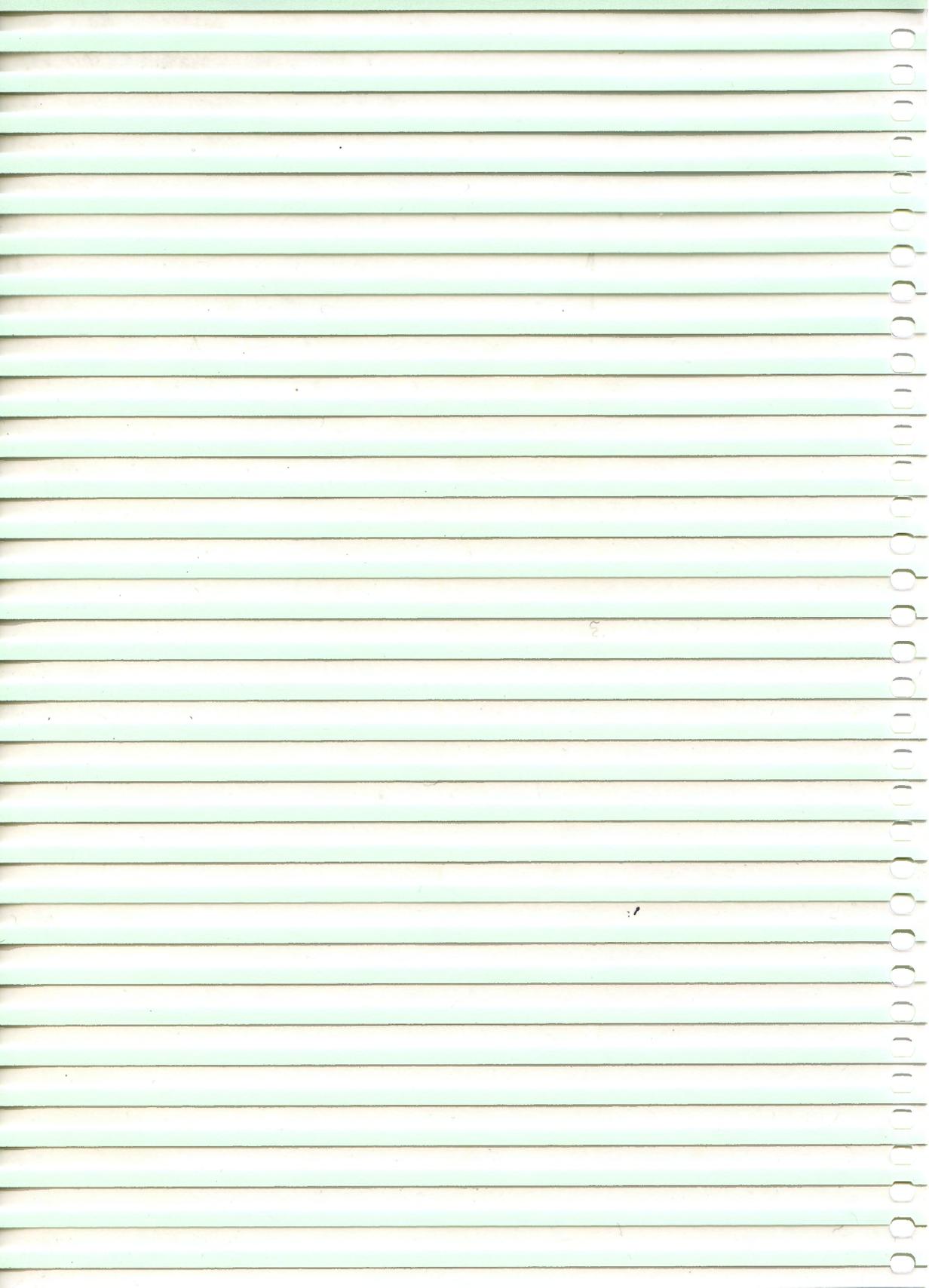


DELLER + SCOFFIELD



Essay by Keith Mitnick



DILLER + SCOFIDIO



MAP 10

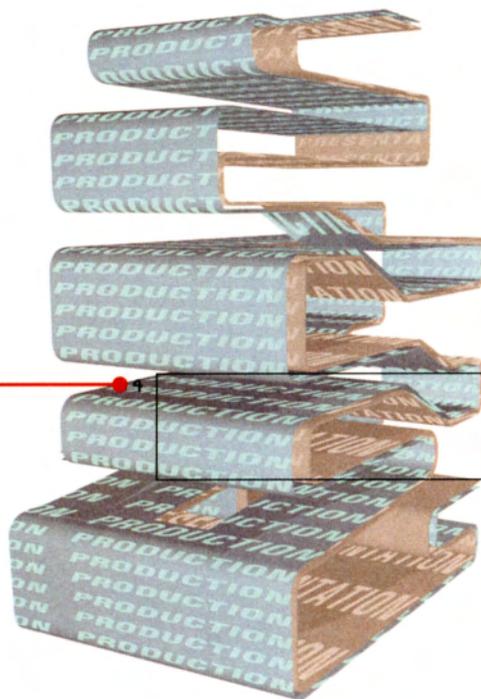
Essay by Keith Mitnick

MICHIGAN
ARCHITECTURE
PAPERS

14

3

Resident (white coat)



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Elizabeth Diller and Ricardo Scofidio question how architecture contributes to a probing and unresolved engagement with the world by challenging the images of stability and control we conventionally infer upon buildings. Their proposed design for the Eyebeam in Manhattan not only reveals the innards of the museum by creating a transparent billboard of the people, art, and media-technology it contains, but also frames the intrinsically mutable identity of a contemporary cultural institution. In the end their design for this new media arts and performance center does much more than simply provide an armature for a new vision of art and technology, it is the vision itself. The Eyebeam design promotes the intersection of architecture and new media by offering new ways of exploring space, information and the various technologies with which they are created and re-defined. Diller and Scofidio's proposal weds the traditionally static and concrete nature of architecture with the immaterial and temporal qualities of new media. By uniting the frequently opposing poles of art and technology, and incorporating questions of exhibition, production, and research, the building actuates a new condition of overlap and impermanence.

6 INTRODUCTION

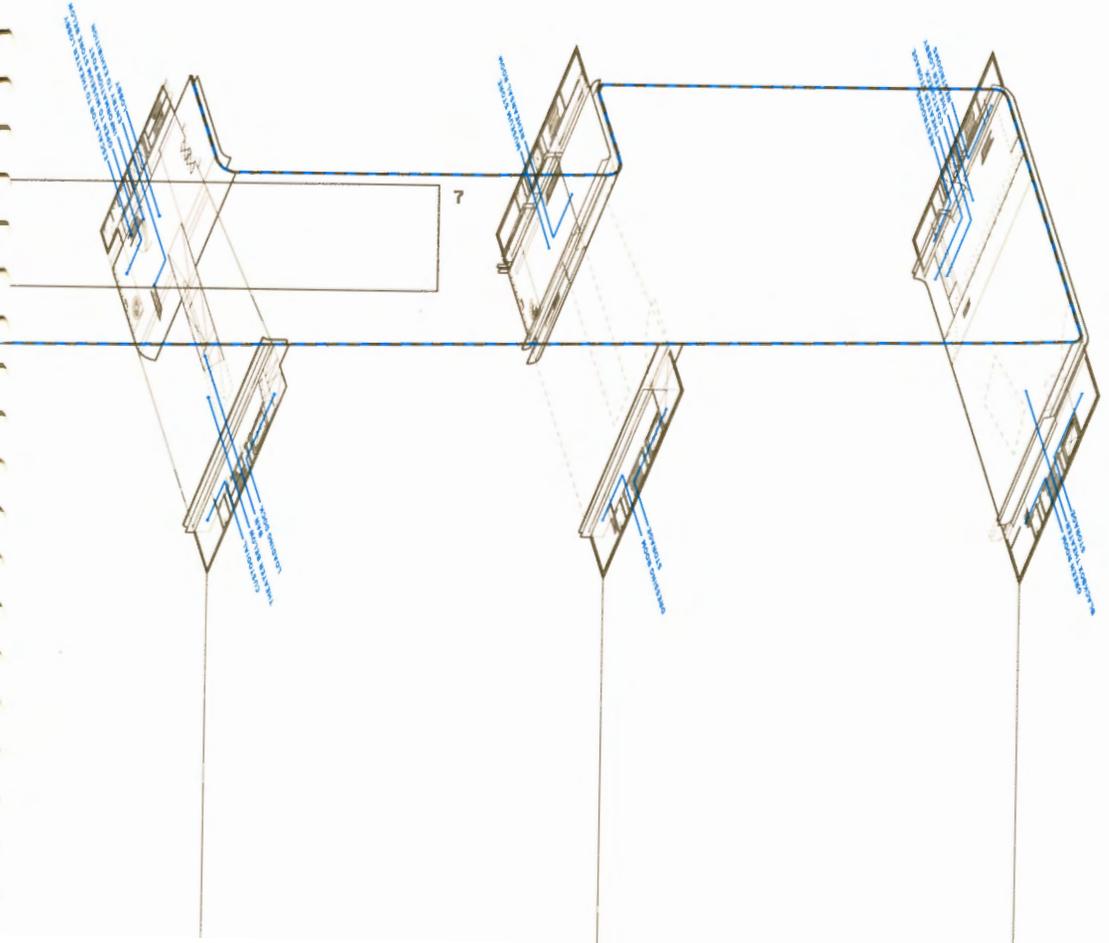
Keith Mitnick
Assistant Professor of Architecture
University of Michigan

