While many discussions surrounding the topic of mobility often lead to the proposal of portable dwellings, *snowray* takes a different position. It offers stabile dwellings amidst the increasing flux of it’s inhabitants. Instead of deploying homes, people move, perhaps taking along some well designed, compact, meaningful belongings. For this reason, *Snowray* offers a line of luggage/furniture for “taking home with”.

matrix of terms



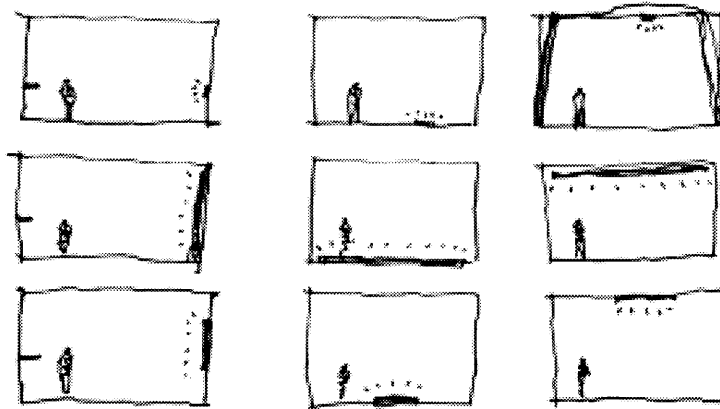
egyptian ideogramm for house

This is the initial matrix forming the theoretical background of the proposal that influenced the architectural design within the snowray network.

1. Orientation. As mobility increases, the necessity for orientation also increases. This demands skills or devices that impart the ability to navigate, translate, mediate, synchronize, and traverse.
2. More Nature. The disappearance of landscape from urban and even suburban life and has led to an inability for nature to give a sense of "ground". Because of this loss of landscape, more ubiquitous natural elements such as wind, the sun, the moon, precipitation, or temperature may be monitored in order to impart orientational readings, or to give a kind of archaic tempo by which an inhabitant can gauge one's own time by.
3. Repetition. Amidst increased instabilities, constants begin to play a critical role. In the realm of the dwelling, daily repetitive actions such as eating, sleeping, bathing, working, and playing can gain a valuable role as metronome, giving weight as counterpoint to sporadic speeds. Setting contemporary principles on these daily rituals, traditional allocations of space for these programs may be reexamined.
4. Substance. It will be emphasized that immaterial substances, such as the organization and conducting of Time, the construction and the storage of Memory, the channeling and exchange of relevant Information, the place forming aspects of consequential Space and the sensate capabilities of Body will be considered integral to the research of the thesis.

<u>nature</u>	<u>orientation</u>	<u>repetition</u>	<u>substance</u>
wind	navigate	eating	memory
sun	translate	sleeping	time
moon	mediate	working	body
precipitation	synchronize	bathing	space
temperature	traverse	playing	information

a note on interface design



varying relationships between man and information

The proposals consist primarily of the retrieval of digital information through the use of projections. The bulk of the proposals are for the use of projections to receive ambient or peripheral information relevant to the notion of home. It is recognized however, that this means of digital information retrieval can apply also to more traditional notions of digital work.

On the general nature of projections:

1. Projectors allow the user to manipulate the relationship of him or her to the digital information through distortion of scale and focus.
2. Projectors bring the user into direct contact with his or her physical surroundings.
3. In this direct contact, the physical setting is affected by the virtual world, and the virtual world becomes somewhat dependent on the physical.
4. In fine tuning the placements, the user becomes dependent or exploits both, engaging in digital and physical worlds for his or her information intake.
5. By using the "screen" of one's surroundings, "work surface" area increases dramatically, being able to support multiple windows simultaneously. In fact, one may use the placement of information into physical space as a means of navigation through large amounts of information.

On the general nature of cameras:

The camera has been proposed for use in the following ways:

1. To extend the notion of ownership. One owns that which is monitored, or scrutinized.
2. To affirm the present or past existence of someone or thing.
3. As a means for the projection of oneself into the virtual world.

Projection and recording technologies make digital information more malleable in the hands of the user. It allows for fuller immersion of the body into a virtual world. At the same time, the physical world is looked at in an active way. The mental and physical realms of the user, the physical and virtual domains of existence can be simultaneously engaged. The physical world is a backboard but also a springboard into virtual environments. At the same time, the physical world assumes a strong presence upon the departure from a virtual environment.

ten proposals for lives *sans terre*



A WORLD. A PERSON IN THE WORLD

Proposition 1: fragmentation of universal understanding requires individual constitution of world based on personal trajectory.

THE LANTERN AND THE CURIO BOX

Proposition 2: a source of continuity is the accumulation through time of memory space.

THE SPHERE AND THE CHANDELIER

Proposition 3: an alternative definition of individual property, encouraging distributed and/or shared holdings.

CONES AND A SHUTTER

Proposition 4: it's always good to get another point of view.

JUNEBUG AND STEM

Proposition 5: reliance upon telepresence connectivity requires multiple and active means for self presentation and projection.

A PET AND CROCODILES

Proposition 6: parallel working ensembles of interactive surfaces integrated into daily habitual actions able to accommodate changing body location and position.

SHAKERS, QUILL AND INK

Proposition 7: multiple new means for personal invention and language creation.

FILES AND A CIRCULATION NETWORK.

Proposition 8: a source of necessary redundancy.

A LOCALITY. A PLACE IN THE LOCALITY.

Proposition 9: arrival at a place requires the finding of one's coordinates as well as the deliberate construction of open passages and identification of points of exchange.

A LOCAL HOME. A GLOBAL HOME .

Proposition 10: besides being a container for the flow of information, the home has to tell you something about the weather and your neighbors.

II. presentation of December 11, 1998

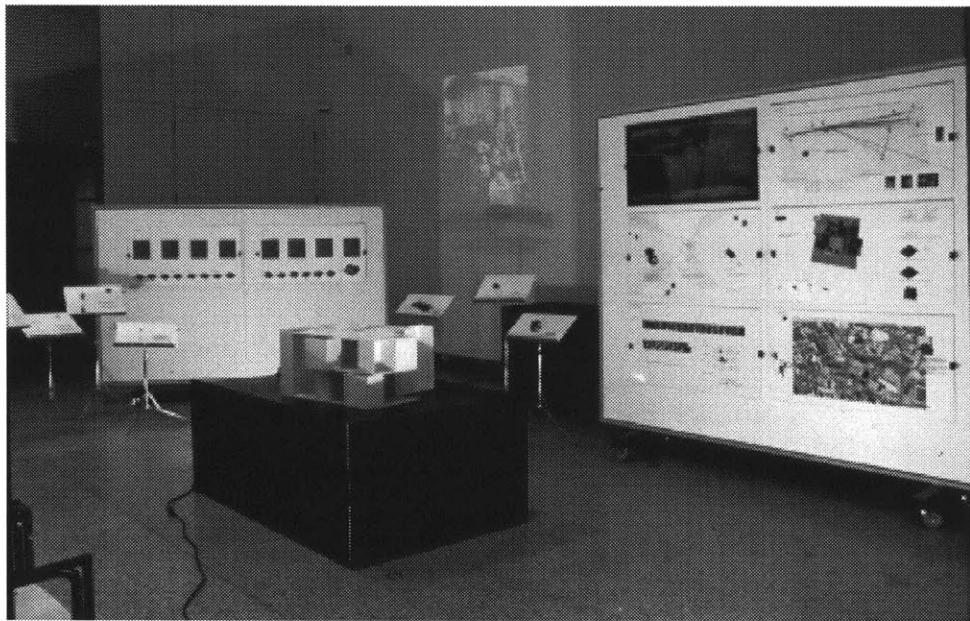
presentation layout

board 1: the world and individual trajectories
board 2: network
board 3: furniture
board 4: unit
board 5: aggregate
board 6: complex

unit model

board 7: unit components one
board 8: unit components two

stand 1: chandelier
stand 2: curio box
stand 3: pet
stand 4: junebug and stem
stand 5: surfaces
stand 6: shakers



presentation layout

moving design for lives *sans terre* was presented on December 11, 1998 in the audio visual theater of building 7 at MIT.

