

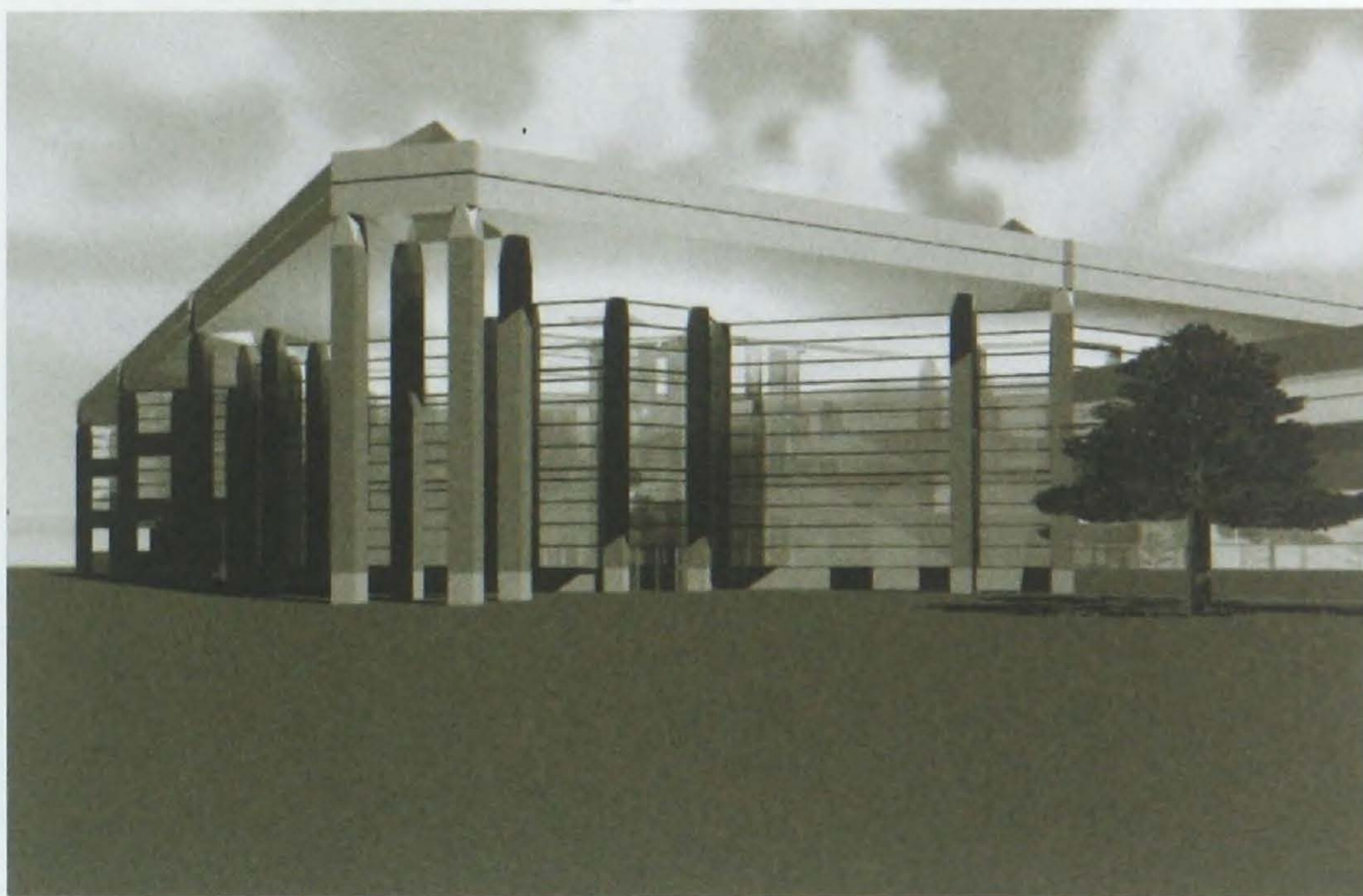
The
Integrated
Technology
Instructional
Center