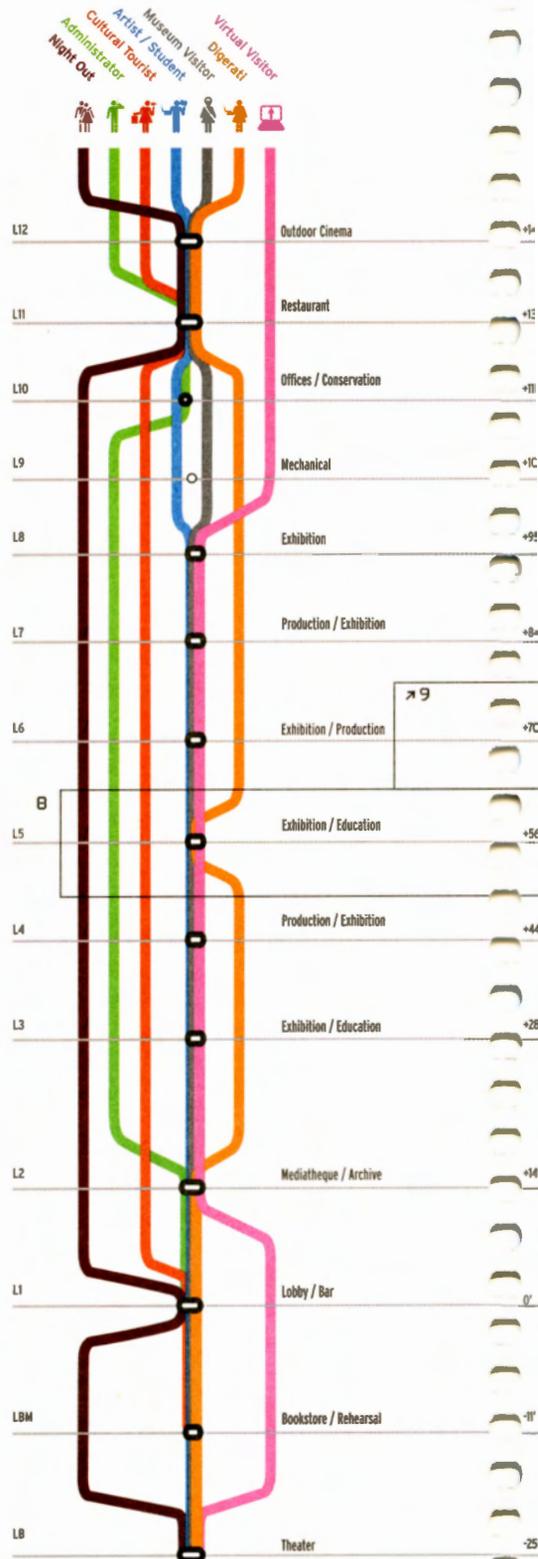
010

L1 0' Lobby / Bar

LBM -11' Bookstore / Rehearsal

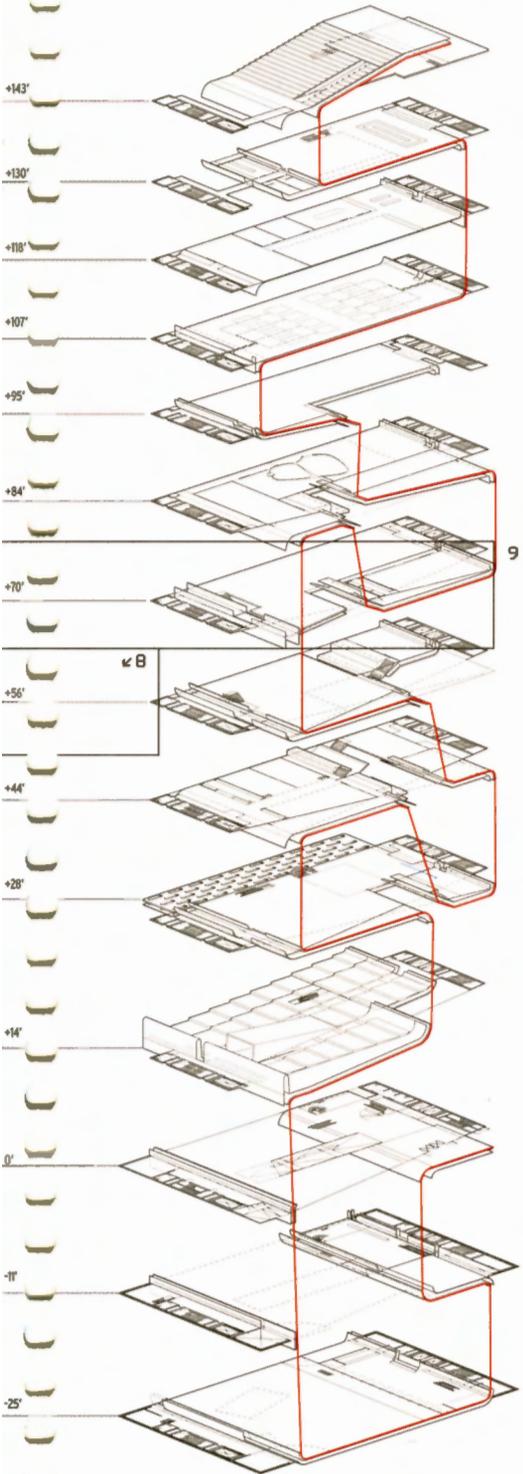
LB -25' Theater





EYEBEAM

MUSEUM OF NEW MEDIA



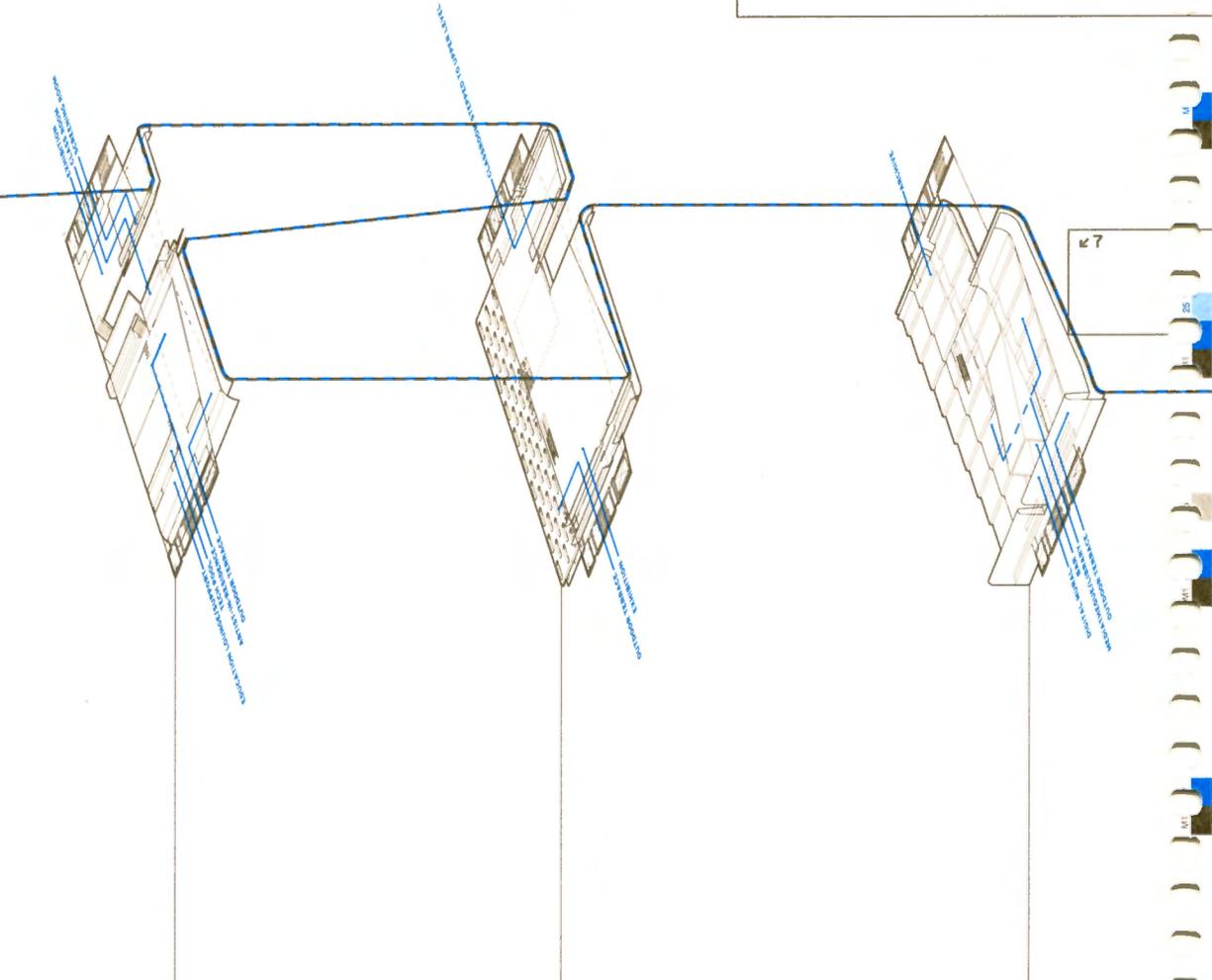
L4 +44' Production / Exhibition

L3 +28' Exhibition / Education

L2 +14' Mediatheque / Archive

10

7



This is Not a Book

Most forms of graphic design favor the rational, homogenous, and pristine over the disheveled, smeared, or mottled, which are considered to be lacking in order. Irregularity is suppressed while *order* is upheld as a singular ideal against which all deviation is considered to be chaotic or arbitrary. As a consequence, books tend to be organized by structures of logic and graphic standards that produce seemingly neutral—but narrowly defined—patterns of interpretation. These narrative structures exist independently of the material they present, yet encode it with the cohesive bias of an extraneous order.

As an alternative to standard models of appearance and sequencing, the form of this book has been determined as much by the logic of its own fabrication as it was by ideas about appearance and the narration of images. The images and texts are arranged simultaneously at two different scales: the unfolded press sheet and the single page. The press sheets are revealed in the stacking of signatures, and may be viewed at the scale of printing by removing the binding and unfolding them, or at the scale of the book, by tearing the bound edges and reassembling the page sequence. In so far as this book diagrams the intersection of bookmaking procedures with the display of images, it mirrors the operational interlacing of *production* and *presentation* implemented by Diller and Scofidio in their design for the Eyebeam.

In a world as complex and chaotic as ours, it is surprising that there are so few material emblems of the aberrant and off-kilter. Perhaps a more inclusive cultural orientation towards the unresolved, inchoate and deviant aspects of people and things would promote a greater awareness of the forces that produce them. Much of Diller and Scofidio's work does precisely this by challenging the proliferation of reduced and stable representations of the world and engaging flux and mutation as an equally immanent condition.

These are Not Architects

Architecture not only frames views, it produces them as well, but as world events become increasingly blurred, there has been a backlash of anxiety among many that the capacity for art and architecture to stimulate new modes of seeing may be slipping away into arbitrariness. When international conflicts appear to lack resolution and environmental problems solutions, the promotion of even more

INTRODUCTION 11

6

New institutions breed new spatial politics and codes of behavior. The hybrid nature of the Museum of Art and Technology, both museum and production/education facility, evokes an architecture of cross-programming and spatial interleaving. The architectural concept begins with a pliable ribbon that partitions the program in two: *production* spaces to one side (blue) and *presentation* spaces to the other (gray). The ribbon undulates from side to side as it climbs from the street, floor folding into wall, folding into floor, slipping back gradually to fit the diminishing zoning envelope. With each change of direction the ribbon alternately enfolds a production or presentation space, thus combing together the major program divisions and populations of the building (residents and visitors) as well as their diverse activities and speeds. While residents use the east cores and visitors use the west, each must pass through the spaces of the other when circulating between successive levels. The ribbon is sometimes sheared and slipped into alignment with a level above or below, thus, conjoining a production and presentation space. The building is designed as a system of controlled contamination.



12 CONTROLLED CONTAMINATION

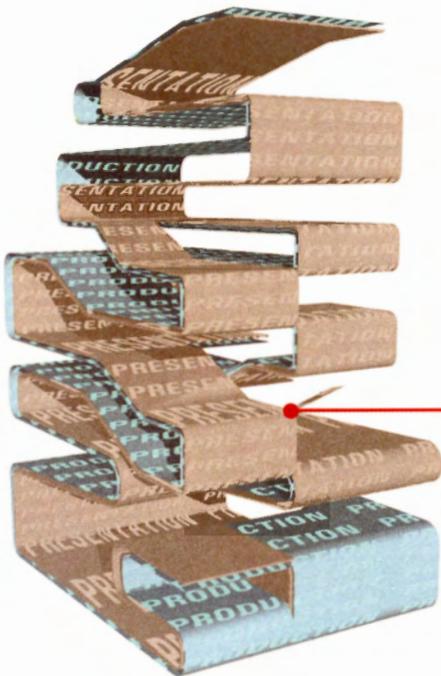


5



13

Visitor (black coat)



14

impermanence and inquisition may be maddening for some, but for others a complicated, dissected and self-critical world is still preferable to a falsely determined picture of one.

This preference for the unstable and ill-defined appears throughout Diller and Scofidio's varied projects, and their endeavors generally reflect a sense of the world that is anything but resolved. At the core of their work is a question not only about the production of artifacts, and the meanings we assign to them, but also about the distinctions and classifications by which order is created among objects and ideas: Why this and not that? What do we mean by "architecture" that is different from "technology," and what bearing might the reconceptualization of the former have upon the latter, and the inverse?

Much of Diller and Scofidio's work has focused upon the instrumentation of drawings that anticipate the mechanics of construction, and buildings that emulate the abstraction of the drawings by which they were conceived. The work cycles around the divide that separates graphic and technological operations of drawing from the material exigencies of construction. Their Blur Pavilion in Switzerland captures fantastically such oscillations between the production of a visual effect and the revelation of the means of producing it. At one moment its form is nothing more than a skeleton and in the next—at its foggiest—its apparent form is precisely that which obscures the very same structure.

As they receive ever more significant commissions, questions arise about the physicality of the buildings and the nature of their *object-ness*. What in the beginning may have been the result of a strong determination to develop architectural ideas in the absence of building opportunities has recently been transformed into the pursuit of *non-buildings*, or more precisely, architecture that questions the permanence and stability we commonly invest buildings with, and the meanings this characteristic stability has come to signify in architecture.

Given the experimental nature of their earlier installation projects it is easy to see the critical intention behind Diller and Scofidio's more explicitly architectural work, yet considering the demands of any large-scale building endeavor, it is uncertain to what degree the concepts driving their design process will remain legible in the final outcome. Will such recent commissions as the Eyebeam or the ICA in Boston engender the kind of social commentary found in their books and gallery installations, or will the critical impact of the work be overshadowed by the

exigencies of building when removed from the isolated frame of the competition board, book page, or the white walls of the gallery?

As one possible means of resistance to the limitations inherent to large-scale construction, Diller and Scofidio frequently incorporate video, surveillance, and other mediating technology as part of the experience of the building. These elements not only raise a range of questions about the changing nature of space-time relations, voyeurism, and the coexistence of multiple realities, but also introduce a perceptual and symbolic frame of reference external to the formal logic of the building itself. Thus by obscuring the categories of architecture, art, and surveillance their recent work manages to maintain a complexity of *auto-inspection* that would not be possible without the inclusion of strangely foreign and unstable points of observation.

In the case of the Eyebeam, a camera-toting robotic spider crawls up and down the building capturing and transposing images from one moment and location to another. The roving camera makes an object of the building it scans and creates a frame of inspection not explicitly identified with the building. As an eye looking upon itself, in the body but not necessarily of it, it choreographs its own perceptual divide and self-scrutiny. The building, and the embodied institution, is treated to its own psychotherapy: it is transformed into a self-reflective perceiving subject, and in doing so actuates the conditions for the complex intersection of media, technology, art, and architecture.

This is Not a Museum

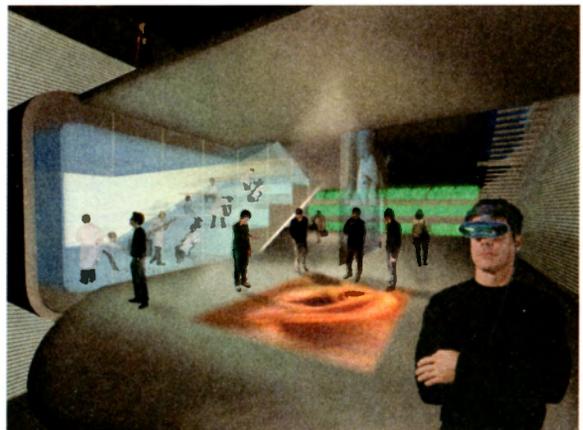
Any new variation on the museum typology involves questions about the nature of the institution and the mechanics of meaning. For instance, what determines the conditions, form, and meanings we assign to the ever-expanding range of art and media installations? Are they produced and contained within the conceptual and technological parameters of each project, or are they continually constructed and redefined from the outside, through the work's presentation—its institutional frame and architectural context? What happens when the practices of civic and cultural agencies resist traditional modes of display and endorsement by taking those modes as subjects to be investigated?

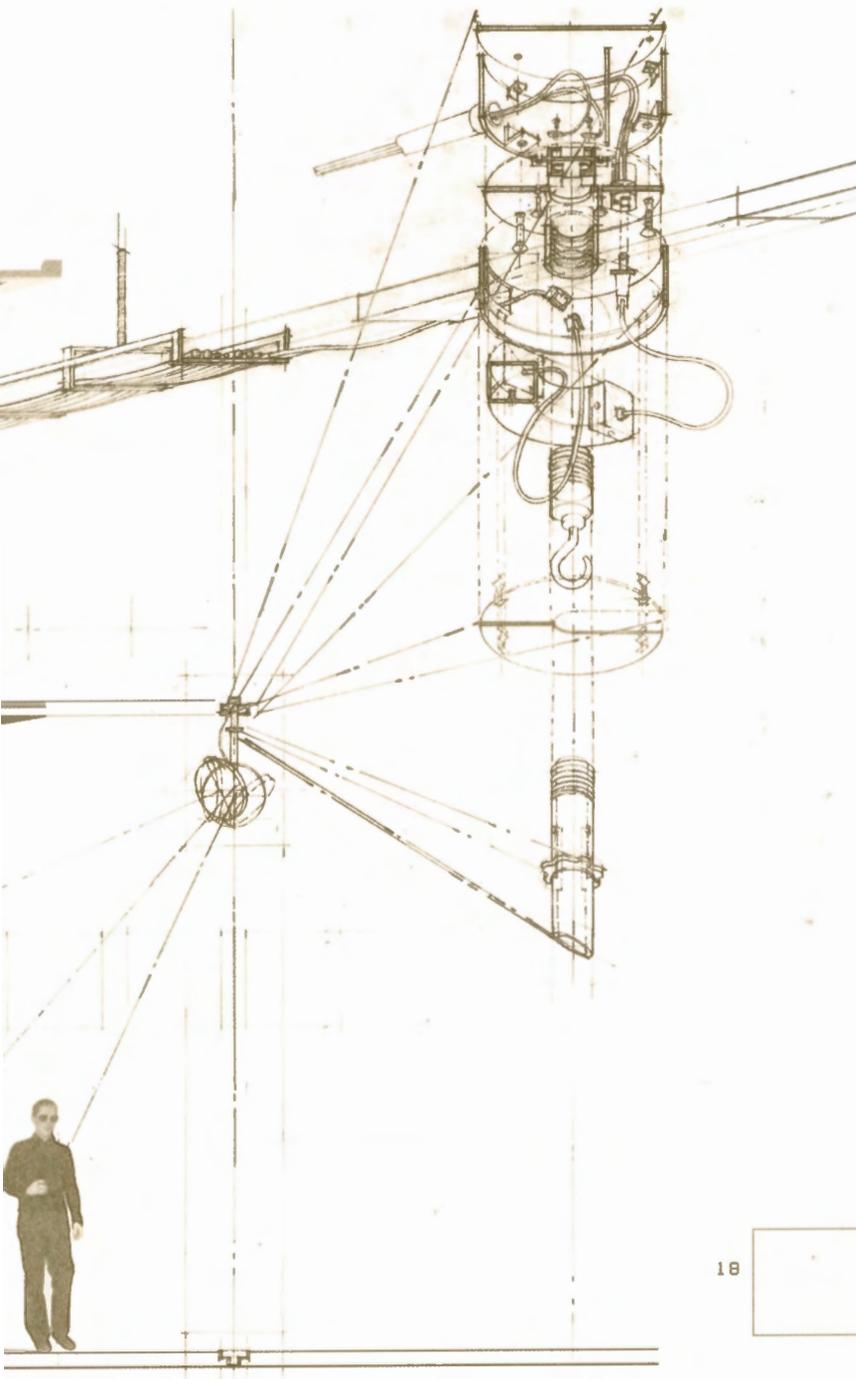
In their design for the Eyebeam, Diller and Scofidio have taken ideas about surveillance and theater developed in earlier work and

Existing buildings surrounding the site are of limited architectural significance and economic viability. Many will not survive the decade, making the context an unstable architectural referent for the new building. While its long span structure and loft-like spaces are in keeping with more notable buildings in the area, the new building is intended as a post-industrial counterpoint to the semi-industrial context of West Chelsea.