the project was reviewed by:

thesis advisor: peter testa, associate professor of architecture, M.I.T.

thesis reader: mark jarzombek, associate professor of history and architecture, M.I.T.

william mitchell, professor of architecture and media arts and sciences, M.I.T.

guests: alice friedman, professor of art, wellesley college, director, architecture program

julia scher, lecturer in visual studies, M.I.T.

sudhakar thakurdesai, senior vice president, RTKL Associates, Los Angeles, CA



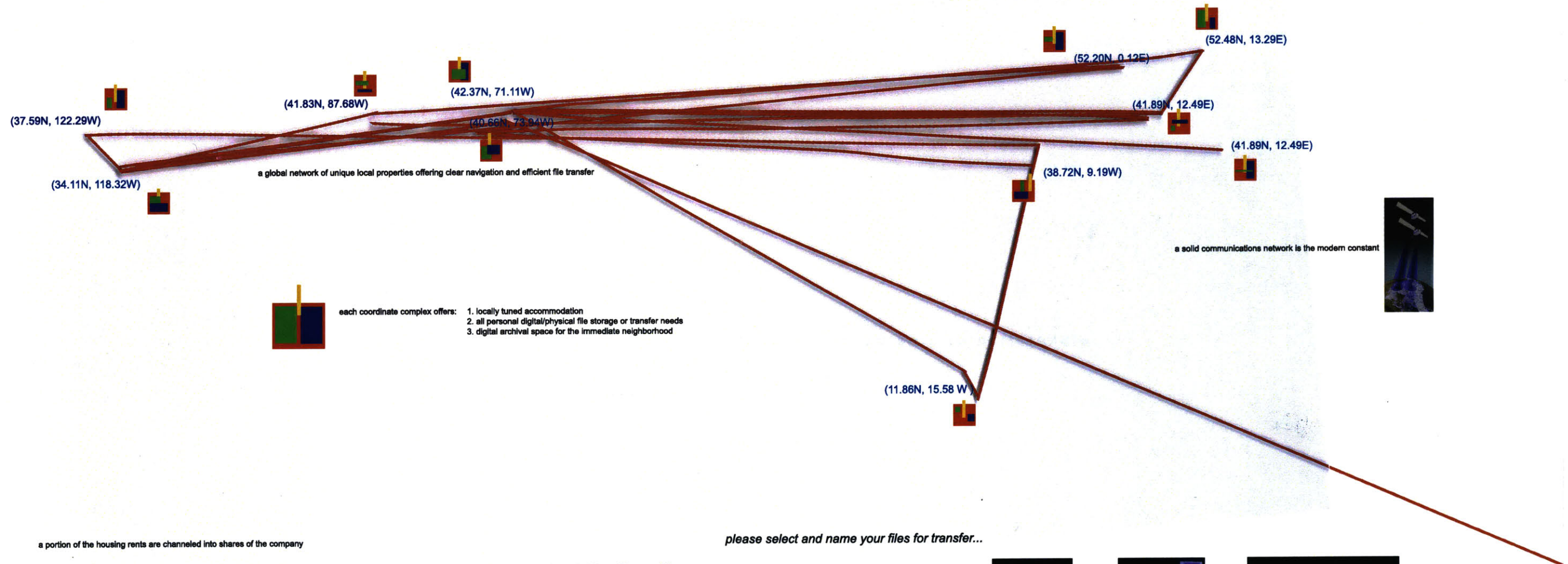
board 1
the world and human trajectories

board 2
elaboration of a network

network

(snowray)

snowray is a company offering a unique combination of networked services to fulfill the accommodation and digital/physical storage and transfer needs of contemporary lifestyles



a global network of unique local properties offering clear navigation and efficient file transfer

a solid communications network is the modern constant



- each coordinate complex offers:
1. locally tuned accommodation
 2. all personal digital/physical file storage or transfer needs
 3. digital archival space for the immediate neighborhood

a portion of the housing rents are channeled into shares of the company

36 3/8	14 11/16	SmithF	...	...	18	10899	28 1/8	25 3/8	26	+	3/8
19 1/8	6 5/8	SmithMO	...	...	9	204	9 1/16	8 3/4	8 15/16	+	3/16
22	9 3/4	SmurfStne	68e	4.9	74	41320	14 5/8	13 1/2	14	-	7/16
24 1/2	22 1/2	SEC A n	...	...	40	22 1/2	21 3/4	21 2/4		-	1 5/8
24 1/2	22 5/8	SECB n	...	...	780	23 1/2	22 3/4	22 3/4		-	1
32 5/8	12	SNOWR	...	...	29181	27	24 1/8	26 3/8		+	2 1/4
9 1/2	5 1/4	Sodak	...	...	5449	9 3/16	7 7/8	8 5/16		+	7/16
24 1/4	10 3/4	Softech	...	...	16	687	4 1/16	3 3/4	3 7/8	-	1/16

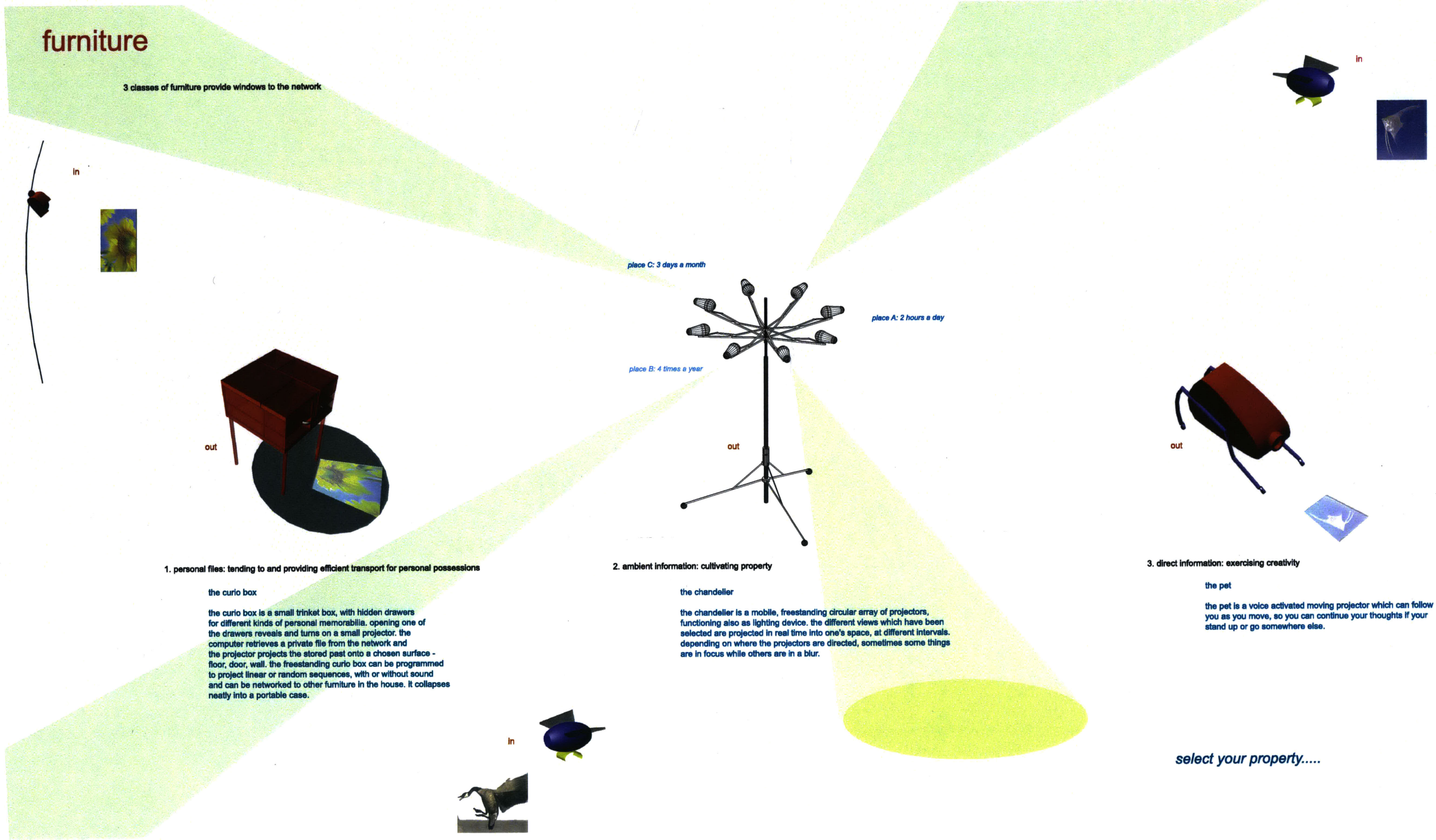
please select and name your files for transfer...