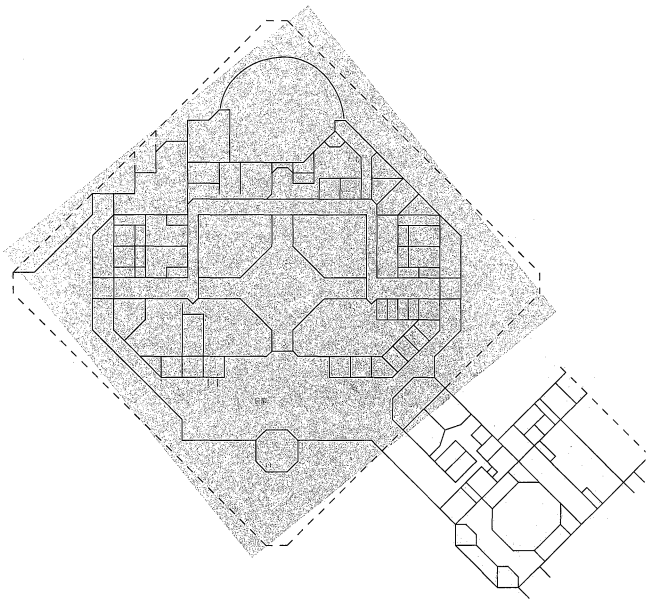
**THE UNIVERSITY
OF MICHIGAN'S
MEDIA UNION**

Office of the President

The
Integrated
Technology
Instructional
Center

THE UNIVERSITY OF MICHIGAN'S MEDIA UNION





First Floor

DISCOVERING THE UNIVERSITY OF THE TWENTY-FIRST CENTURY

We are creating an environment where students and faculty can dream and then act on their dreams.

—Paul Boylan, Dean, School of Music

Because scholars can join activities without moving from their offices, the Media Union will act as a catalyst, building connections across our entire campus.

—Eddie Goldenberg, Dean, College of Literature, Science and the Arts



Our new Media Union merges the creative aspects of disciplines across the entire campus, ranging from art, psychology, and architecture, to engineering, philosophy and biology. Inventive scholars will come together with powerful resources, entering a free-wheeling space where both ordinary and extraordinary people can do exceptional things. Michigan's portal to the rest of the world, the Union will reach out to the huge storehouses of information growing daily on the "Web," while drawing national and international scholars and students into our campus conversations. New information technology will create a "virtual" community of thinkers, allowing face-to-face dialogue and collaboration across thousands of miles.

The Media Union will house:

- the electronic library of the future
- interactive multi-media classrooms
- a virtual reality laboratory
- theater and performance spaces
- design and innovation studios

In each area, however, instead of defining rooms that restrict possibilities, we have worked to create spaces that invite the unexpected. We have designed, as much as possible, for flexibility. In fact, the most revolutionary part of the Media Union project is that we can't know exactly what will happen there until creative people take up residence.

Unlike other buildings on campus, the Union is not owned by any single department or school. It is a truly neutral meeting place, open twenty-four hours a day, seven days a week to the entire University community. And, as

Dean Allen Samuels notes, part of the reason collaborative work is so difficult across disciplines is that "you have to get support from both sides of the fence. It's hard enough on one side. Here, the University provides tools and space."

The Media Union building invites participation and discourages isolation. For example, glass walls and doors in most work spaces overlook common areas, drawing passersby into the excitement of discovery. And the "virtual" nature of much of the Union's work will give people around the world the opportunity to view designs, artworks, and performances in the process of creation through the Internet. The Media Union building has bricks and mortar, but our vision is of a community without walls.

MEETING THE CHALLENGE OF A CHANGING WORLD

The winners of the new era will be creators, and it is to them that power and wealth will flow. The need to shape, to invent, and to create will blur the border between production and consumption.

—Jacques Attali, *Millennium*

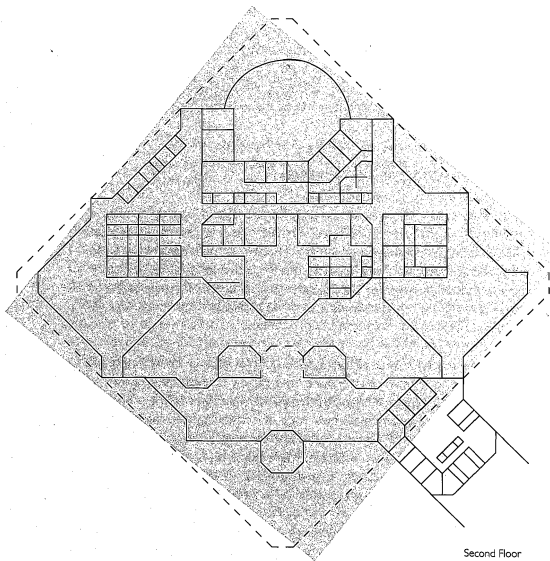
Our society today is experiencing a transformation that may ultimately prove as profound as the Renaissance or the Industrial Revolution. But while these earlier shifts took centuries, the developments we face today, with burgeoning advances in fields as disparate as information technology and genetic engineering, may take less than a decade. We live in a time of breathtaking change, and the pace continues to accelerate.