Accepting the rapid obsolescence of new technologies, the building is conceived as a supple and spontaneous organism that can accommodate artistic and technological unpredictability. The ribbon is composed of two plies separated by an interstitial zone. A smooth concrete ply lines the exhibition levels while a ply of resin-coated, cast fiberglass panels lines the production/education levels. Aside from the structural and mechanical systems, the interstitial zone houses the building's nervous system. Open conduit troughs carry a variety of data and power lines to a grid of jacks at ceilings and floors throughout the building. These jacks are like skin "pores"—a system of minute punctures in the building's smooth surfaces that pass feeds from its innards to serve external equipment. The open infrastructure allows for continual adaptation of the building to changing technologies. The interstitial zone widens at upturned ribbon ends to house technical control rooms. To advance an awareness of the intelligent systems that drive new media art works, these spaces are visually accessible to the public.





knitted them into their concept for the museum. In their *Para-site* and *Jump-Cuts* installations, individuals are framed and observed by others as desiring subjects ensconced by the all-seeing authority of a network of closed-circuit cameras. The matrix of cameras and monitors capture and transpose the images of viewers beyond the physical constraints of time and movement, and deprive spectators of the freedom to produce and control their own self-images. This dynamic between voyeurism and technology as it relates to the manipulation of personal identity appears repeatedly throughout the Eyebeam, but rather than making a facile image of the technology it employs, or privileging a fixed point of seeing or authority, their design promotes a transparent and malleable structure of diverse perceptual thresholds and overlays.

The design for the Eyebeam is focused as much upon the experience of its users as it is by any issues about construction or materiality. Yet buildings are bound by the limits of their own physicality, and even the most mutable and unpredictable architecture becomes more the representation of *mutability* than it is actually *mutable*. For this reason the structure and image of the Eyebeam is more the reification of the institution itself and the technology it supports, than it is the expression of any specific formal preoccupation. Whether it appears as a frame, an armature, or a sign of the desire to break free of materiality altogether, the building's form is addressed as much to ideas about program, occupancy, and institutional behavior as it is to objects and artifacts.

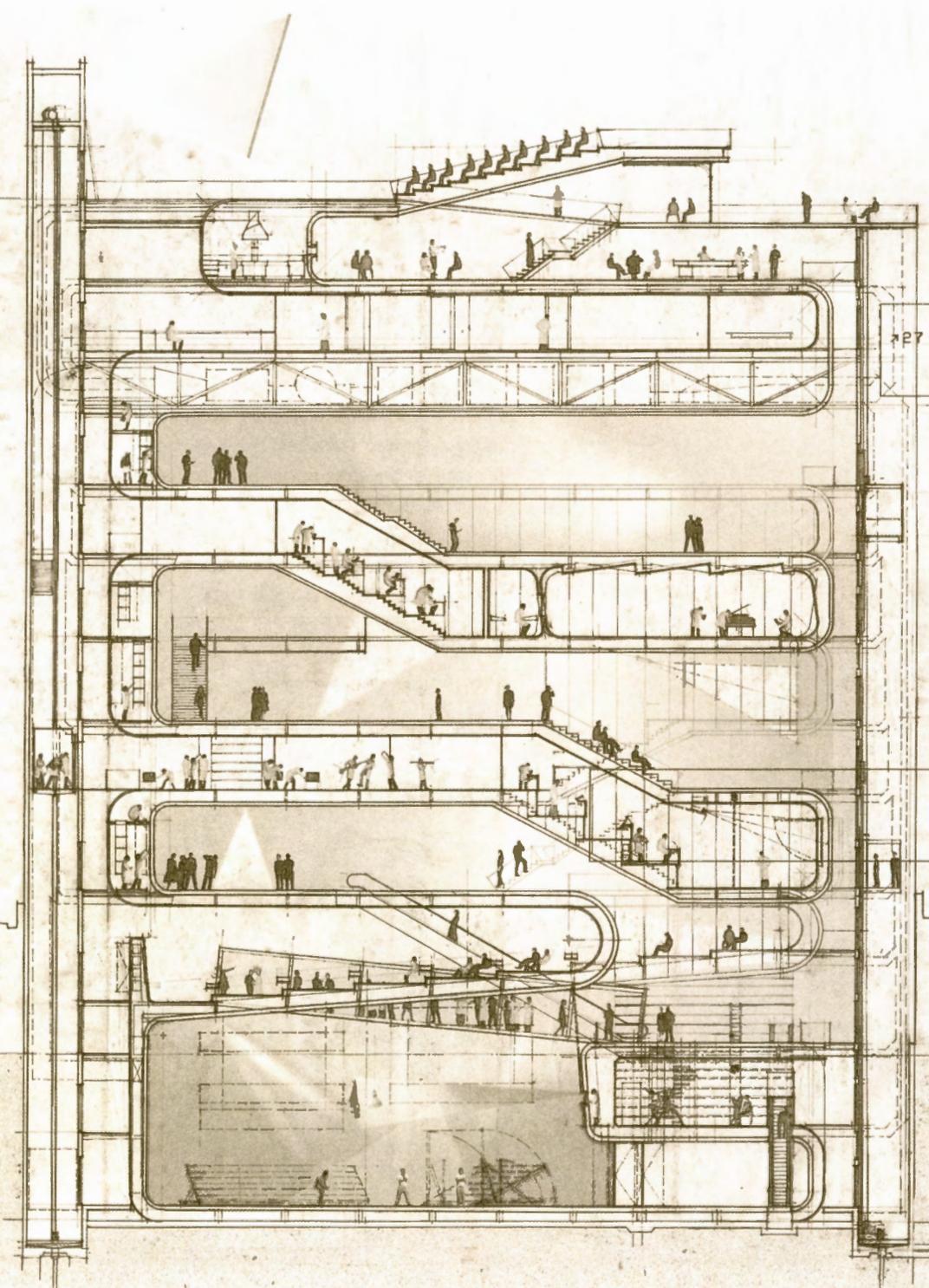
Much of Diller and Scofidio's work questions the dynamics of institutionalized codes of use and behavior, and seeks out the reverberations of different types of technology upon our social and psychological lives. In their *Non-place* project, the space of surveillance is reduced to undifferentiated and inchoate patterns of white snow on a screen suspended between coherent channels of reception. As with much of their work, *Non-place* generally aims to make physical and symbolic borders and distinctions unclear and undifferentiated, and thus the social patterns they produce stop making sense. In the case of the Eyebeam, the welding together of museum space, theater, school, and production studios with a bar, mediatheque, and computer lab redefines these entities both individually and collectively. Be it the sudden abutment of things lacking a conventional relation to one another, or the division of spaces into the categories of production and exhibition, the positioning of activities becomes the primary means for their redefinition.

The undulating ribbon produces a stack of flexible, column-free loft-like gallery spaces. The exhibition circuit follows a contiguous foot path from the lobby to galleries of diverse sizes, heights, and qualities. As future art using emerging technologies cannot be known nor specific environmental requirements predicted, the exhibition spaces of the new building are designed to meet the demands of contemporary art—capable of supporting physically and spatially demanding pieces such as heavy sculptures, large installation works, and light and sound sensitive media pieces. Yet, as future exhibition systems will likely redefine the viewer's relationship to artwork through control and delivery of sound, light, and image, the building is ready to adopt unimagined presentation techniques as they become available.

The grid of jacks or “pores” distributed throughout floors and ceilings of galleries can accommodate several types of exhibition equipment: space, light, and sound control systems; media delivery devices; data and electric feeds; and wireless antennae. The structural mounts can support pre-structured wall framing systems, projection screens, mounts for projectors and speakers, festooning extenders that cantilever equipment to any point, suspension hooks for heavy objects, and track systems that can be outfitted with sound retarding curtains. Feeds at the jacks include line and low voltage electric, a fiber data network upgradable for any standard, Ethernet, Firewire, analog/video lines, and audio lines. Control rooms at gallery ends contain racks of equipment that drive media artworks such as video servers and routers, hubs, audio amplifiers, software patch bays, and other support and monitoring equipment. Flex space is provided for equipment supplied by artists not intended to be on view.

While the future of exhibit sound control will be more a product of the way sound is issued rather than stopped, several control systems are built in place. The contiguous ceiling/wall of the concrete ribbon is cast as a shallow waffle slab, infilled with mineral wool panels, troweled over with several coats of "acoustic plaster" containing progressively smaller mineral particles, and finished with a microporous topcoat pigmented to match the concrete. The result is a seamless and smooth ceiling and wall surface with a high sound absorption coefficient that is contiguous with the floor. An "active noise cancellation" system can delineate spaces as needed. Flexible partitions of mass-loaded vinyl clad in fabric can be used for installations with a high level of acoustic sensitivity. For the control of light, a phototropic louver system maintains a desired light level within galleries despite changing external light conditions.