board 3
furniture

furniture

3 classes of furniture provide windows to the network



1. personal files: tending to and providing efficient transport for personal possessions

the curio box

the curio box is a small trinket box, with hidden drawers for different kinds of personal memorabilia. opening one of the drawers reveals and turns on a small projector. the computer retrieves a private file from the network and the projector projects the stored past onto a chosen surface - floor, door, wall. the freestanding curio box can be programmed to project linear or random sequences, with or without sound and can be networked to other furniture in the house. it collapses neatly into a portable case.

2. ambient information: cultivating property

the chandelier

the chandelier is a mobile, freestanding circular array of projectors, functioning also as lighting device. the different views which have been selected are projected in real time into one's space, at different intervals. depending on where the projectors are directed, sometimes some things are in focus while others are in a blur.

3. direct information: exercising creativity

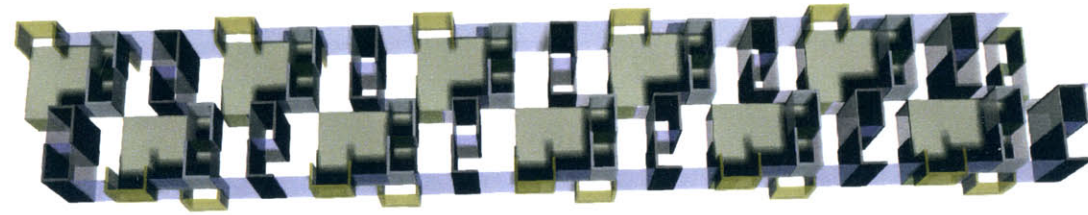
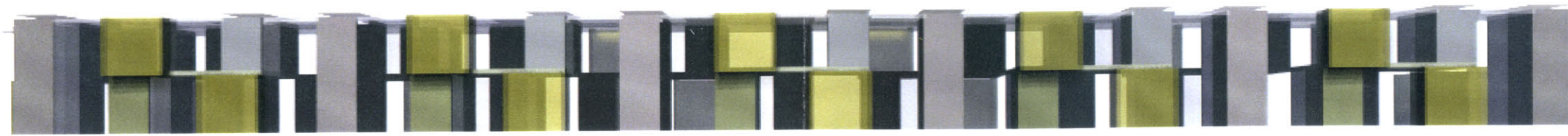
the pet

the pet is a voice activated moving projector which can follow you as you move, so you can continue your thoughts if your stand up or go somewhere else.

select your property.....

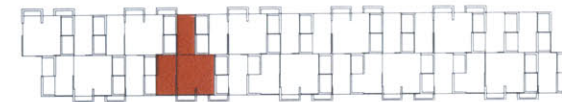
board 5
initial studies of the unit in aggregate form

aggregate

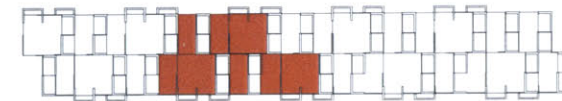


the porous structure allows for the contraction and expansion, and even non-contiguous distribution of living area.

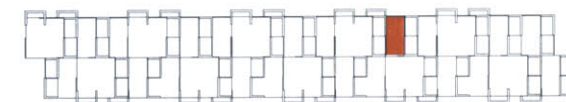
a researcher, 2 years



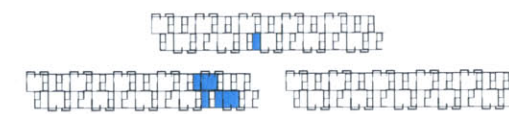
a large family, 4 months



a seminar attendant, 2 weeks



a professor with a separate office space



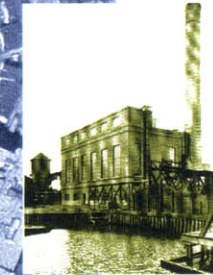
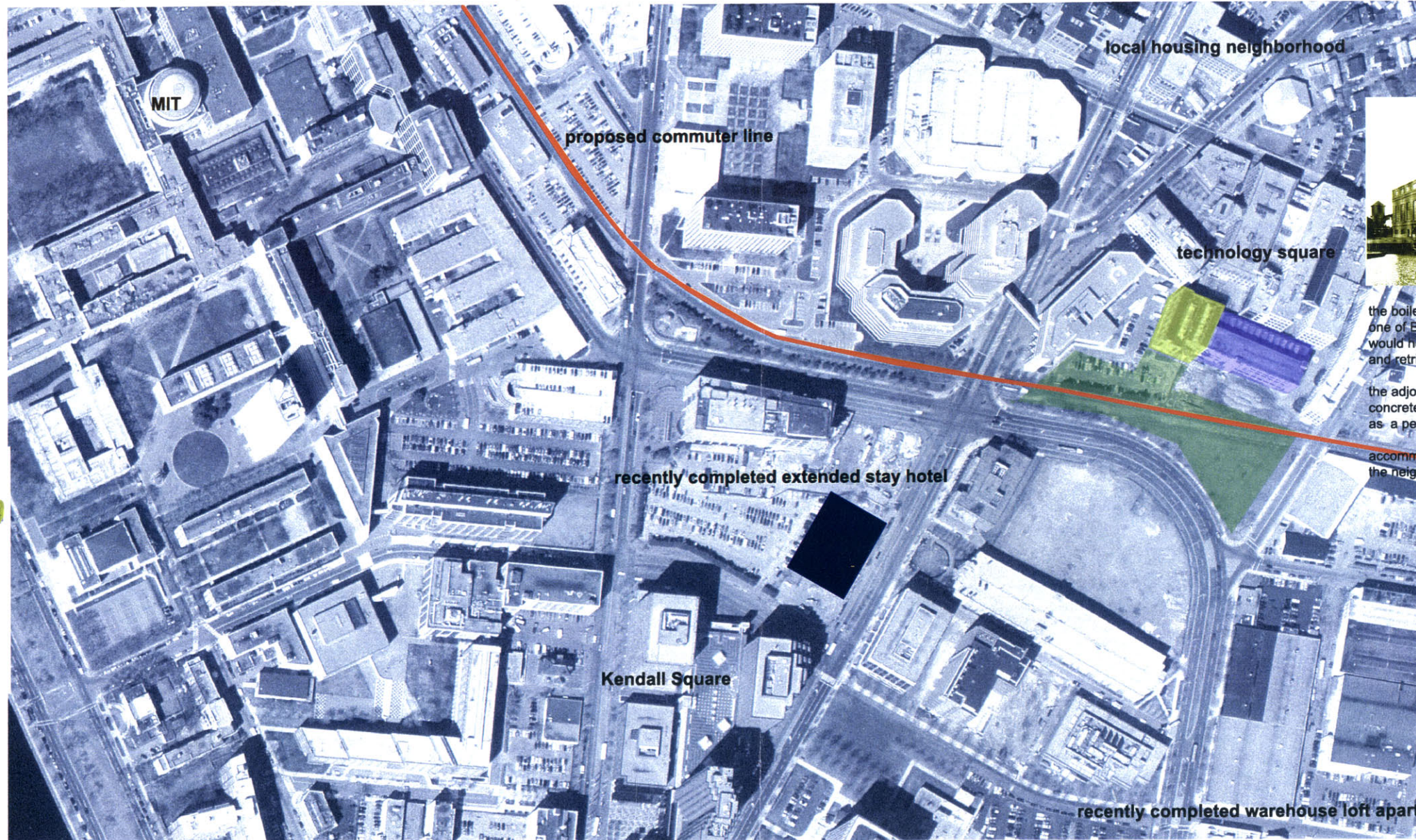
board 6
an example of a site location