Jacques Attali, in his exceptional essay, *Millennium*, has suggested that the impact of our new information technology, connecting millions to a global information structure, will be even more radical than the harnessing of steam and electricity in the nineteenth century. Much like the discovery of fire by our earliest ancestors, it will prepare the way for an evolutionary leap that will transform human culture. This new technology continues to evolve. In the next few years, the power of computers and networks will increase one-thousand fold, as the cost continues to fall. Soon, the general public will have access to international networks that can transmit video and sound directly from person to person, and the transmission of vast amounts of data will become commonplace. Wireless communications will release people from limited locations, allowing them to work anywhere.

For the State of Michigan, this new era will bring profound dilemmas. Transportation and its related industries determined the progress of the twentieth century. During this period, Michigan's automobile industry had no equal—and the state rapidly became one of the most prosperous and powerful

industrial regions on Earth. But today, we have entered a new era in which the engine of progress is not transportation, but communication, enabled by the profound advances we are now seeing in computers, networking, satellites, fiber optics, and many other related technologies. To continue to prosper in the coming years, the State of Michigan must grapple with the challenges and possibilities that this new world brings.

This "knowledge revolution" could well lead to a parallel shift in our intellectual culture. While the 'analytic' professions such as law and business dominated the twentieth century, there is a great deal of evidence that the 'creative' professions, such as art, medicine, organic chemistry, literature and engineering will dominate the twenty-first. Instead of simply manipulating and rearranging knowledge, it is becoming increasingly clear that the driving intellectual activity of the future will be the act of creation itself. To quote



Second Floor

Atтали again, "the creator who turns dreams into reality will be considered as a worker who deserves prestige and society's gratitude and remuneration."

The University of Michigan is well poised to take advantage of this intellectual shift, with several schools that focus on the art of creation. And our tools grow more powerful every day. Today we have the ability to literally create objects atom-by-atom. We are developing the capacity to create new life-forms through molecular biology and genetic engineering. And we are now creating new intellectual "life forms" and artistic experiences through artificial intelligence and virtual reality.

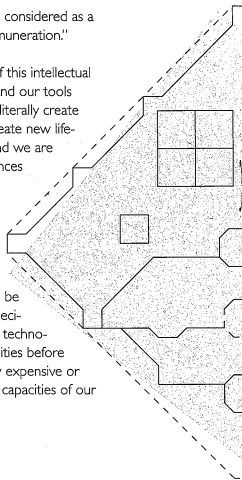
No one knows what this profound alteration in the fabric of our world will mean, both for academic work and for our entire society. It is vital that we begin to experiment with the new paradigms that this technology enables. Otherwise, we may find ourselves deciding how the technology will be used without really understanding the consequences of our decisions. The Media Union will remain a step ahead of us in our technological future, giving us the chance to try out different possibilities before they become widespread realities, helping us avoid potentially expensive or even dangerous mistakes while maximizing the extraordinary capacities of our new tools.

INVENTING THE UNIVERSITY OF TOMORROW

Historically, universities—large, complex, traditional, and "loosely coupled" institutions—have been resistant to change and slow to respond to opportunities and barriers in their environment. Those that have managed to transform themselves have either "bought" change with additional resources, or have laboriously worked to build a consensus. Often, real change has only come through crisis—sometimes resulting in haphazard and unreflective re-organization.

In our new era, with its accelerating speed of change, such stolid institutions cannot hope to flourish. At the same time, rapidly evolving information technology is directly challenging the traditional paradigms of the university, pointing towards fundamentally new ways of envisioning teaching, research, and our very notion of "community." To be successful, universities must find ways to become quicker on their feet, more responsive to the outside world. At the same time, they must develop a strong sense of their own mission, which can guide them through tough choices between possible futures.

For promoting truly fundamental change, a "green-field" approach has proven much more effective than attempts to transform existing structures directly.



By creating entirely new programs, we can experiment with revolutionary paradigms. Those elements that are successful can be propagated out into the larger community, eventually creating opportunities across the entire state.

The Media Union is intended as part of such a "green-field" project for Michigan, a "New University." The Union will create an environment where students and faculty can join with colleagues beyond the campus, developing and testing new visions of the University, exploring teaching, research, service, extension, and other areas. Even more importantly, the Union will foster a new spirit of excitement and adventure. We intend to build the foundation for a risk-tolerant culture, where students and faculty are strongly encouraged to "go for it," accepting failure as a part of the learning process as they reach for ambitious goals. Organized around dynamic, integrative themes, the Union will work to break down the compartmentalized nature of the larger University.