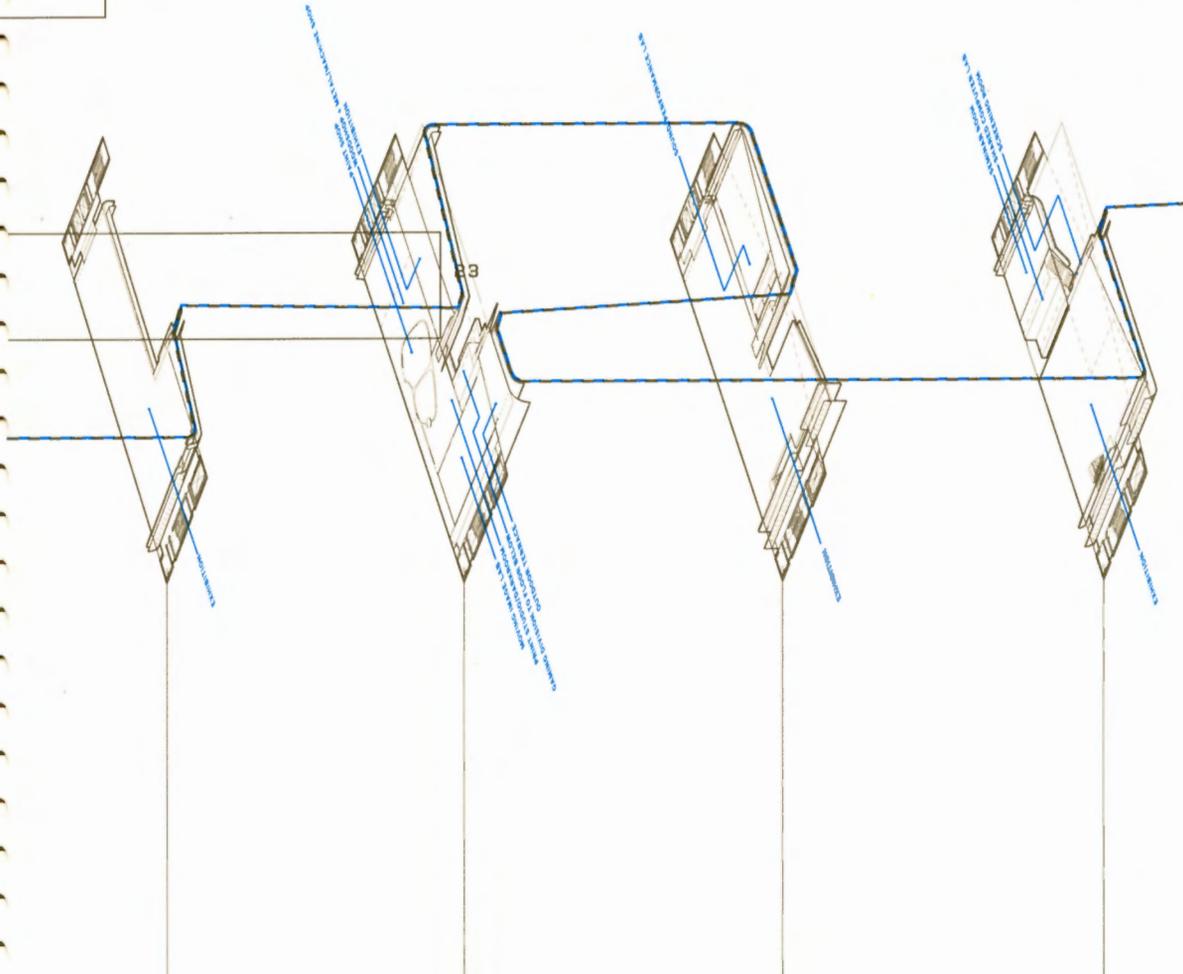


L8 +95' Exhibition

L7 +84' Production / Exhibition

L6 +70' Exhibition / Production

L5 +56' Exhibition / Education

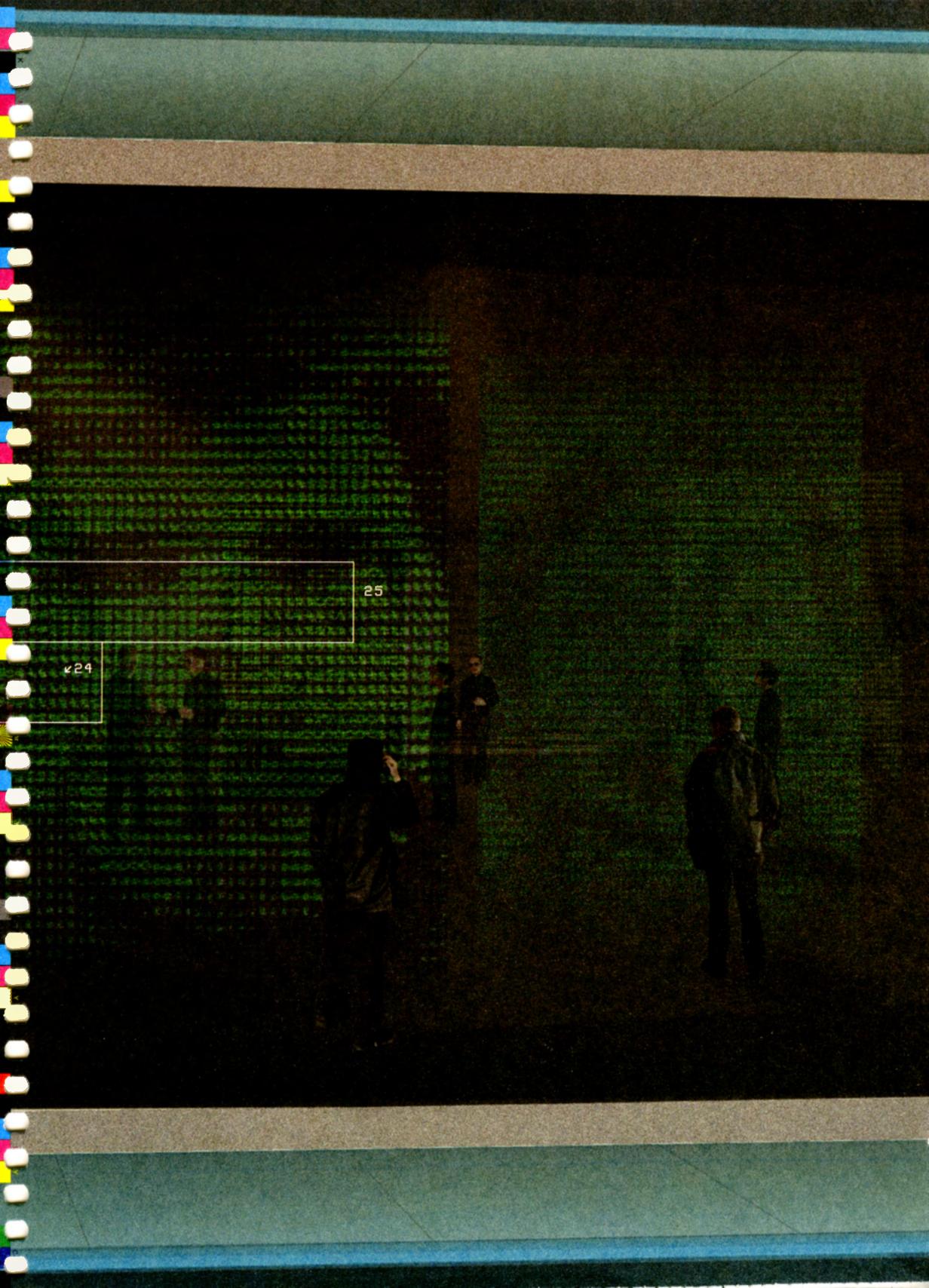




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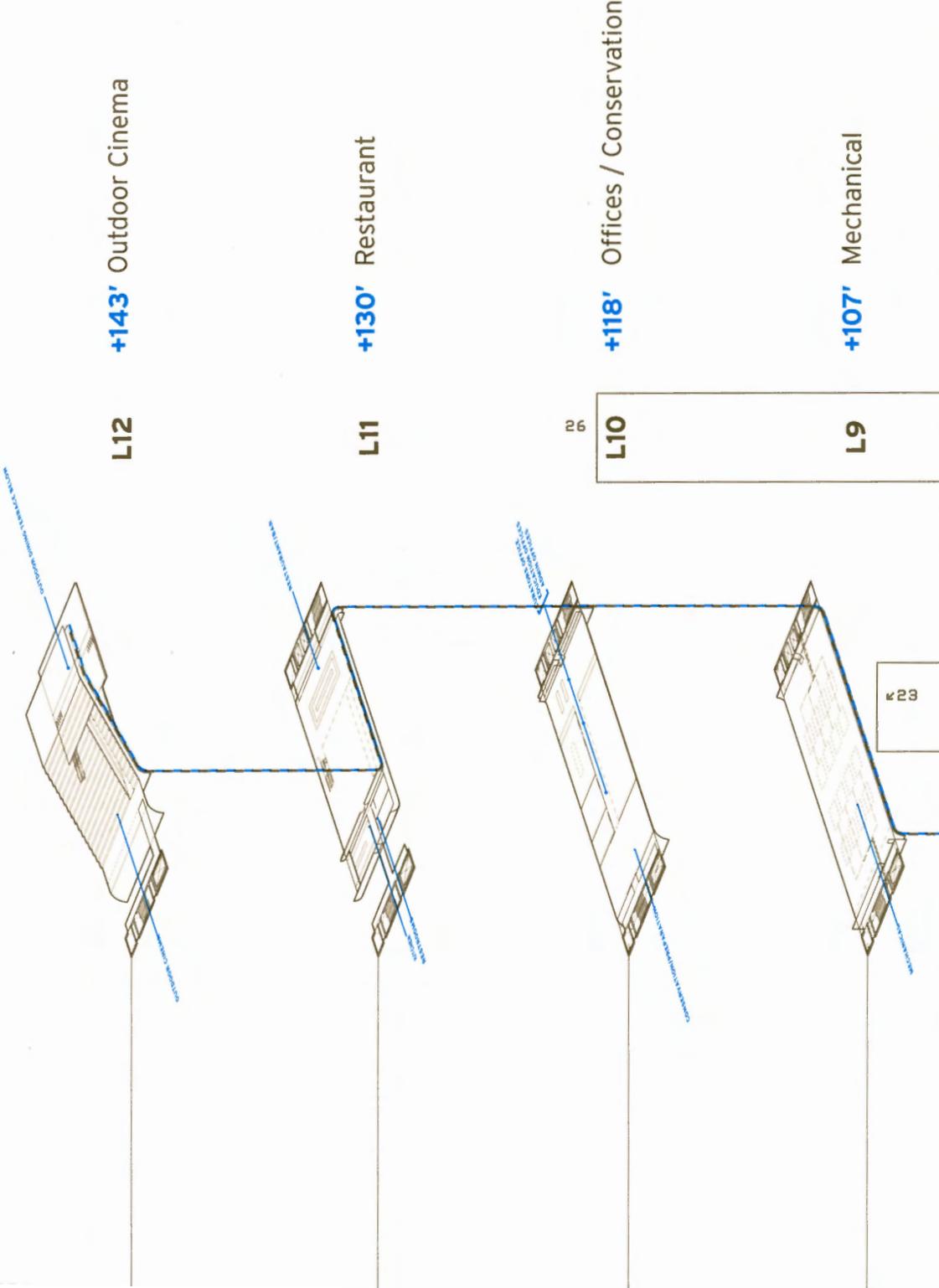
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25

←24



L12 **+143'** Outdoor Cinema

L11 **+130'** Restaurant

L10 **+118'** Offices / Conservation

L9 **+107'** Mechanical

26

23

As the media arts continue to move further towards time-based installations, theater, and performance, the role of the museum is shifting away from one of cultural authority, toward the provision of visual entertainment and loosely defined modes of inquiry. And while the museum has historically been in the business of making clear distinctions between its architecture, its collection, and its methods of display and interpretation, visitors now find themselves included in the subject and production of the museum experience. They are framed and examined within the world that the museum exposes, and alerted in creative ways to the processes of constructing perceptual and conceptual frameworks.

It's Not Even a Building

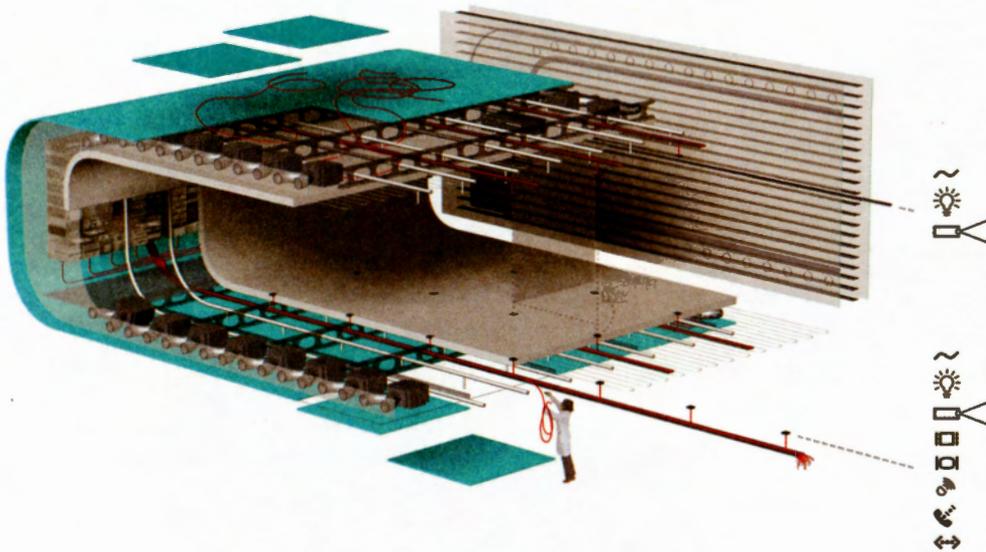
The Eyebeam may be seen as an open site for the production and presentation of events and installations loosely organized around the ever-changing requirements of experimental media technology. The primary structural elements are concealed on either side of the façade, creating the image of a self-supporting ribbon that arranges and reveals the structures of interior activity across a transparent façade. Thus the building is similar to many electronic devices where the means of operation are concealed and only the product of the instrument is apparent. But while the transparent façade of the Eyebeam is in many ways analogous to a backlit computer screen, it is also a luminous two-way screen that mitigates its own scale and identity with that of the city beyond.

By visually connecting the realms of inside and outside, the building is emblematic of an open dialogue between the varying degrees of privatization, cultural activity, and public life inherent to Chelsea, and gallery culture in general: the transparent façade serves as a billboard of public and institutional activity. In contrast to the so-called neutrality of the *hermetic* white box aesthetic pervasive throughout most contemporary museums, the co-mingling of the museum experience with views of the city introduce not only the life of the Eyebeam to the public, but the disheveled and grittier public at large to the formerly antiseptic realms of the museum.

In their work, Diller and Scofidio unmask and maneuver the dysfunctional and aberrant manifestations of things by running them against their intended purposes and conventional applications. By offsetting the connections we have come to expect between familiar affects and the means of producing them, their work frustrates and

The building minimizes the use of built-in display hardware for two reasons: as a defense against the speed of obsolescence and as a challenge to the convention of situating media art on designated screens. The proposal, instead, makes available the building's location-based communications network for artistic intervention. Thus, the entire building can be interpreted as a raw canvas for artists and as a charged field of artwork for the mobile viewer/receiver wearing the wearable device. The wireless system offers a variation to museum commissioned site-specific installations, a projects room without walls. Artists may produce digital environments that infiltrate galleries as well as support spaces such as elevators, bathrooms, lobby, restaurant, bookstore, and external spaces, which become activated by the visitor's presence and apprehended individually through the wearable device.

28 HIJACKING INFRASTRUCTURE



21

A wireless location-sensitive communications network is uniformly installed throughout the building. Each resident carries an electronic ID tag; each visitor can elect to input basic personal information at the entry (Log-in) and receive a wearable device that communicates with the network and the building's database. The device merges the scale of the body with the scale of the building. The more personal information a visitor volunteers, the more personalized the system becomes in return. The matrix of beacons can locate each visitor at any given moment, thus the system can offer a variety of location-specific services: it can permit or deny access to floors, it can keep a bookstore and bar tab, it can offer directions and information about exhibitions specific to an adult or child, it can illuminate the icon of the appropriate gender when a visitor nears restrooms, it can build up a profile of preferences for "frequent visitors" and save records of a visit for future retrieval through the Internet, and more.



challenges our expectations of technology and the patterns of our own seeing. Through the dismemberment of things and their conventional contexts, they reveal some of the plots and assumptions that underlay the props of our daily lives and challenge the institutions by which these scripts and codes have been maintained.

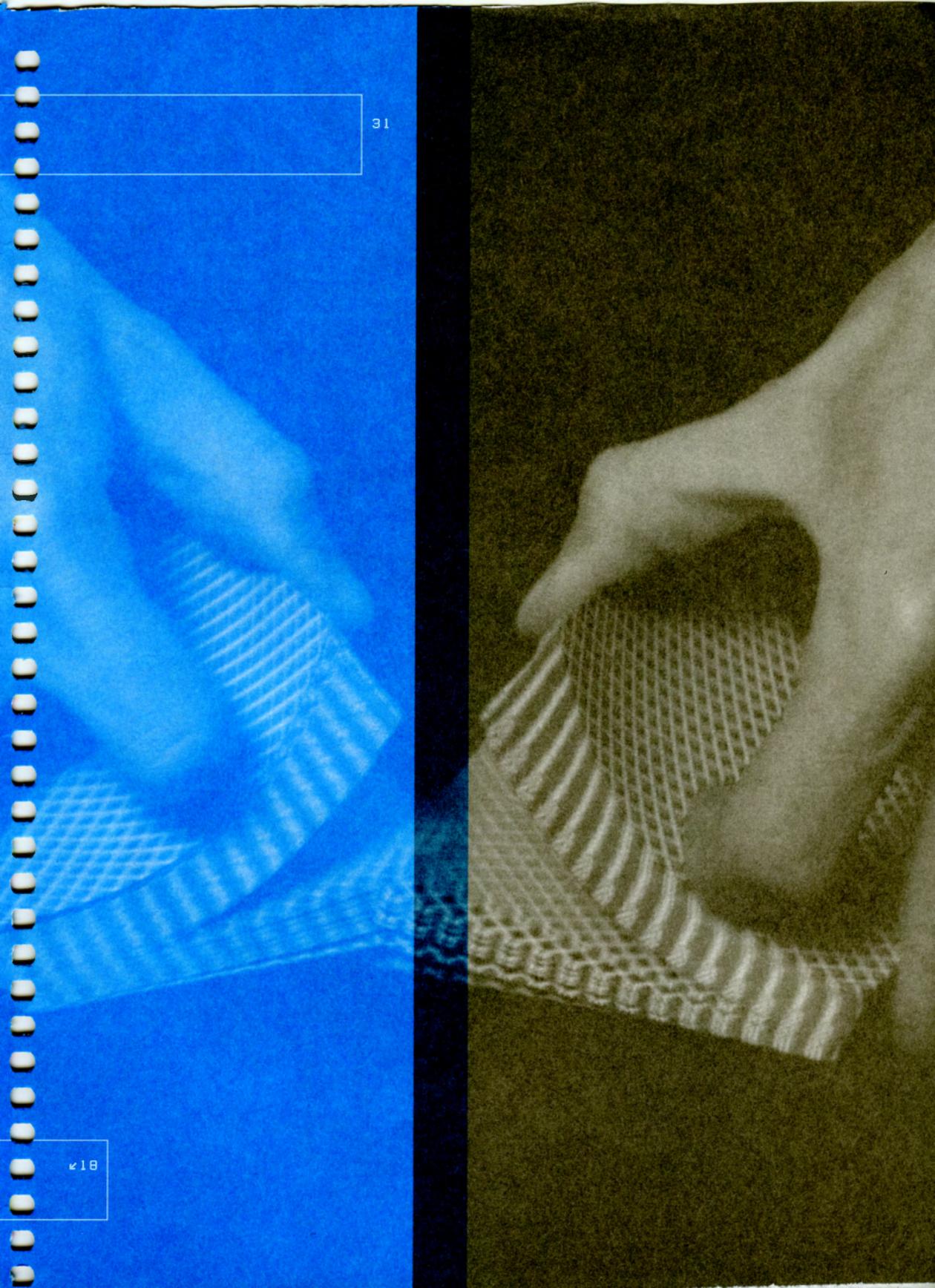
The Eyebeam facilitates the timely intersection of media technology with contemporary art, public space, and architecture in general. In the absence of specific curatorial agendas, or the need to anticipate the direction of future work, Diller and Scofidio's design marks not only new ideas about the relationship of technologically innovative work to architecture, but provides a vital forum for creative discourse about technology in general that is at once optimistic and cynical about the consequences of these mechanisms upon our daily lives.