complex



42.37N, 71.11W (Cambridge, MA)

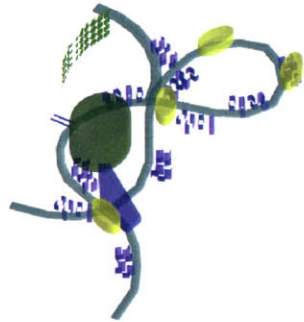
the site chosen for Cambridge is located amidst residential, university, and hi-tech research programs

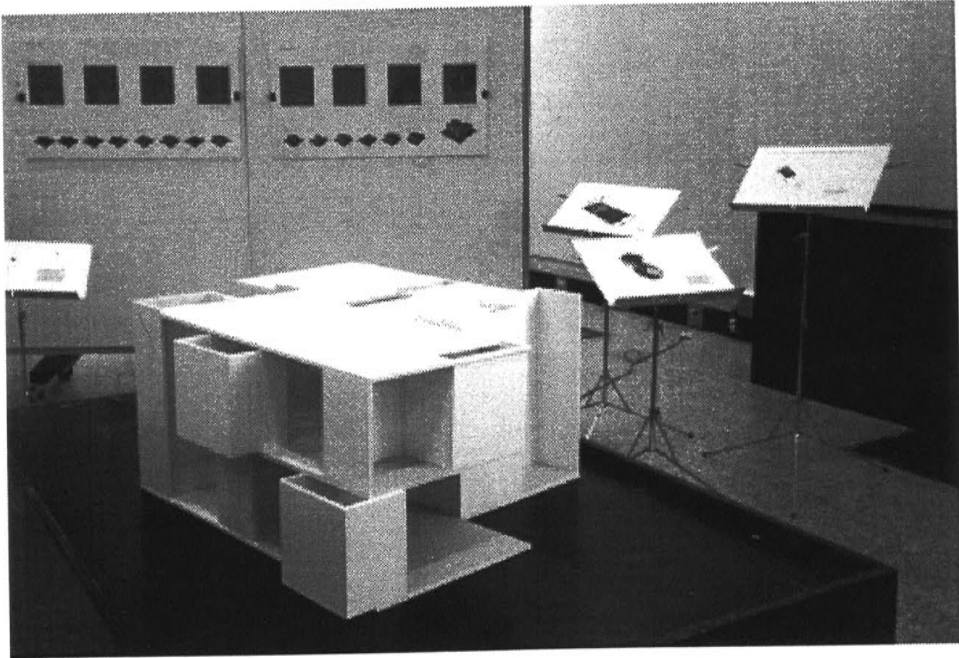


the boiler room of Boston Woven Hose, one of Boston's oldest rubber manufacturers, would house the Cambridge digital archive and retrieval center

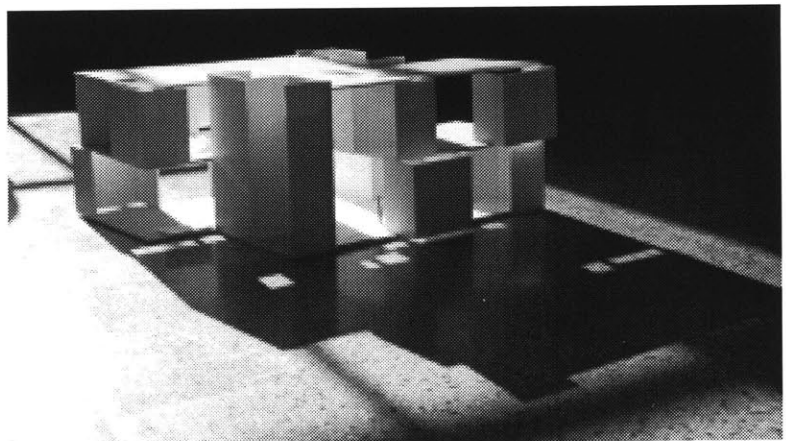
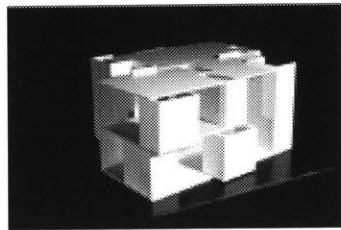
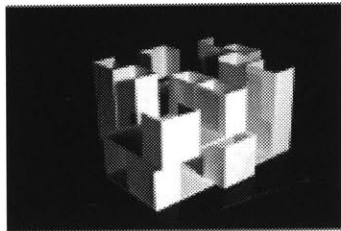
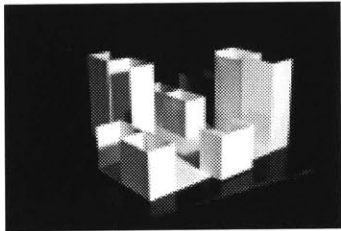
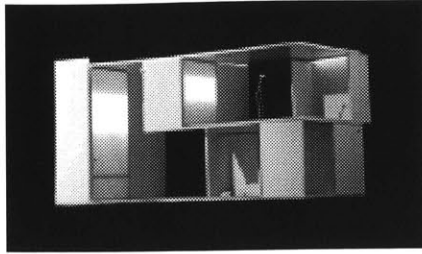
the adjoining warehouse, the first reinforced concrete structure in Cambridge, would serve as a personal material bank