WHAT WILL PEOPLE "DO" IN THE MEDIA UNION?

Every activity in the Union will test whether the technology is there just for its own sake, or is really useful for helping creative people.

—Randall Frank, ITIC Project Director

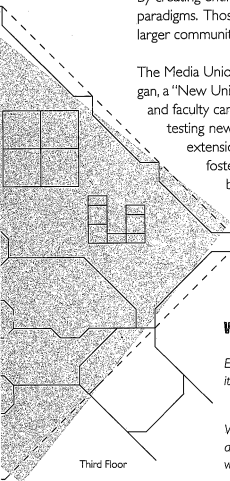
When one sets to work in the Media Union, one should go with an awareness of what was, a concern for what is, and a preoccupation for what can be.

—Allen Samuels, Dean, School of Art

Perhaps the best way to envision the Union is as a tremendous interactive playground for imaginative scholars, a place for creativity—using knowledge to serve our society. The tools in the Media Union should be so easy to use that they become natural extensions to everyday activity. For example, an artist and an engineer should be able to think up a new sculpture together; sketch it out in three dimensions on a computer; then show it off and discuss it in real time with colleagues both here and across the world, all without noticing the complex technology that allows them to collaborate.

Some of the activities envisioned for the Media Union include:

- Exploring new avenues for creative collaboration
- Extending human cognition and sensory powers
- Inventing new paradigms for learning and teaching
- Discovering new art forms
- Designing new buildings for new forms of community
- Creating new devices for industry and home



Third Floor

ENHANCING COLLABORATION

By locating everything in the same space and by giving the outside world multimedia access to our activities, we have created a cauldron for interdisciplinary activity.

—Douglas Van Houweling, Vice-Provost for Information Technology

I'm excited by the extent to which the planners have taken a whole range of possible users into account, building the structure itself around a notion of flexibility . . . I hope the Media Union will act as a magnet, drawing our two campuses together, helping us arrive at a stronger sense that we are all part of the same community.

—Eijner Jensen, Professor of English

The Media Union's community is limited only by our imagination, as time and distance cease to be important obstacles to collaboration. We are only a short time from when true teleconferencing—direct and instant face-to-face conversations with people around the world—will be possible using common technology. Eventually all workstations in the Media Union will be equipped this way, and we plan to scatter more than one thousand of these interactive sites throughout the building. For the Union to truly succeed, it should be as easy to interact with a scholar across the globe as it is to speak with a colleague across the desk.

The "virtual" nature of the research teams in the Media Union will entice not only campus scholars, but exciting thinkers around the world to participate. While the groups may meet physically from time to time, many of the members of these project teams will participate through interactive technology. Members will not need to leave their home institution or even their homes to join in close collaboration with other scholars who are thousands of miles away.

Originally we envisioned the Union as a common connecting point between the four schools on North Campus: Engineering, Architecture and Urban Planning, Music, and Art, all of which are intimately concerned with the act of creation. Although all four facilities operate within close proximity of each other, there have been few collaborations between them. This makes little sense. Increasingly society demands designs that combine aesthetics, efficiency, and durability. As engineers become more like artists, artists and musicians have become more interested in new environments for their creations; and architects are increasingly concerned with the structural integrity and beauty of their designs.

We soon realized, however, that the Union must be a resource for the entire University. The need for interdisciplinary collaboration extends beyond the North Campus schools, and as a facility designed in part to bridge the limita-

tions of time and distance, what better place to bring the North and Central Campuses together? The Media Union will act as a catalyst, helping faculty and students from different fields realize their similarities while capitalizing on their differences.

LIBRARIES: FROM STOREHOUSE TO WINDOW ON THE WORLD

The Media Union will extend the paradigm of browsing in a library, creating a hybrid where traditional and digital resources coexist. As a pilot project for the University's library systems in general, the Center will change our notions about what libraries "do," facilitating serendipity.

—Daniel E. Atkins III, Dean, School of Information and Library Studies

Libraries will always have books, but the Media Union's library will not be judged by its number of volumes. Increasingly, information will be stored electronically, and its data will be dispersed across the globe. We are talking about more than just text; the Internet already contains archives of images and sounds, audio and visual information that scholars can retrieve at the touch of a button. Eventually a researcher will not have to find a VCR to view movies or locate a tape recorder to listen to the score of a symphony. And published "papers" will increasingly include images and sounds as an integral part of their presentation.