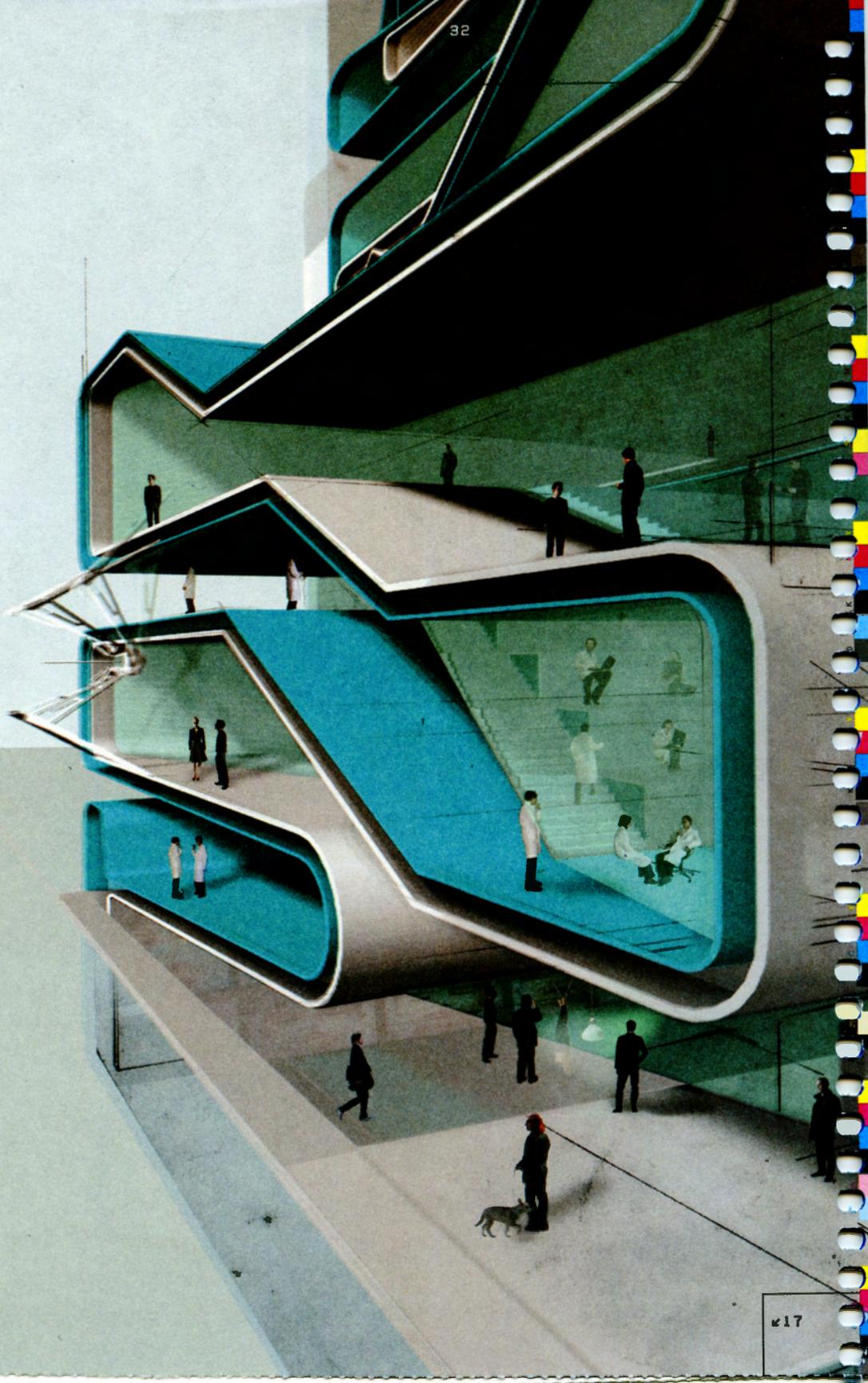
Despite the Eyebeam's clear and exuberant formal language, Diller and Scofidio's vision for the institution is less determined by any particular formal aesthetic, or preference for a single conception of visual order, than it is by the desire to invigorate the intermingling of people and new media at different scales across a threshold to the city. The project is driven by a vision of performance and theater that cares much less about upholding conventional distinctions between performers and viewers, building and site, or art and architecture than it does about pushing the frontiers by which even the most inanimate people and things may be infused with the complexity of events, transforming technology and the vitality of a new cultural institution.

K.M.

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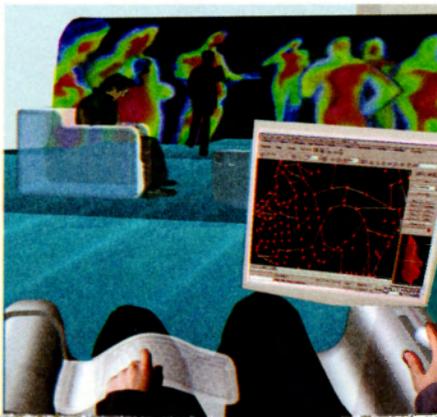


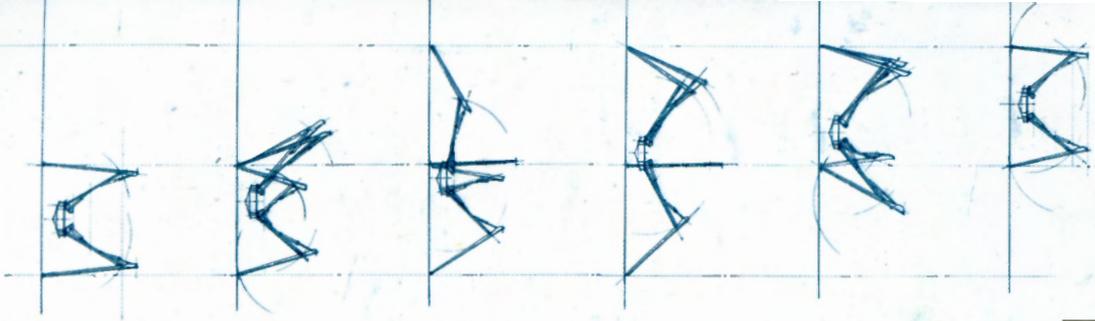
Updating the Acoustiguide principle, the point-to-point tracking capability in the building in conjunction with a multi-channel audio feedback system offers the museum and its visitors two-way communication. Several registers of exhibition-related information are available on the wearable device. When in proximity to a particular artwork, the curator's channel may offer a theoretical overview and technical information, the artist's channel may offer insight into the artist's intentions, and the visitor channel may record audience response.





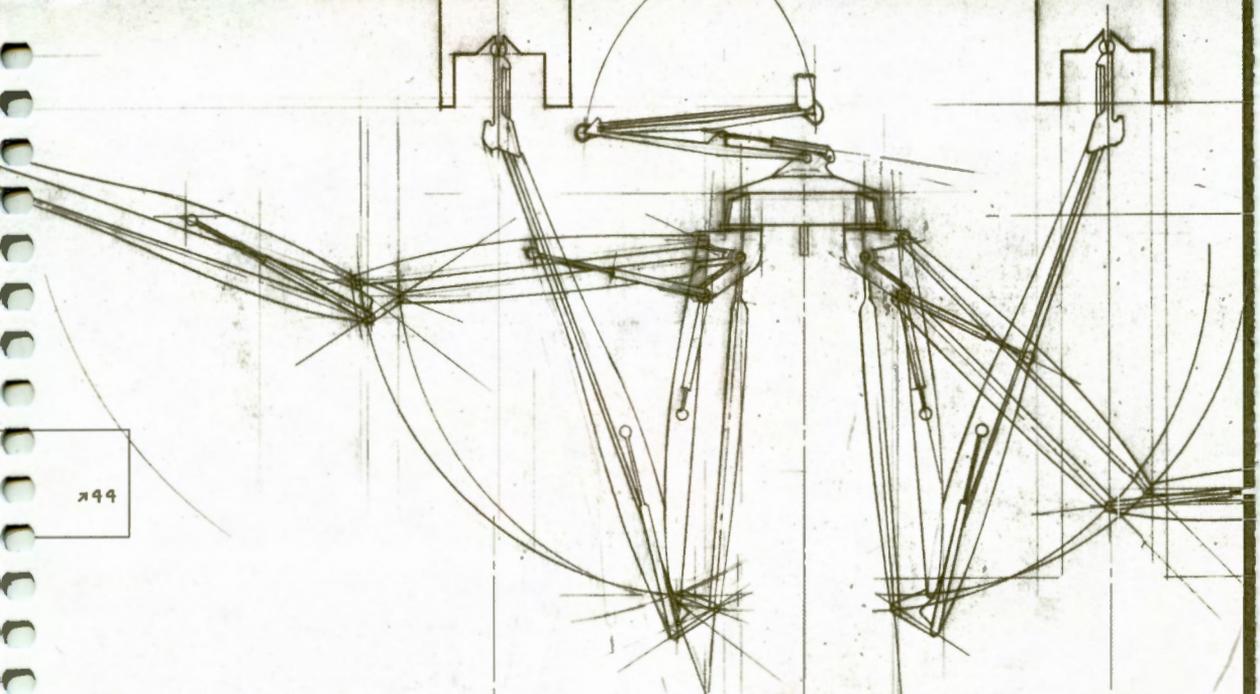
The work of students and resident artists will be continually harvested and made accessible to the public throughout the building at four scales. A feedback loop on the visitor channel of the wearable device allows the visitor to input responses, retrievable by students. *Large:* The lobby terminates in a time-share projection surface. Based on the logic of broadcast TV, developed student works may be given exposure during prime time or peak visitor hours while works in progress may be shown off peak. The space can accommodate works in all media. *Medium:* The smart party walls at conjoining exhibition/production spaces permit visitors to access student works-in-progress (assuming access is given). A visitor, for example, can select one from a menu of work stations and view a student's digital workspace in real time projected onto the transparent surface. *Small:* Periodic screen captures are systematically archived for computer-generated student projects and accumulated into time-lapse records of the evolution of each project. This information is continually updated on the server in the mediathèque and made accessible to the public at the media lounge chairs. *X-tra Small:* The student channel in the wearable device provides visitors with multi-media access to site-specific student work throughout the building.



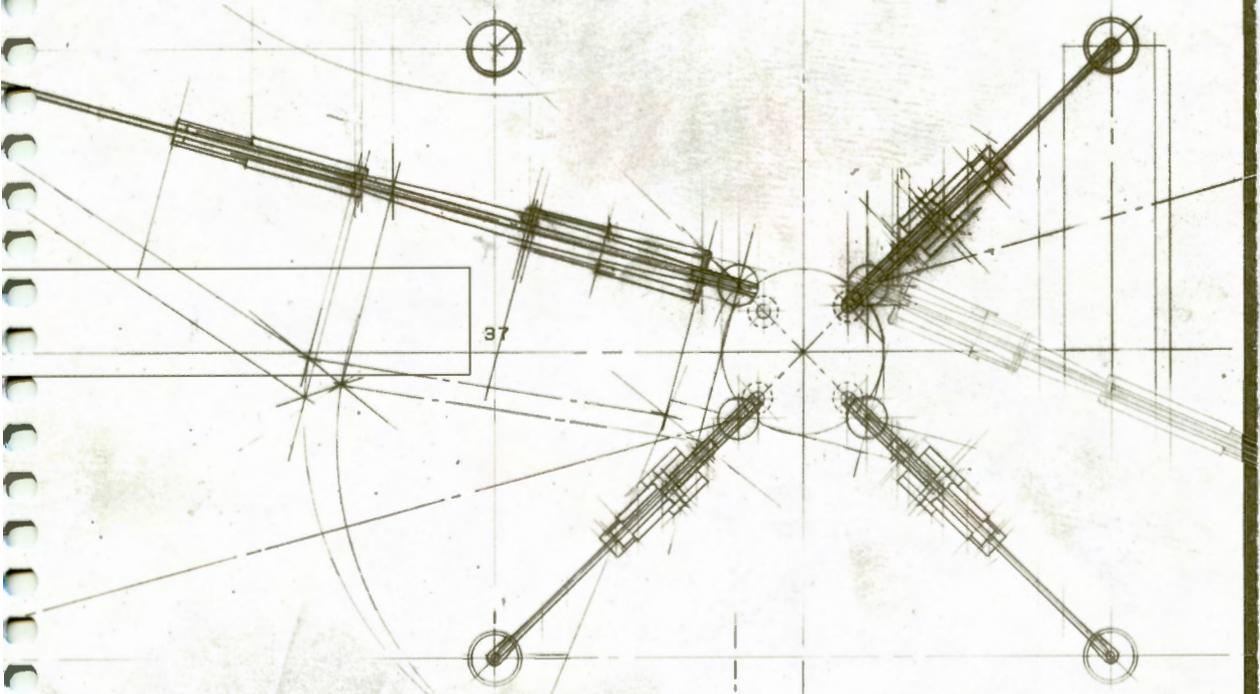


The semi-autonomous robot traverses the face of the building with a spider-like motion. It moves with a slow, deliberate gait, venturing one leg out at a time while the other three are secured into sockets at the interstitial zone for static stability. Each leg is 18 feet long fully extended and built with three degrees of freedom for easy maneuverability. Servomotors drive the legs from socket to socket. The robot has an acutely developed sense of thermal detection. It gravitates toward densities of human presence and technological activity, receiving its information from the building's tracking system. A live video eye held on the fifth leg transmits image data to the electronic mural in the mediatheque. The camera head hosts a triad of cameras—near infrared, far infrared, and an optical light camera. The latter can be controlled remotely by individuals in the mediatheque or on the web. The camera leg can crane in any direction to hone in on a precise target, allowing the camera to zoom in on fine detail. A combination of off-board and on-board control systems enable remote monitoring and control of the vehicle. Control signals and video signals are transmitted wirelessly. The robot is a pet. Always at the corner of one's eye from within the building, it can be summoned by a resident to perform a trick or an errand. A "nest" is provided on the ledge of Level 5 for servicing the robot, storing it when not in use, and protecting it from harsh weather conditions.

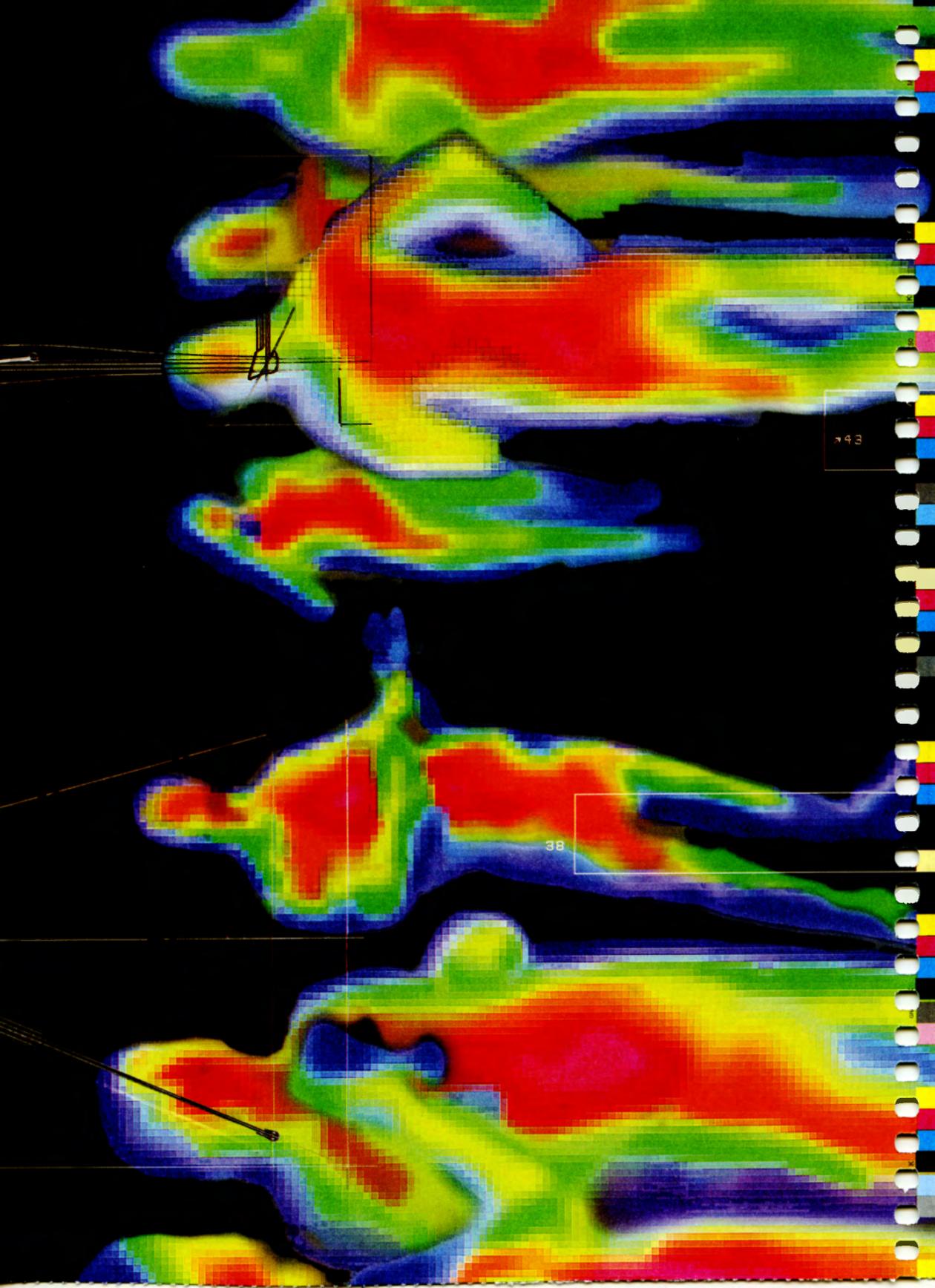
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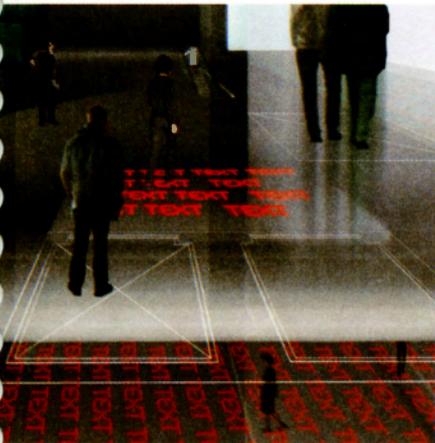
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Electronic signage is architecturally integrated into the building. A potential system uses bundled fiber optic cables illuminated by dynamic LED boards and distributed into arrays cast into concrete slabs. Exposed cable ends seen obliquely visually fuse into legible characters, words, and messages that scroll, crawl, and perform other dynamic motions across architectural surfaces at a variety of scales. The lobby floor may be passive at one moment then transformed into an animated billboard the next. LED welcome mats greet visitors exiting from elevators with information about the exhibitions ahead. LED carpets can line stair risers and treads along the exhibition circuit. Resolution can be refined by increasing cable density.