accommodation facilities would be located on the neighboring site

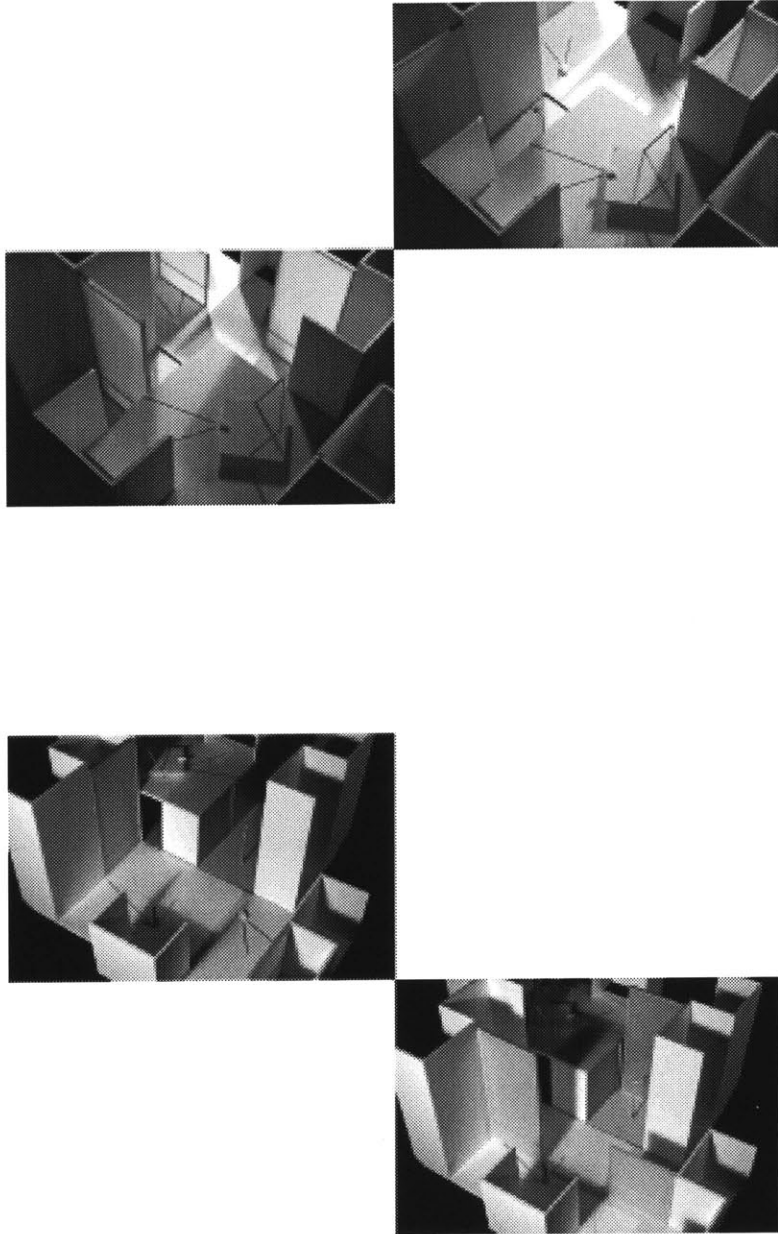




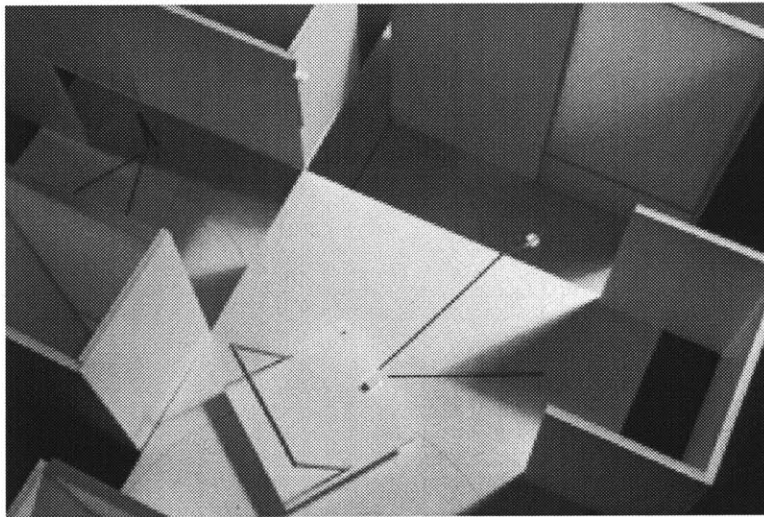
model of the unit
demonstration of the spatial concept



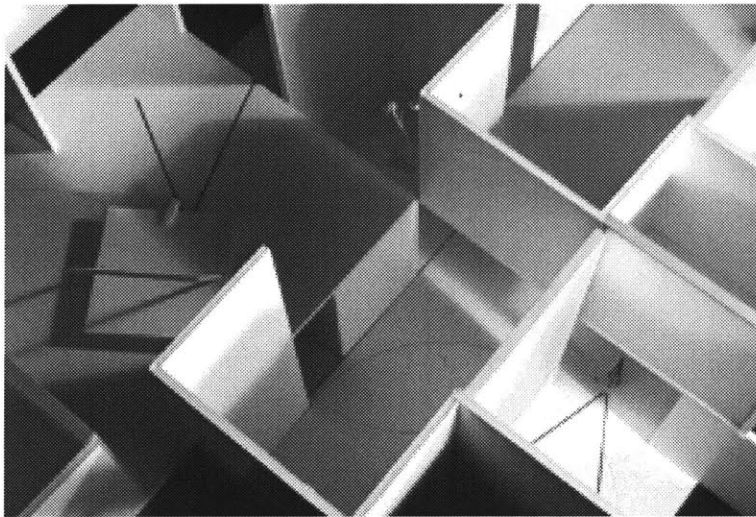
models showing the basic L-shaped spaces forming the units, the allocation of one and two story niches, and the porosity of the resulting structure



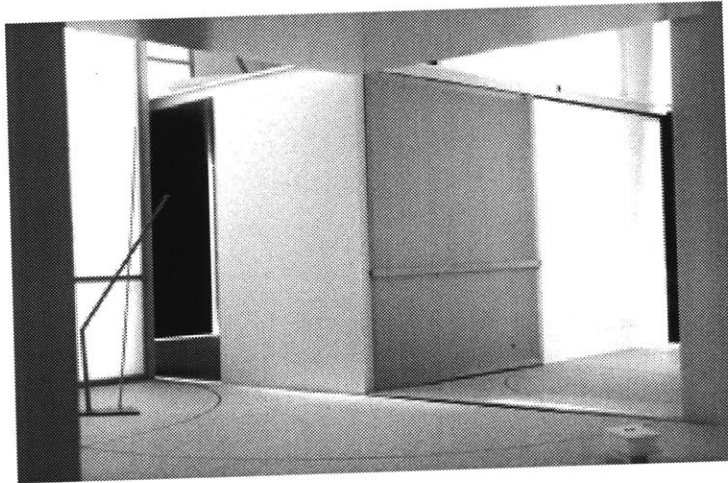
sequence of photos showing the changed nature of space through the use of large screens, or defectors



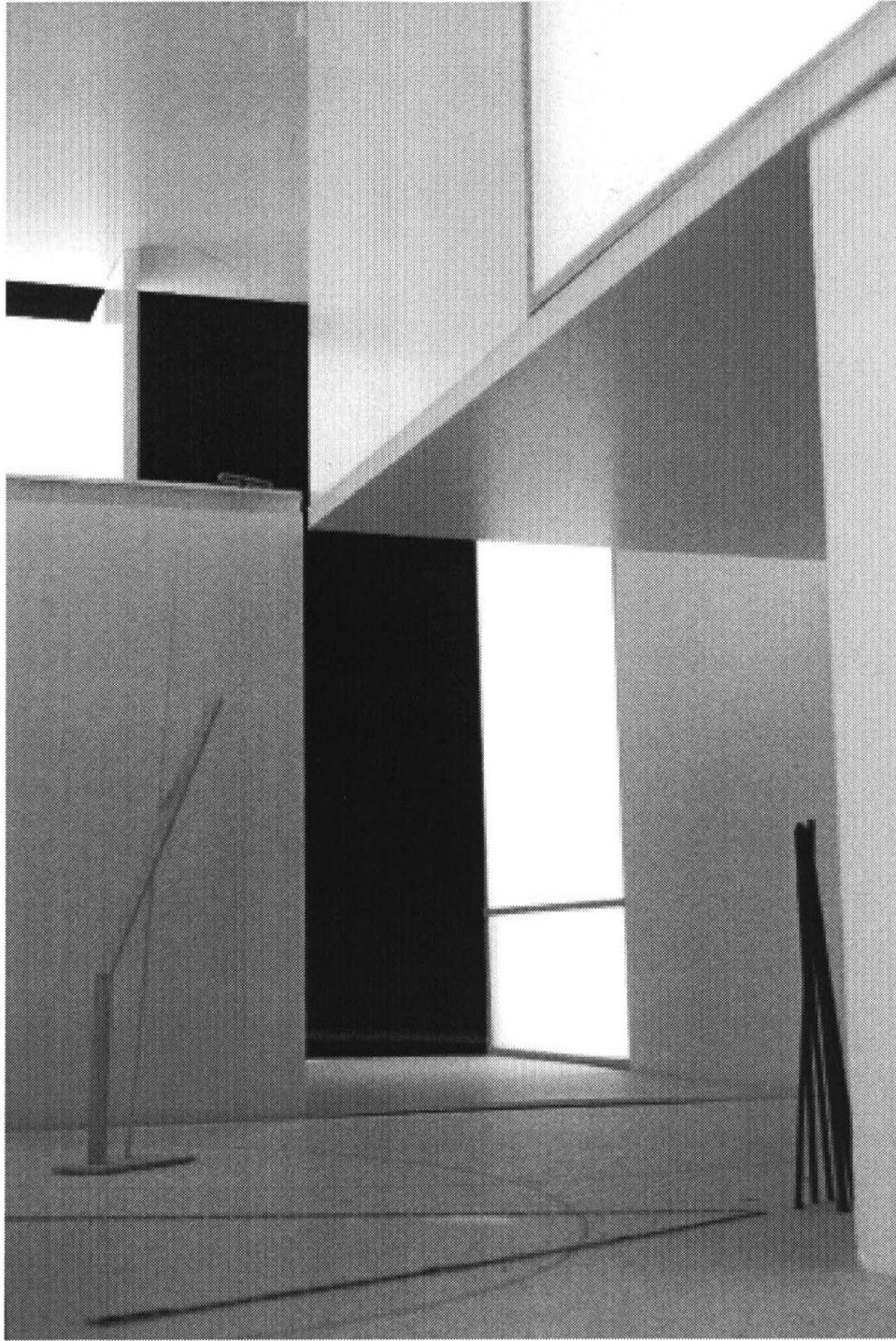
*model showing the bi-leveled space of a unit, which contains both single and double height spaces;
the center of the unit is a point , around which the space of the unit circulates*