The Media Union library will eliminate much of the drudgery usually associated with information retrieval. Quasi-intelligent software programs will search out data for even the most unique topics, tracing connections within a broad spectrum of research that scholars might have missed using manual techniques. While this will never replace human insight, the wide-ranging character of these searches will help break down the invisible barriers that often separate disciplines today. The most useful resources for a psychologist working on an aspect of "panic" might well turn out to have been written by an anthropologist or an English professor or even an engineer.

Libraries will also increasingly become places where the differences between "researching" and "doing" blur. As Dean Atkins points out, the new information technology not only supports information retrieval, but also facilitates manipulation of that information. He notes that "a student could not only read about architecture, but use a computer tool at the same time to try out a design."

OVERCOMING CONVENTIONALITY, TAKING RISKS

One of our real concerns is that the Media Union could become very conventional. Incredibly sophisticated spaces and equipment can potentially be used for not-so-sophisticated purposes. To succeed, we must be vigilant, creatively and strategically resisting the traditional pressures of the university.

—Robert Beckley, Dean, School of Architecture
and Urban Planning

We need to be careful. If we get sold on a single technical paradigm, we can end up blinding ourselves to other opportunities. We need to create an environment that values simplicity and efficiency over mere complexity and apparent high technology.

—Lynn Conway, Professor of Electrical Engineering and
Computer Science

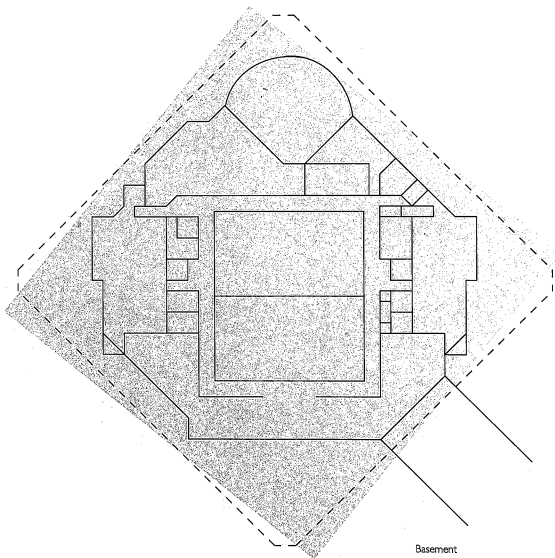
For the Media Union to succeed, we must take risks, accepting that we may stumble before we can walk. When we began this project over a decade ago, our challenge was to envision a building that could become a campus “commons,” both physically and virtually. We struggled with designing a place that would allow colleagues from very different disciplines and across great distances to collaborate with each other. Ultimately, we had no final answers—just ideas. We know we probably won’t get it all right from the beginning. In fact, it is clear that stagnation will have arrived if the Union ever settles comfortably into any single form.

One of the problems in centers like the Media Union at other universities has been that projects often move in when the facility is built—and then never leave. Limited paradigms take hold and then can’t be shaken loose. Instead of propagating flexibility within the larger university, the reverse often happens; and these centers find themselves infected by the stolid, incremental “disease” of large institutions. Creating a fluid structure that continually embraces new ideas will be a great struggle. A related challenge will be learning to sustain spaces that are truly neutral in their academic orientation. The Media Union vision contradicts many universities’ standard operating procedure in a number of important ways.

Another difficulty we have been grappling with is finding ways to let the energy and enthusiasm from the Center’s cutting-edge research projects trickle out into the common areas of the building, and ultimately to the entire University. The new interactive library will be open to all members of the Michigan community, but much of the rest of the building will be reserved for a wide spectrum of research projects and groups. Researchers and scholars need space of their own to work together, but we worry that if they remain isolated behind closed doors (even glass doors), we could lose the opportu-

nity for our students and colleagues to experience their excitement. Even allowing the outside world "virtual" access to the Union's projects may not be enough. As Dean Robert Beckley notes, "there are ways in which we would like the building to have the messy, intriguing look of a house for mad scientists." If we expect the Media Union to be a catalyst, changing the common practices of our community, we must find ways for these new practices to move beyond the building's studios.

The late twentieth century has been astonishing in its ability to produce advances in technology faster than we can incorporate them into our everyday lives. But incorporate them we must. Any new invention can do good or harm—think, for example, of atomic energy, or even television. What better place for a Center where these new discoveries might be explored, developed, and integrated into our society than at the University of Michigan?



Basement



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