#42

SIGNAGE 39

L9 +107'

Mechanical

L10 +118'

Offices / Conservation

L11 +130'

Restaurant

L12 +143'

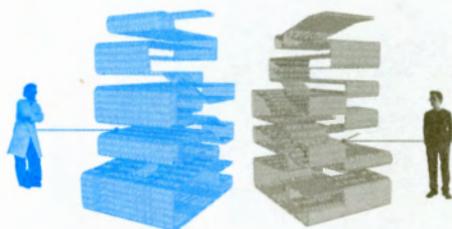
Outdoor Cinema



The most challenging problem in designing the new Museum of Art and Technology is the integration of traditionally distinct programs such as the "museum," "theater," "school," and "production facility." The new paradigm for this programmatic hybrid is the operational and aesthetic interlacing of production and presentation.

The spatial logic of the proposed building is based on a simple premise: a pliable ribbon that identifies production (atelier) at one face and presentation (museum/theater) at the other. This ribbon undulates as it climbs vertically from the street. The floor becomes wall, turns into floor, turns into wall, etc. With each change of direction, the ribbon enfolds a production space or a presentation space, alternately. The combing of programs also combs together two diverse populations: the building's residents (students, artists, and staff) and the building's visitors (museum and theatergoers). The alternating programs require each population to pass through the space of the other while moving between successive levels.

The relationships become more intricate when a loop of ribbon at one level is sheared in half and slipped into alignment with a level above or below. The new alignment allows a production space to infiltrate a presentation level or vice versa. This controlled contamination juxtaposes technical processes with their effects, people at work with people at leisure, the prosaic with the poetic. The adjacency of a brightly lit atelier space of experimentation with the theatrical ambience of a multi-media installation may raise the question: Which is the spectacle? Residents



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Elizabeth Diller & Ricardo Scofidio

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and visitors will observe one another as they move fluidly through the building sometimes on parallel paths separated by a transparent prophylactic, sometimes crossing paths, sometimes merging paths and sharing programs.

The ribbon is two-ply with a technical space sandwiched between layers that houses the building's "nervous" system. The smooth concrete ply facing the exhibition space has a pattern of precast service jacks. The ply of modularized panels facing the production program permits easy access to the interstitial space for rewiring and servicing of exhibition needs at specific locations below or above.

The interlaced production and the presentation programs each have distinct physical attributes: while the production spaces require an even distribution of natural light and artificial light for day/night work, the exhibition spaces require a high degree of light control and sound isolation. Effectively these requirements necessitate that the fluid spaces of exhibition and the fluid spaces of production each constitute a discrete building: one filled with light and one that can be darkened. The levels of these buildings appear to be "shuffled together" like a deck of cards, their qualities put into relief on the façade.





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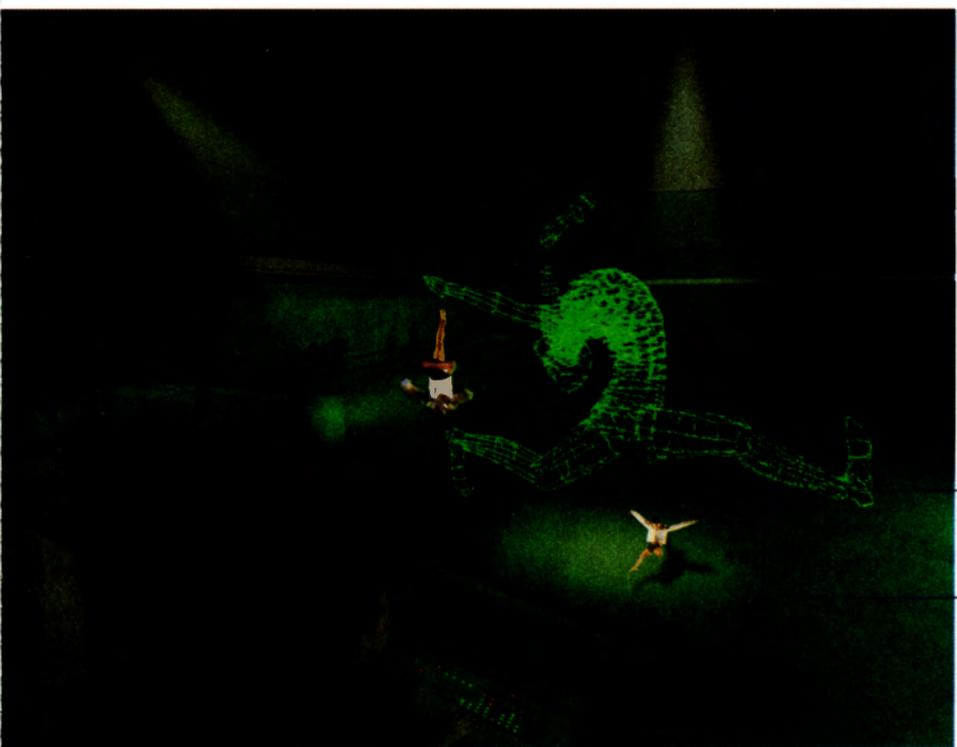
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L8 +95' Exhibition

L7 +84' Production / Exhibition

L6 +70' Exhibition / Production

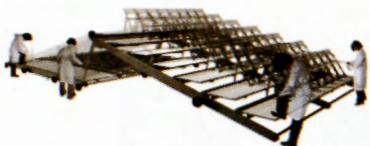
L5 +56' Exhibition / Education





THEATER 43

The theater has a clear height of 25 feet to the underside of the wire suspension grid and an average of 7 feet of technical space above the grid. Day-to-day activities of the theater are exposed to the public from a variety of locations: the wrap-around slot from street to lobby, the lowered, "submerged," part of the Refresh Bar, and the wall of pivot doors at the theater level. Each made of liquid crystal glass, these surfaces can be programmed to darken with the dimming of house lights at the start of a performance. For total flexibility, six mobile hydraulic bleachers in units of 64 seats can be joined to configure larger seating areas, adjusted to variable rakes, rolled anywhere in the space, and folded flat for storage behind the control room. A continuous gallery along three sides of the theater allows for additional seating, bleacher access and egress, and wrap-around technical space. Thus, a projector cab or lighting control board can travel to a desired location according to the needs of individual works as well as the ease of communication during rehearsals. The panelized floor provides access to data, power, and other infrastructural services. Two layers of heavy, absorbent fabric curtains can transform the space from "hard" to "soft," and gradations in between. The curtains are mounted to a switched track system at the underside of the technical grid and are capable of being drawn electro-mechanically to a variety of positions or parked in the double height spaces behind the control room when not in use.

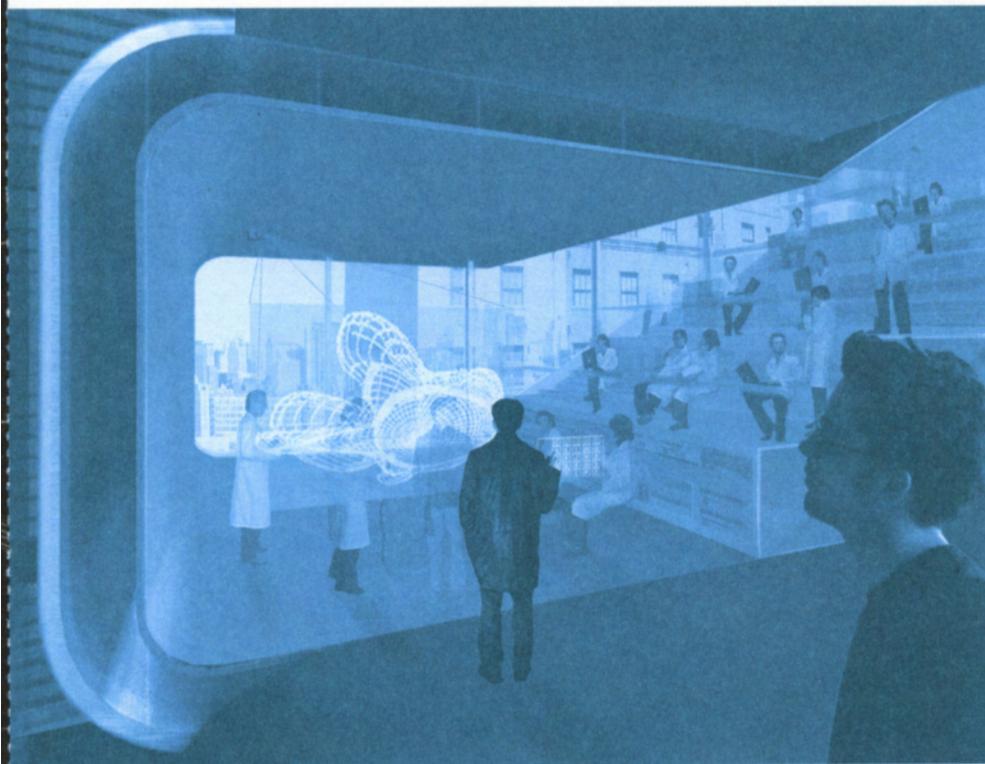


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Conjoined production and presentation spaces share a floor-to-ceiling interface for two-way communication between residents and visitors. Common walls are made of liquid crystal sandwiched between layers of transparent conductive film, laminated between glass, and operated by electric current. Transparency, translucency, and opacity can be regulated in degrees for privacy and light control. A touch-sensitive menu, in combination with a laser-etched projection screen in the glass, allow the visitor to access resident work and residents to post information for visitors.

44 SMART PARTY WALLS

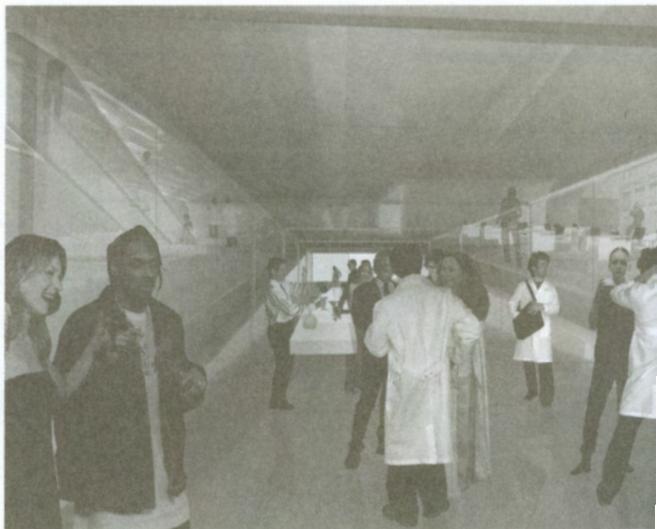


PROTRACTED STREET 45

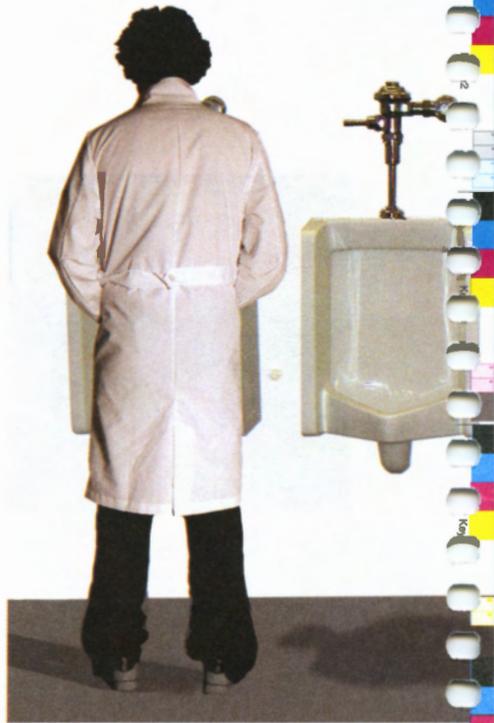
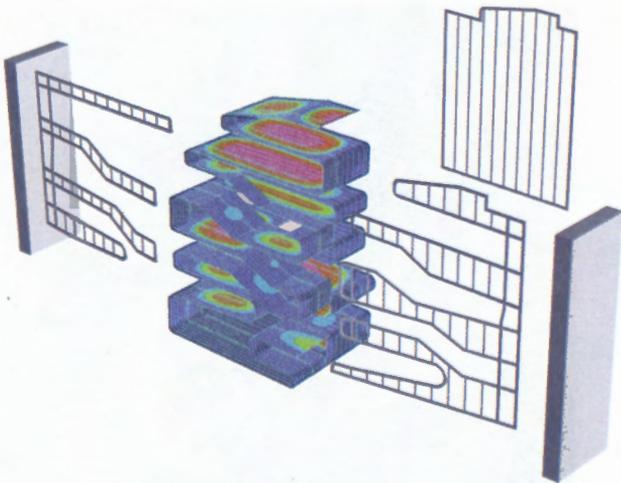


In keeping with the democratic ethos of information technologies, the building lobby is an extension of the street—a civic space where the public is free to wander. The visitor can watch activities in the theater from a clerestory slot, see student work on display, have a drink at the bar, browse the collection in the mediatheque, and shop at the bookstore. Five architectural links connect the lobby to the rest of the building: an escalator connects the lobby to the galleries, a descending stair connects to the theater, a second descending stair connects to the bookstore, a bank of elevators connects to the restaurant and all galleries, and the bar connects to the mediatheque. The Refresh Bar is a tubular ramped bridge made of glass and suspended over the theater. It is the heart of the building where students, resident artists, staff, tenants, the general public, and members of the New York digerati converge both day and night. The mediatheque, just beyond, is a cross between a library and a grand hotel lobby: a public resource in a casual yet spacious room. Media lounge chairs equipped with flat screens, flexible lap keypads, and earphone jacks provide access to the media server and the Internet.