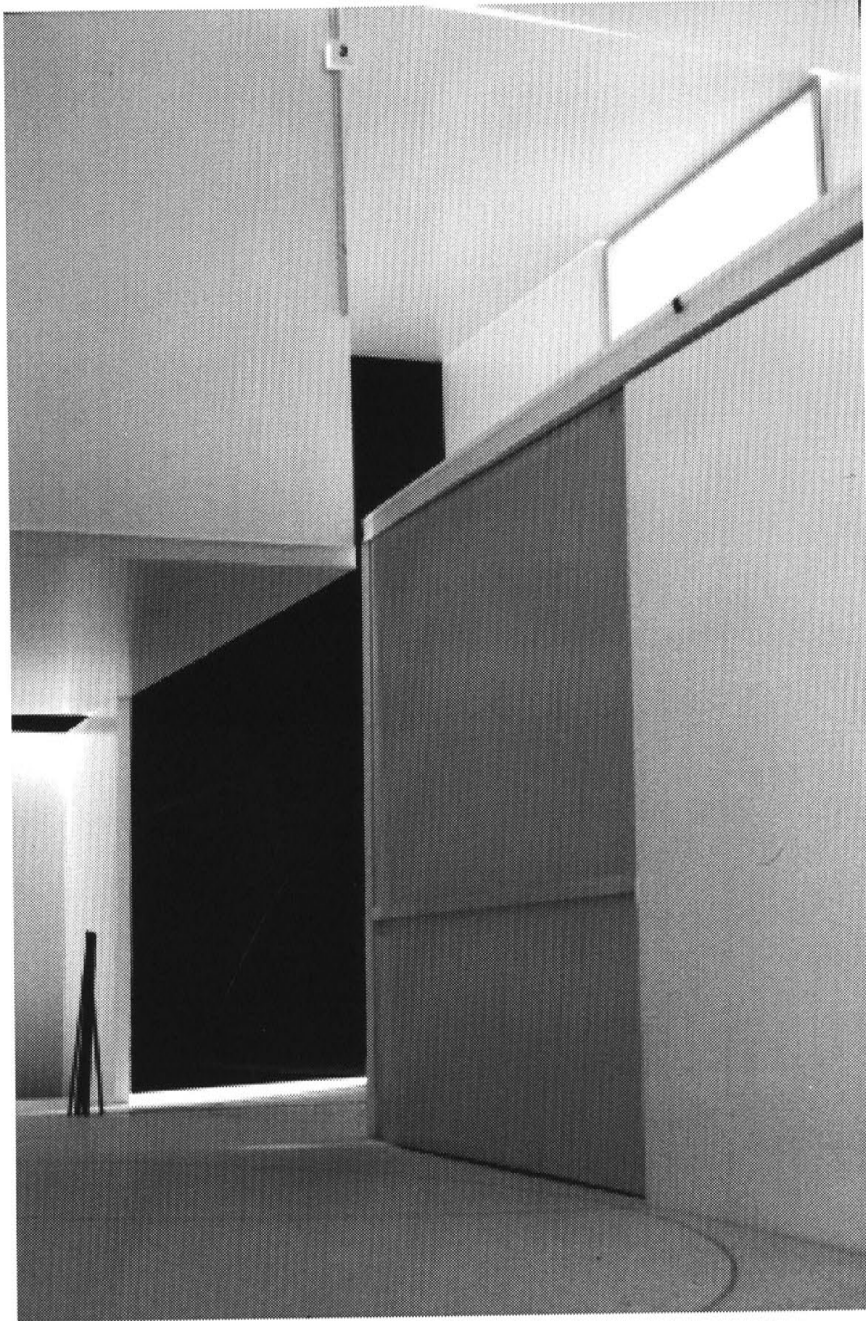


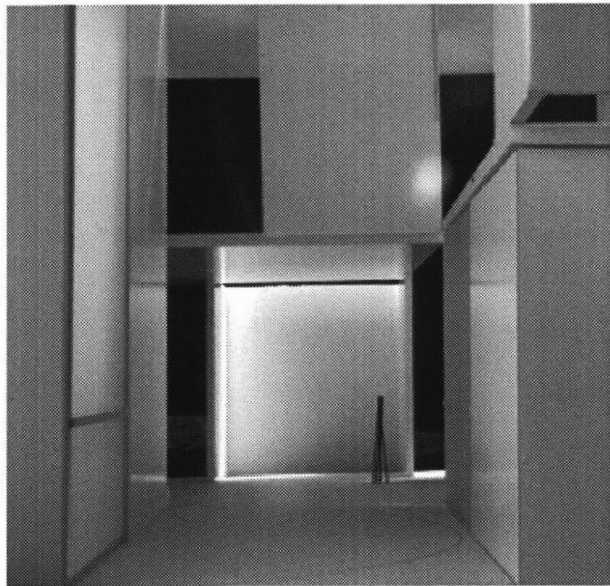
model showing how the use of the large deflectors create a richness of pockets from the rerouting of the flow of space



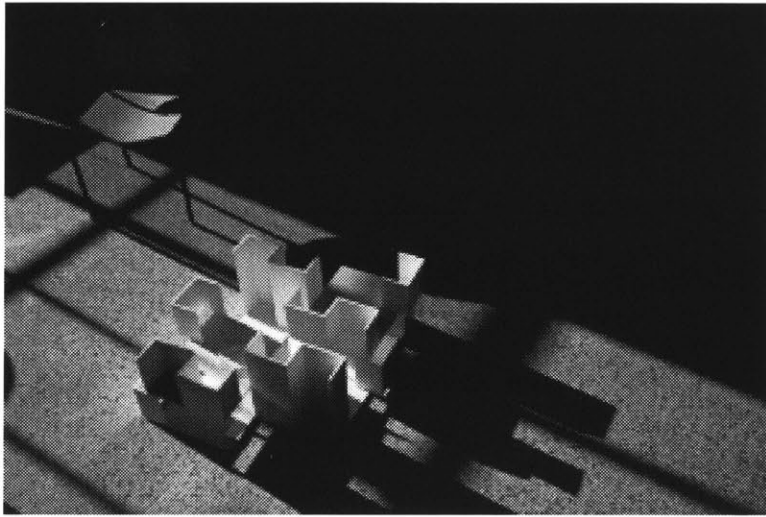
interior views of the unit







interior views of the unit

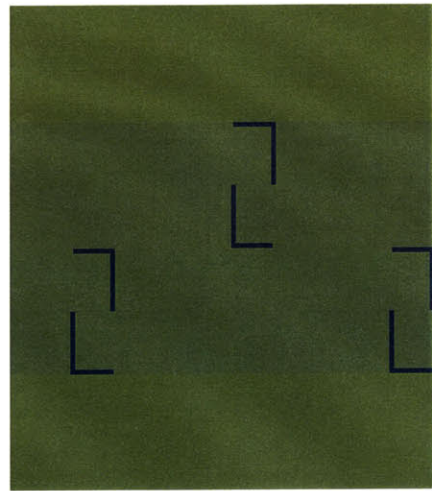


the final model in the dome cafe

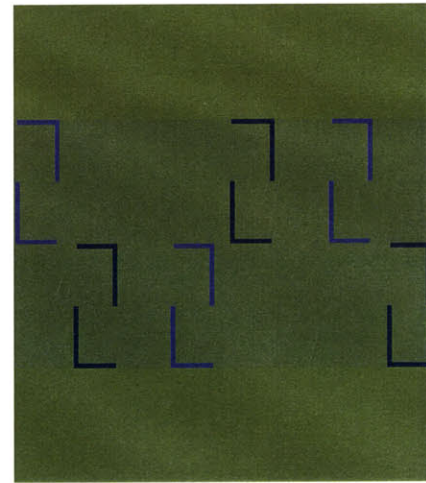
board 7
analysis of the spatial components of the unit

unit components 1

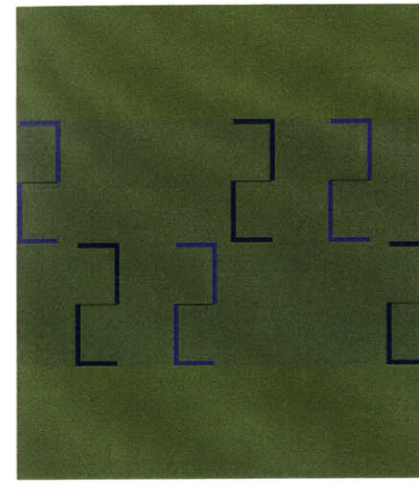
ground floor



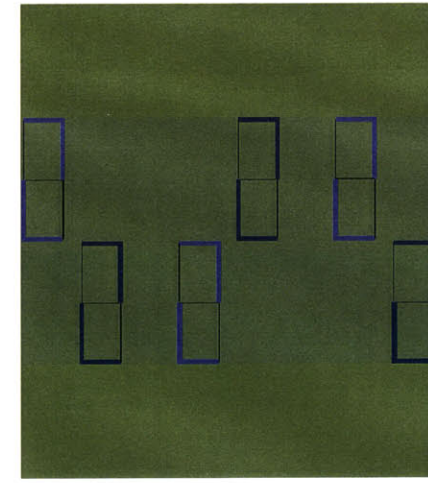
double height primary structure



single story primary structure



locks regulate flow in the X direction



full height deflectors create niches, transform space

double height primary structure



double height locks regulate flow in X direction



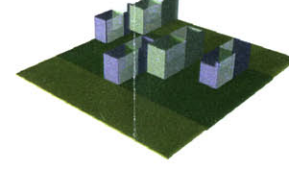
inhabitable niches



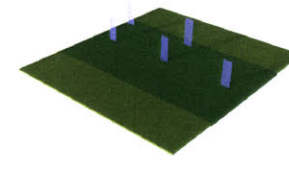
deflectors divert light, transform space



single story locks and niches

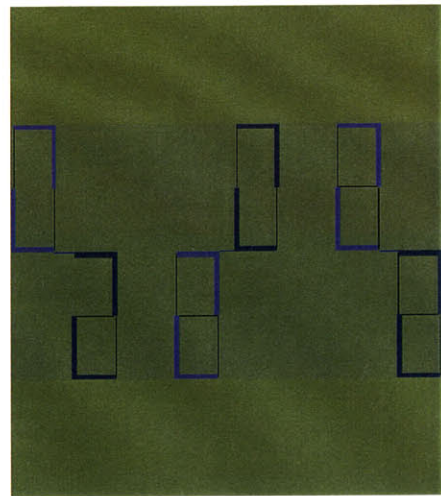


gaps regulate flow in the Y direction

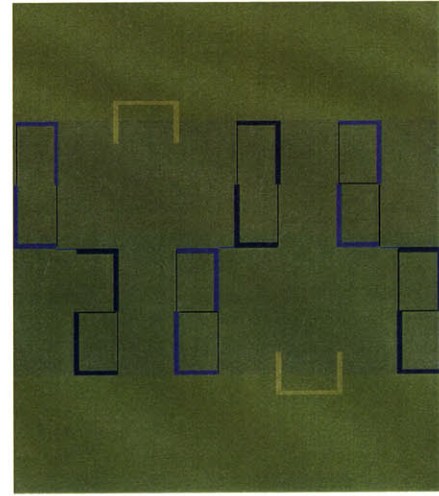


board 8
analysis of the spatial components of the unit

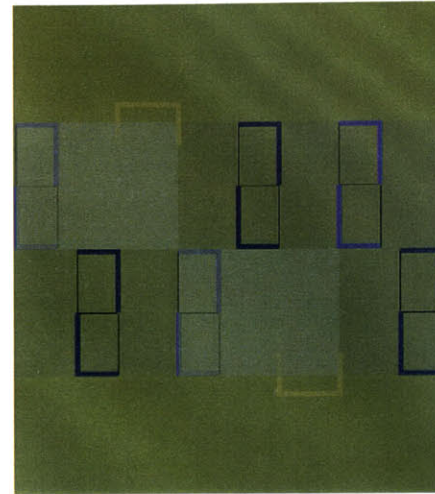
unit components 2



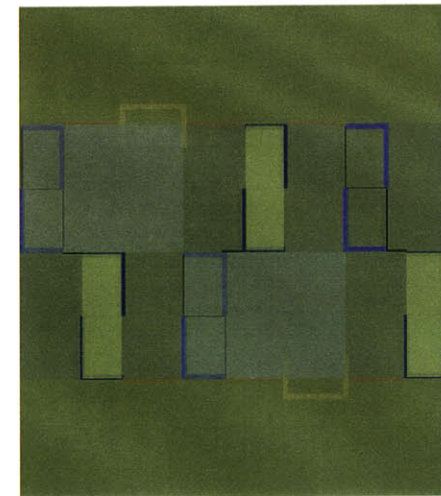
gaps regulate flow in the Y direction



plug in structures act as loading docks for storage



second story floor plates

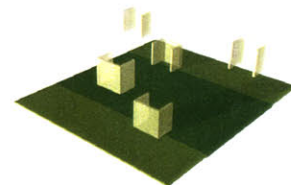


external glazing functions as homepages
light is brought down into the niches

floor plates create L shaped spaces



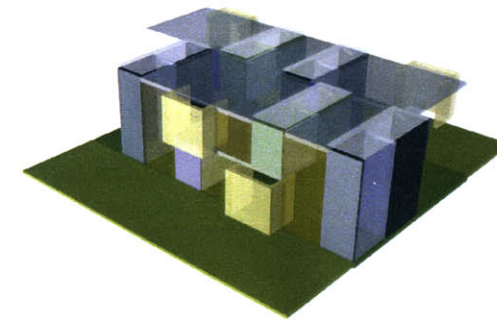
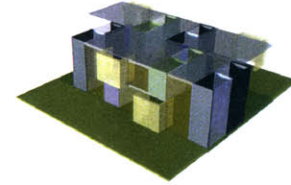
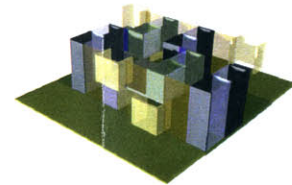
plug in structures



glazing acts as homepages



roof brings in light, collects energy



stands

sphere and chandelier

an alternative definition of individual property, encouraging distributed and/or shared holdings



chandelier



sphere

sphere

IN

the sphere is a collection of video cameras in a place. it can contract into a ball, or expand into a three dimensional halo or web of cameras. variously chosen lenses take different perspectives on a selected subject. if there is a place which has a certain meaning to you, you select and purchase a view and segment of time. perhaps the time of a lens is shared by many. the real time of a place would be distributed and shared, translated via satellite to the chandelier.