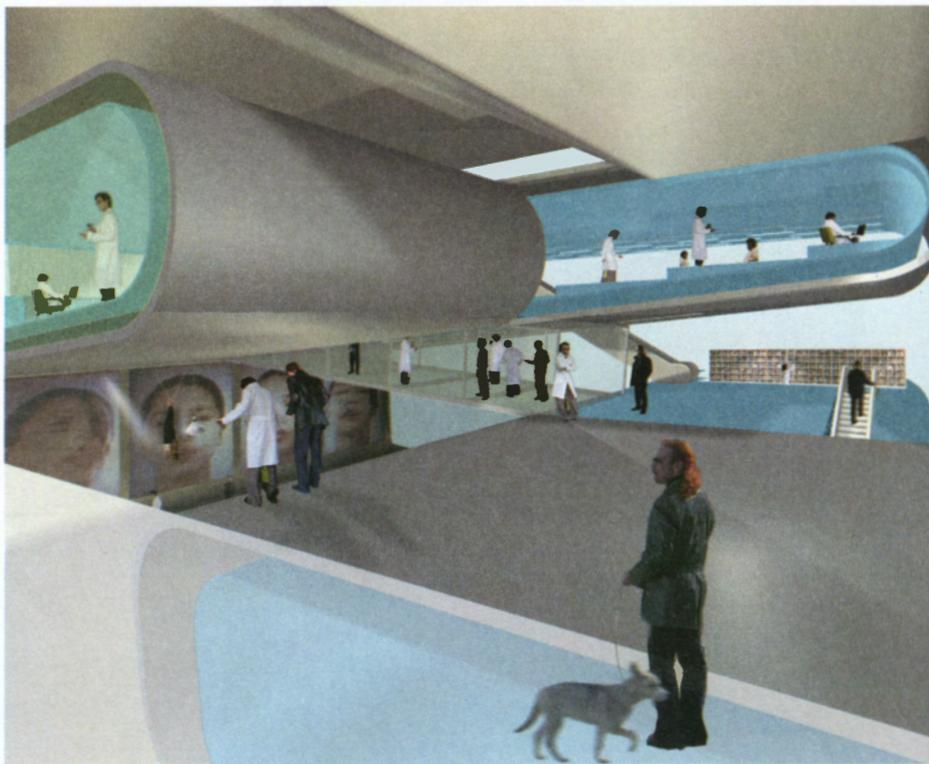
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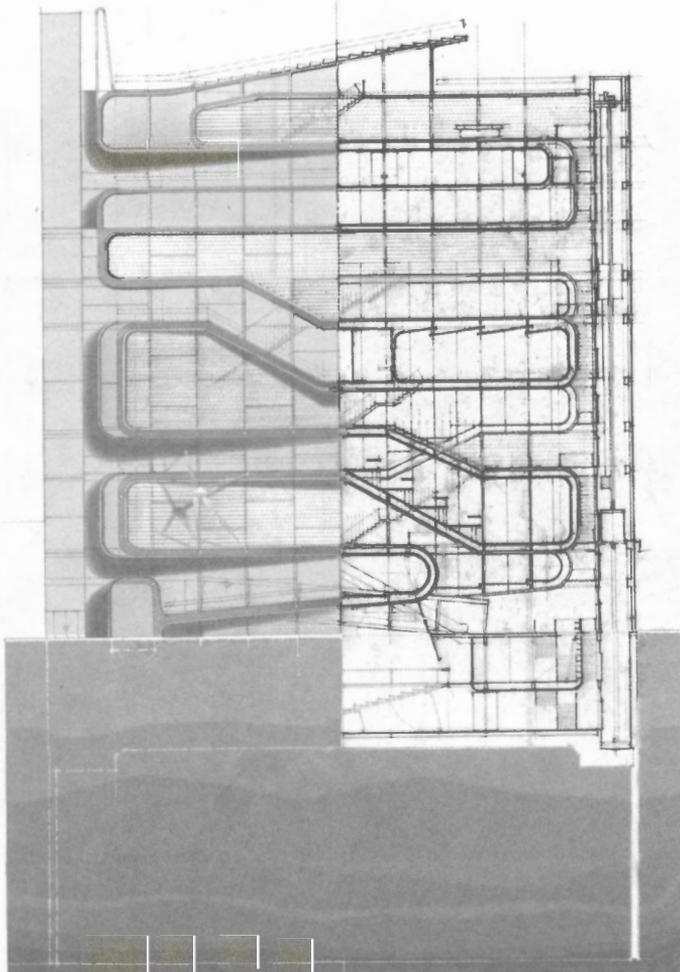


The superstructure consists of cores at east and west ends of the building with Vierendeel trusses bridging between them at front and back. Thus, loads are concentrated in the two cores, leaving the floor areas column-free. The cores and the Vierendeel trusses consist of welded steel elements. Secondary beams span between the front and back façades supporting the undulating concrete ribbon. The secondary (blue) ribbon is built as a suspended ceiling or raised floor. While the Vierendeel trusses at the rear face of the building are in alignment, the trusses at the street façade play with the modulations of the ribbon. Oblique trusses originating alternately at the east and west cores, criss-cross through a common vertical member at the center of the façade. Structural discontinuity at sheared floors is accommodated by suspension rods from a deep truss in the mechanical space. The cores and the trusses are prefabricated as individual segments that can be delivered to the site via ship or truck.



In contrast with many New York museums that present a hermetic face to the city (MoMA, Whitney, Guggenheim), the front façade of the proposed building is conceived as a section cut that reveals to the street its internal organization, activities, and architectural viscera. Alternating atmospheres are exposed through its interleaving skins: dense, industrious activity washed in an even light can be seen through the transparent glass of production spaces while variable densities of public activity and punctual lighting can be seen through the louvered glass of the exhibition spaces.

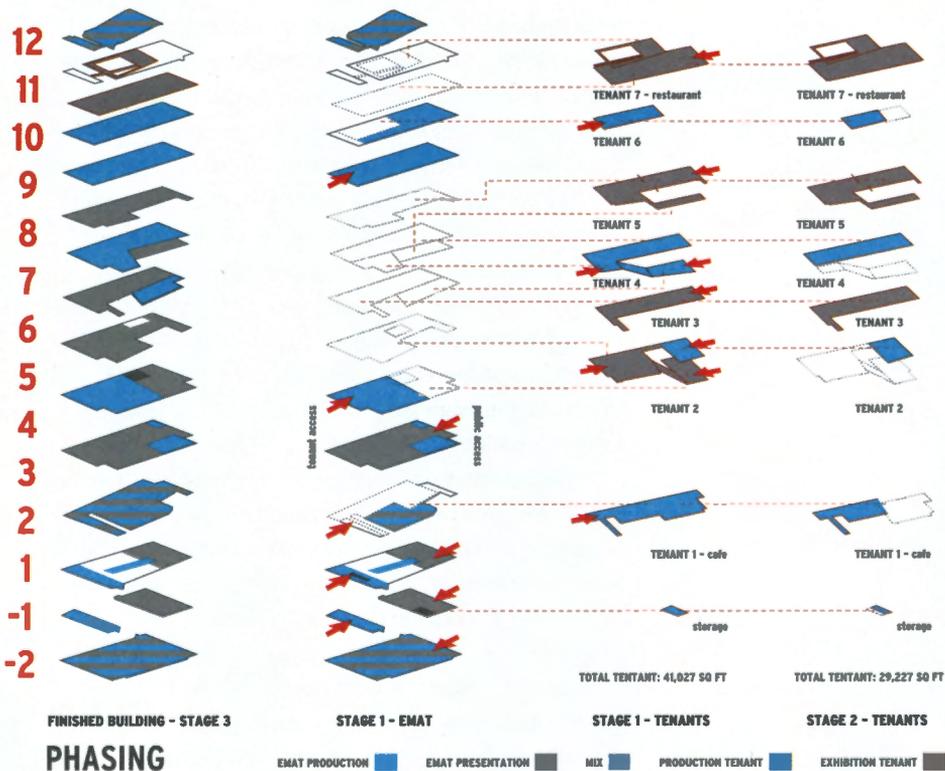


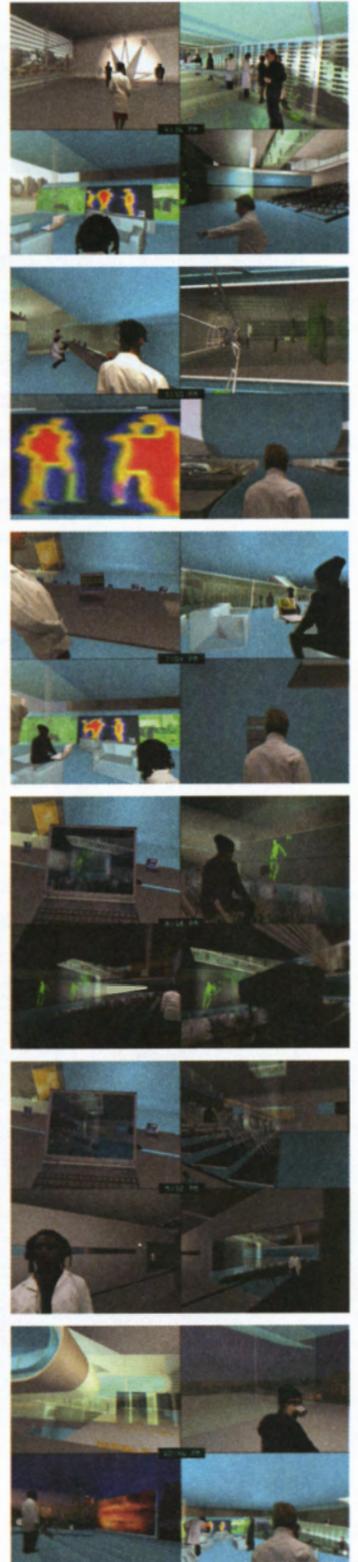
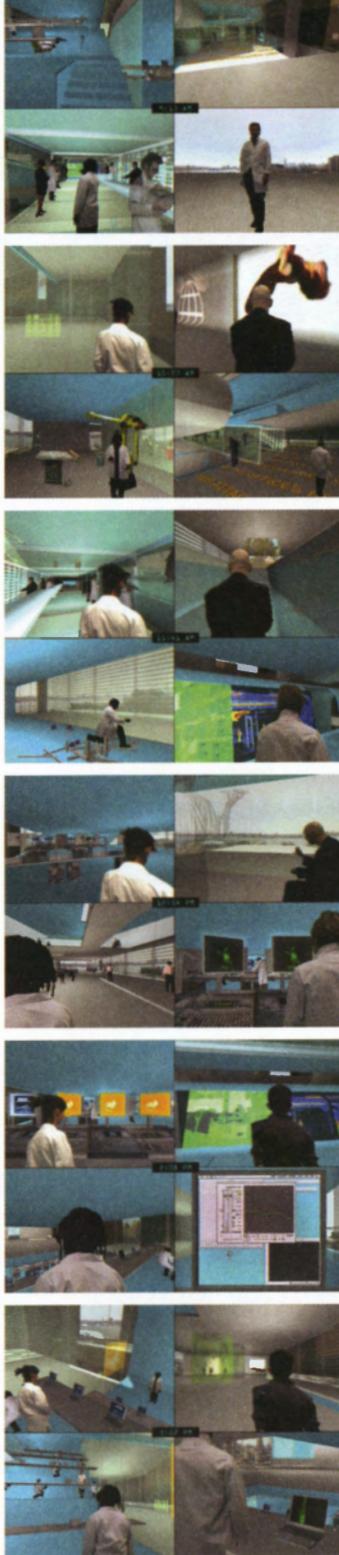


The site is located in an historic land expansion area near the Hudson River. Borings at the sidewalk revealed subsurface conditions unsuitable to support the loading of a multi-story building. Deep foundations penetrating into the underlying sand or into the bedrock are required for any building on this site, independent of its basement elevation. With this in mind, the proposed "bathtub" foundation optimizes its perimeter walls to create an occupiable volume of space with a long span, ideal for the black box theater. Thus, the premium required for deep foundations is offset by two advantages. First, financial: as the equivalent volume of space to be built above ground is now transposed below the ground, proportional savings for superstructure and façade can be made. Secondly, architectural: the sub-grade location allows the theater to be optimal in size and height, provides easy street access and egress, and avoids the theft of valuable light and view from other parts of the program.

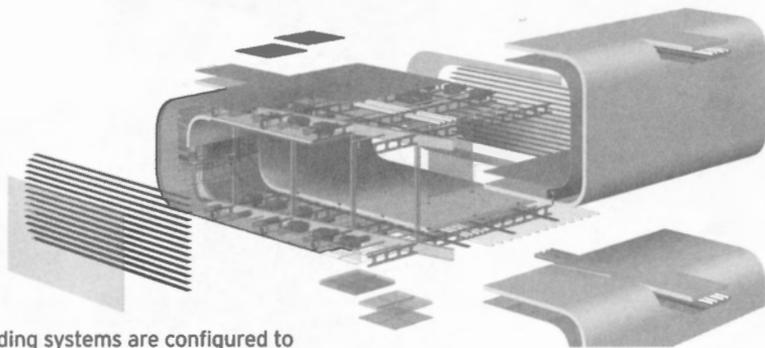
The bathtub foundation is a 24-inch thick diaphragm wall or "slurry wall" at the perimeter of the site reinforced with a 12-inch thick reinforced concrete liner wall in the basement. The diaphragm wall is socketed into the bedrock about 85 feet below street level. During excavation, the diaphragm wall serves as a ground water cut-off. In the final stage, the diaphragm wall will carry the vertical load from the building into the bedrock. The liner wall, which is connected with studs and dowels to the diaphragm, will provide additional waterproofing and structural stiffness. Excavation will proceed in stages with intermediate cross bracing. The foundation mat, three feet thick in the center and five feet thick under the cores, is sized to resist uplift water pressure. The chosen construction method is well established for basement construction in New York and the U.S.; it provides substantial vertical stiffness to the new building, making it less susceptible to settlement while protecting it from future development on adjacent sites. The building is compact; its elevation rises to 154 feet above grade.

The building's "production" and "presentation" designations can be strategic in its phasing. Tenants consistent with these designations, such as administrative offices and/or art production facilities, and commercial or non-profit galleries, could be favored accordingly. Therefore, programmatic amenities built into the proposed building can instantly be put into use and its architectural intentions can be realized in the first stage.