chandelier

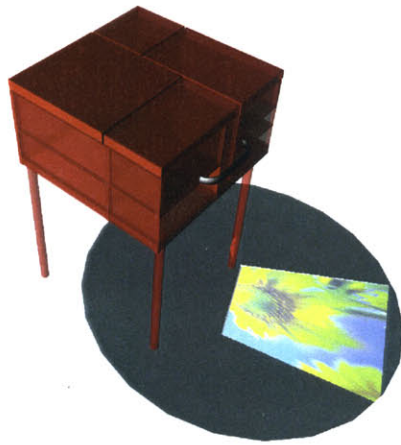
OUT

the chandelier is a mobile, freestanding circular array of projectors, functioning also as a lighting device. the different views one has selected are projected into one's space, onto the ceiling, the floor, or the walls. the circular array can spin on it's axis. depending on where the projectors are directed, and it's distance to a surrounding surface, sometimes some things are in focus while others are in a blur. one turns the projector by taking the cap off the head. one manually decides on the orientation of the stand.

stand 1
chandelier

curiobox

a source of continuity is the steady accumulation through time of memory space



curiobox

OUT

the curio box is a small trinket box, with hidden drawers of all sorts for different kinds of personal memorabilia. opening one of the drawers reveals and turns on a small projector; the computer retrieves a private file from the network and the projector projects the stored past onto a chosen surface - floor, door, wall. the freestanding curio box can be programmed to project linear or random sequences, with or without sound and can be networked to other furniture in the house. it collapses neatly into a portable case.

stand 2
curio box

pet

a paralel working ensemble of interactive surfaces integrated into daily habitual actions able to accommodate changing body location and position



pet

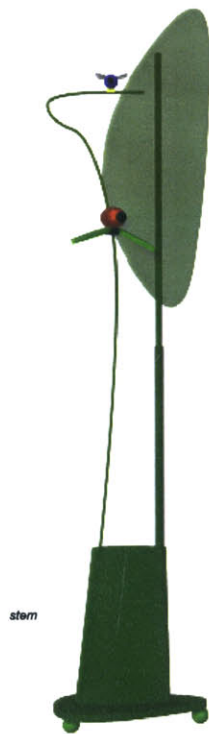
OUT

this is a voice activated moving projector which can follow you as you move. it is networked to the other surfaces so you can continue your thoughts if you stand up or go somewhere else.

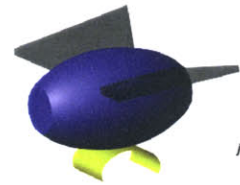
stand 3
pet

junebug and stem

reliance upon telepresence requires multiple and diverse means for self presentation



stem



junebug

junebug

IN

the junebug is a voice activated robot that flies around but always with you in view. you are wearing a necklace so it knows where you are. it takes an active view of you, sometimes zooming in, sometimes out. you can tell it to fly around randomly or choreograph it. you can tell it to go fast or to sit down. in any case, this is the view which others are getting of you.

stem

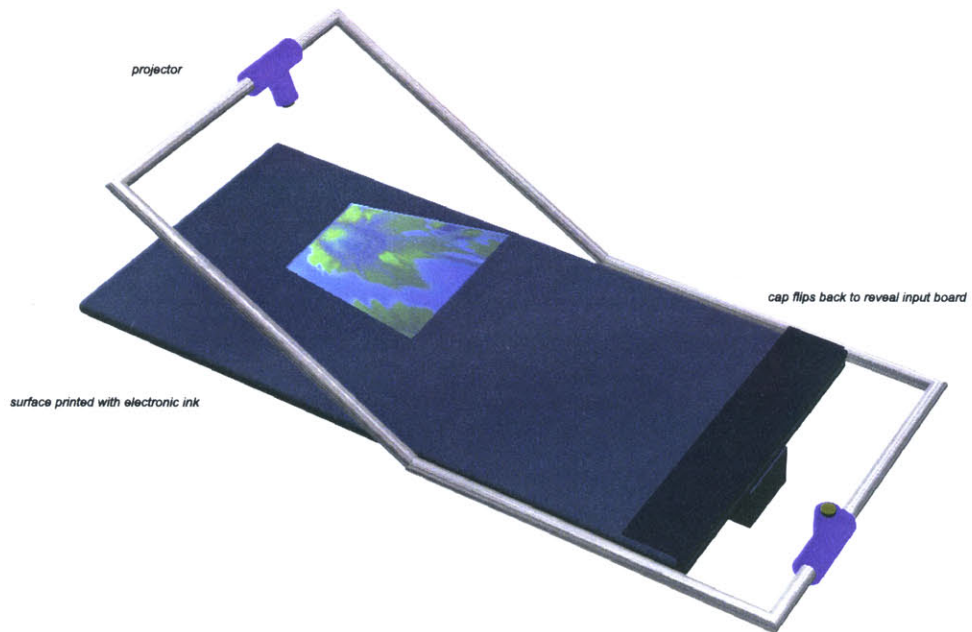
OUT

you can make the junebug land on the stem, an adjustable free standing mobile video camera stand. the stem is a passive camera, non moving, but you can point it where you like. it has a screen, so you can see what the camera is seeing, or who might be watching you.

stand 4
junebug and stem

faces

parallel working ensemble of interactive surfaces integrated into daily habitual actions accommodating changing body location and position



surfaces **IN OUT**
surfaces at various heights accommodate various body positions. these are computing devices with speaker, projector, key input, and electronic ink display surfaces. the surfaces can be used to work, play, eat, or sleep on. they have sensors imbedded in them, so as you move from one to the next, whatever is engaging you at the moment also moves.

stand 5
surfaces

shakers, quill and ink

multiple new means for personal invention and language creation



shaker

IN

shakers are hand held key devices that allow you to input with your arms in an unconfined position. they are wireless touch sensitive keyboards that are networked to surfaces. they can be taught to recognize you own gestures.

quill and ink

IN

quill and ink recognizes your hand writing through the establishment of a coordinate point, letting you work out your thoughts on a sheet of paper.

stand 6
shakers

selected bibliography

barthes, roland, camera lucida, hill and wand, new york, 1981

goytisolo, juan, space in motion, lumen books, new york, 1987

heidegger, martin, "bauen, wohnen, denken"

pink, daniel h., "the 1099 rebellion", the new republic, april 27, 1998

rajchmann, john, the virtual house, mit press, cambridge, 1998

sennett, richard, der flexible mensch die kultur des neuen kapitalismus, berlin verlag, 1998

serres, michel, "the origin of language: biology, information theory, and thermodynamics", in *Hermes: Literature, Science, and Philosophy* (John Hopkins University Press, 1982)

thoreau, henry david, walking, concord, 1862

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