16 Hours
Digital Animation



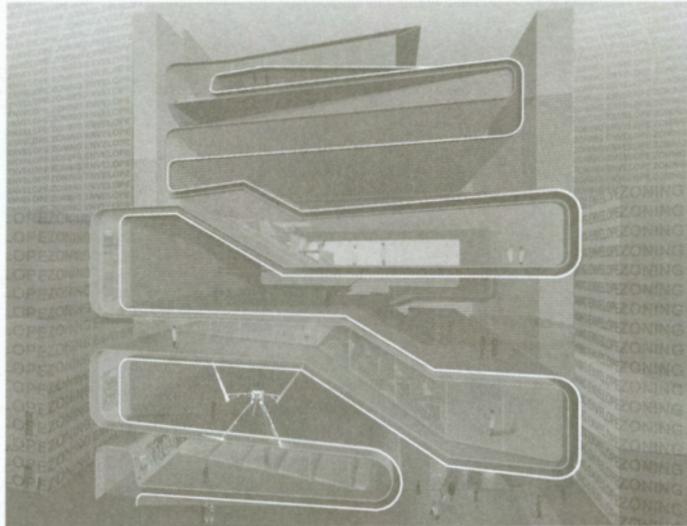
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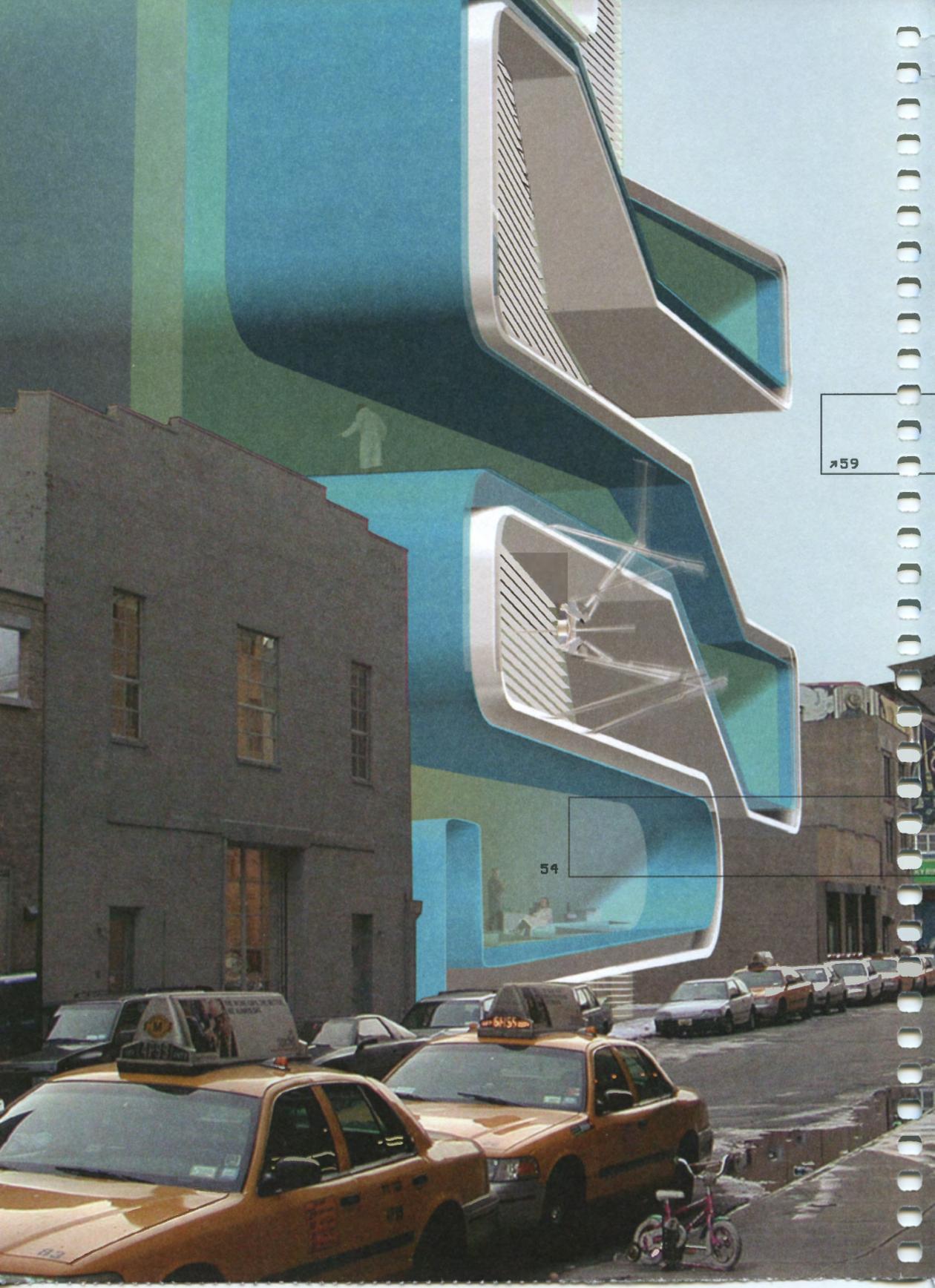
Eyebeam's modular building systems are configured to respond readily to dynamic compartmentalization of program functions. Multi-service networks, integrated into interstitial floor cells, generate open, riser-free floor plates suited to fluctuating layout and use. Air, power, and data distribution networks within each cell provide climate control, energy, and communications to every zone of the building. Cells inhale fresh air directly through the adjacent façade, filtering and tempering the air to suit local demands. During emergency conditions, exhaust cells expel smoke through the façade acting as a fully distributed smoke management system.

Bridge connectors span the atrium void linking the floor cells to the primary distribution shafts at the ends of the building. The shafts contain simple vertical conduits connecting each floor to the main mechanical equipment rooms. A common cabling and fiber optic backbone network links data, audio visual, voice, and alarm functions within the building.

Each cell is self-monitoring and self-controlling, via local intelligent outstations networked to a master building automation system. The entire system is linked into the base building data backbone so that cell sequencing and set-points can be remotely re-configured from any data port in the building. Digital lighting control systems interface with the building automation systems and security systems, tailoring programmable sequencing with real time monitoring of occupancy and daylight conditions for optimum efficiency.

According to established New York City precedents for the construction of similar multi-story cultural buildings with floors open to a common space, the entire building would be classified as an atrium. Emergency smoke exhaust requirements for an atrium, six air changes per hour, would be met by distributed supply and exhaust in the interstitial zones. Smoke reservoirs would be created by the use of downstands or smoke draft barriers. Egress from the main building will be by means of two pairs of horizontally separated and fully enclosed scissor stairs in each of the two core towers. Additional and separate means of egress as well as required safe areas will be provided for the theater below grade.





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L2 +14'

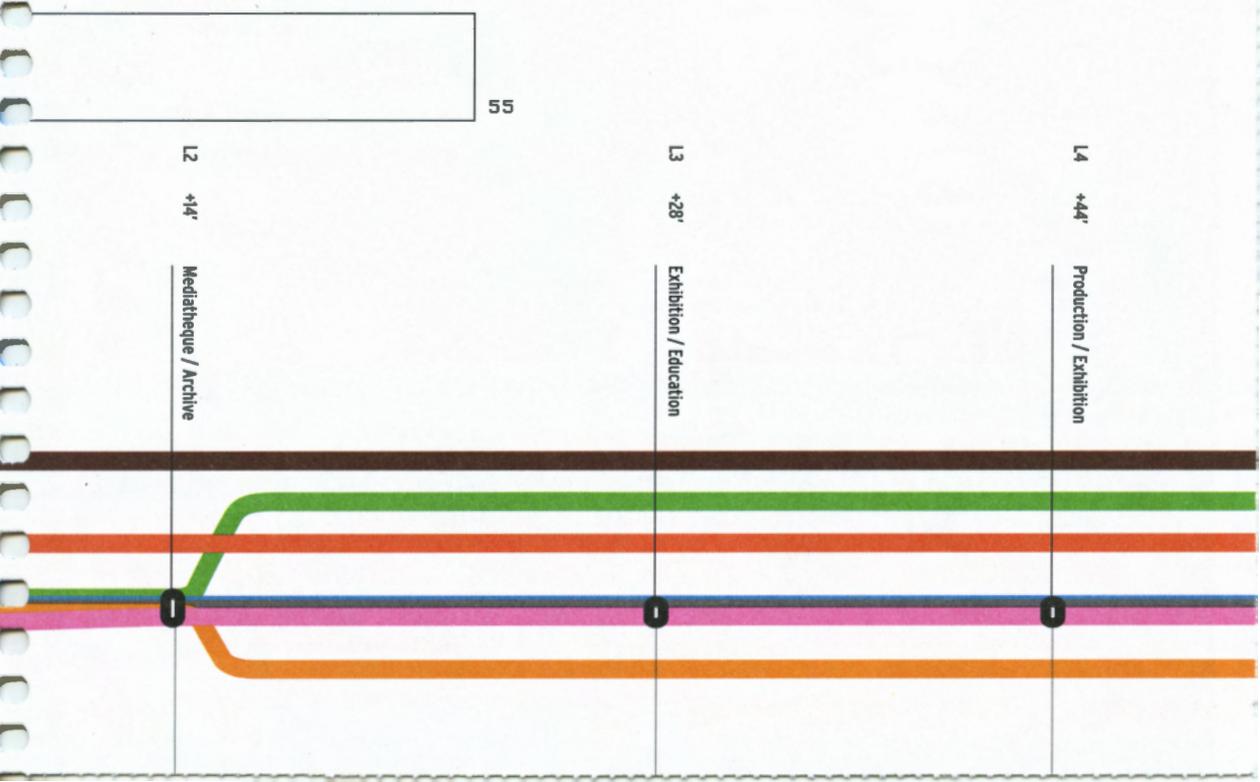
Mediatheque / Archive

L3 +28'

Exhibition / Education

L4 +44'

Production / Exhibition



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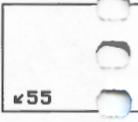
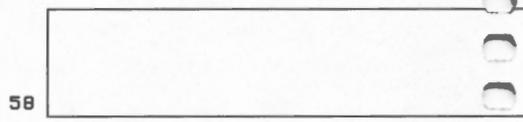
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THE 2002 CHARLES AND RAY EAMES LECTURE

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Eyebeam Museum of New Media

This project represents Diller+Scofidio's winning design in the three-phase architectural competition for Eyebeam's new building in the Chelsea gallery district of New York City.

Eyebeam is a not-for-profit organization established to provide access, education, and support for artists, students, and the general public in the field of art and technology.

Design:

Diller+Scofidio

Principals: Elizabeth Diller and Ricardo Scofidio

Project Leaders: Charles Renfro, Deane Simpson, Dirk Hebel

Team: Joshua Bolchover, Alfio Faro, Reto Geiser, Gabriele Heindel, David Huang, Dieter Janssen, David Ross

Structural + MEP Engineering:

Ove Arup, NY

Markus Schulte, Mahadev Ramen, Nigel Tonks

Animation:

Matthew Johnson with dbox, James Gibbs, Eric Schuldenfrei

Associate Architects:

Helfland Myerberg Guggenheimer

Media Consultants:

Ben Rubin, Tom Igoe, Joe Paradiso

Geo-Technical Engineering:

Mueser Rutledge

The Eames Lecturers

1998 · Tod Williams and Billie Tsien

1999 · Mack Scogin and Merrill Elam

2000 · Annette Gigon and Mike Guyer

2001 · Brigitte Shim and Howard Sutcliffe

2002 · Elizabeth Diller and Ricardo Scofidio

Charles Eames was born in St. Louis, Missouri in 1907 and, after studying architecture for two years at Washington University and traveling in Europe, returned to St. Louis in 1930 to open an architectural practice of his own. Seven years before, the famous Finnish architect Eliel Saarinen had arrived at the University of Michigan. While in Ann Arbor, Saarinen became acquainted with the Booth family who offered him design responsibilities for the new Cranbrook Academy of Art. After moving to Cranbrook, Saarinen saw Eames' work published and, in 1938, offered him a Fellowship. Two years later, Charles Eames became the Head of the Industrial Design Department.

Charles met Ray Kaiser at Cranbrook. Five years younger than Charles, Ray was an accomplished artist and a founding member of the American Abstract Artists group who had studied painting with Hans Hofmann in New York prior to coming to Michigan. When Charles Eames and Eero Saarinen were working on their 100 studies to initiate the designs for the Museum of Modern Art Organic Furniture Competition in 1940, Ray worked with them to develop the proposals that were subsequently awarded first prize in each of the two main categories. However their designs did not go into production, as World War II was imminent, and the procedures for molding plywood into complex curvatures and cycle welding for bonding of metal to wood had not yet been perfected.

Charles and Ray Eames were married in 1941. In the same year they moved to Los Angeles, where they continued the research and testing of molded plywood construction that they had initiated with Colonel Edward S. Evans of Evans Products Company in Michigan. George Nelson introduced the Eames to the Herman Miller Furniture Company and, in 1946, when their designs for molded plywood furniture were ready for production, the company bought the distribution rights as Evans did not have the capability of mass-marketing. Three years later, as Charles and Ray Eames completed their

Case Study House #8 in Santa Monica, Herman Miller took over the complete manufacturing rights for the molded plywood furniture and a manufacturing plant was built in Zeeland, Michigan. The Office of Charles and Ray Eames continued to work on the design of furniture for almost forty years and Herman Miller has been the sole manufacturer of all Eames furniture in the United States.

Alongside their designs for furniture, Charles and Ray Eames developed an office which promoted design in many ways. Through programs of design research, materials investigation and technological innovation, they worked in the fields of architecture and interior design, exhibition and graphic design, product development and film making. They encouraged collaborations across the disciplines and designed new ways of working that connected industry and design.

The Royal Gold Medal for Architecture was awarded to the Office of Charles and Ray Eames in 1979. Ray died in 1988 – ten years to the day after Charles.

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Image courtesy Herman Miller, Inc.



Diller+Scofidio is a collaborative, interdisciplinary studio that merges architecture, the visual arts, and the performing arts. The work of D+S takes the form of architectural projects, temporary and permanent site-specific art works, multi-media theater, electronic media, and print.

Elizabeth Diller and Ricardo Scofidio are the recipients of the MacArthur Foundation Award, the first fellowship given in the field of architecture. They have recently been awarded an Obie for Creative Achievement in Off-Broadway Theater for *Jet Lag*, a James Beard Foundation Award for Best New Design for the Brasserie, and a Progressive Architecture Design Award for the Blur Building. They have also received the MacDermott Award for Creative Achievement from M.I.T., the Chrysler Award for Innovation in Design, the Tiffany Award for Emerging Artists, and fellowships from the Graham Foundation, the Chicago Institute for Architecture and Urbanism, and the New York Foundation for the Arts.

D+S has been awarded numerous commissions including the design of the public spaces of Lincoln Center in New York and a new building for the Institute of Contemporary Art at Fan Pier in Boston. D+S is also working on *Facsimile*, a permanent media installation for the new Moscone Convention Center expansion in San Francisco, and a masterplan for a waterfront park on the East River in New York City. Recent projects include the Blur Building—a media pavilion for Swiss EXPO 2002, a master plan for Brooklyn Academy of Music Cultural District for BAMLDC in collaboration with Rem Koolhaas, and the Viewing Platform for Ground Zero at the WTC site. A retrospective of their work was on view at the Whitney Museum of Art in 2003.

Elizabeth Diller is Professor of Architecture at Princeton University and Ricardo Scofidio is Professor of Architecture at The Cooper Union. Their bi-lingual book, *Back to the Front: Tourisms of War* was published by the FRAC Basse-Normandie. Their second book, *Flesh: architectural probes*, was published by Princeton Architectural Press in 1994. Their most recent book, *Blur: The Making of Nothing* is published by Abrams.

Not only does the form of most books conceal the material processes of their construction, but they also tend to under-represent the range of individual effort required to produce them. This project in particular has required the considerable determination and talent of numerous people whose participation need not go unrecognized due to conventional notions of "authorship."

First and foremost, our thanks to Liz Diller and Ric Scofidio for their encouragement, support and criticism. In the office of Diller+Scofidio, Denise Fasanello kept the process moving and Deane Simpson and Emily Fairbanks have been responsive and enthusiastic in sharing insight and materials concerning the Eyebeam.

In the eye of the storm has been the project team at MI: Christian Unverzagt and Craig Somer's design and production of this book easily warrants several credits for "authorship." Their pursuit of an alternative model of graphic and conceptual order in a world limited by a narrow sense of "clarity" has been unwavering.

Eugenia Bell's editorial efforts have been crucial at every juncture, from the fine-tuning of the content of this volume to the transitioning of the Michigan Architecture Papers to a new scale of distribution.

This is the first of several forthcoming books prepared and produced under the auspices of Tom Buresh, Chair of Architecture at Michigan. The freedom and encouragement he has provided reflects the direction of the school, and we are grateful for the many opportunities his efforts and inspiration have created for faculty and students.

K.M.



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