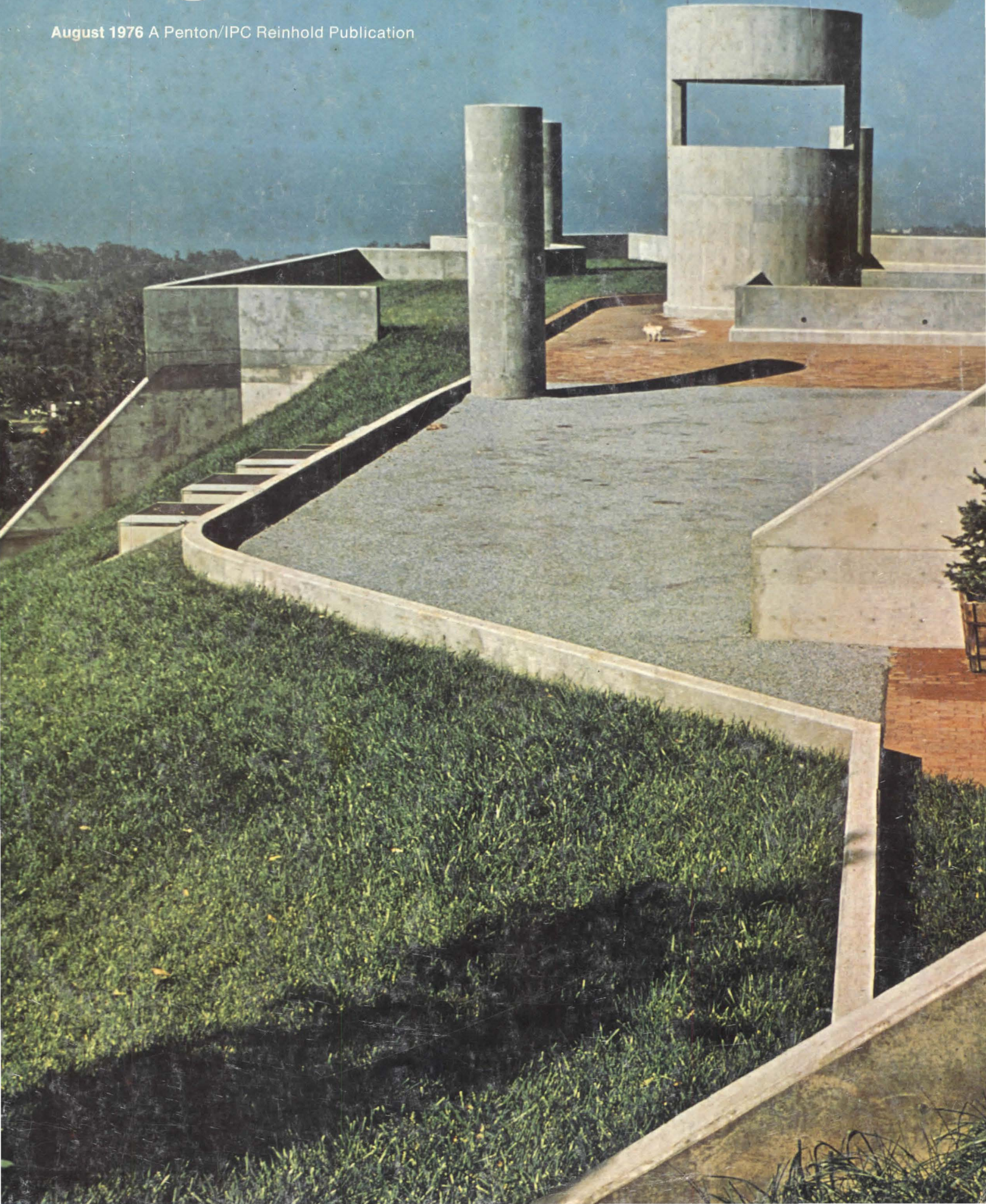


Progressive Architecture

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Tigerman

An aluminum-paneled house continues the tradition of prefabrication in residential construction with an evocative, idiosyncratic design.

Planned for a family with three teenage sons in a Chicago suburb, the 7200-sq-ft house was designed to afford space and privacy to each of the members. The small site (1.5 acres) is secluded, and sits atop a cliff overlooking Lake Michigan. Soil conditions were too poor to permit the house to jut out over the cliff's edge. Thus the plan derives its unusual configuration in large part from the siting and the clients' desire to have rooms overlook the lake.

Architect's Intention

"This is my last serious project," comments Stanley Tigerman. "It is the last project of an insecure person—it has no wit." Tigerman's statement should seem ironic to some Chicago architects—or even to the neighbors living in Colonial and Tudor houses near the aluminum-paneled rubber-gasketed house. But he means it. With this commission, Tigerman wanted to take some off-the-shelf industrial building components and apply them to the design of a house. Previously in fact, he had used the lally column, web-joist, metal deck, and concrete floor construction in the design of a speculative brick-clad industrial building for the same client. (The client knew of him through family.)

With the house design, Tigerman introduced a new feature: modular aluminum panels and glazing with H-shaped zipper gaskets. The structural mullion system of lally columns 5 ft on center, carrying the steel open web joists spanning 35 ft, give the house a high degree of flexibility for the partitioning of its interior spaces. This sort of structure makes sense, considering the highly defined separation of spaces needed now to accommodate a variety of activities. However, with children nearly grown, the clients like the idea of being able to tear down walls if they desired.

Tigerman views the house as part of the continuing Chicago tradition of creating a



Aluminum paneled house sits on cliff overlooking Lake Michigan.

prefabricated all-metal lightweight housing that can be traced to Fuller's Dymaxion House. However, he criticizes it for not being adventurous enough. In retrospect, he feels that the machine-made high-tech image the house suggests would be better reinforced by flush panels and smoothly curved walls instead of the highly visible gaskets and segmented curves.

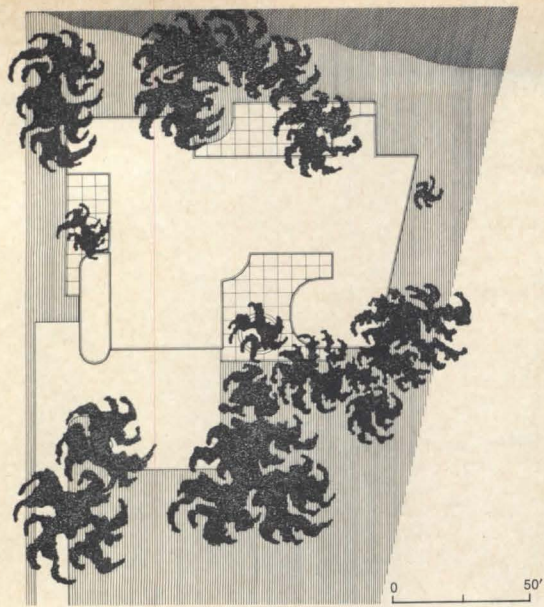
Clients' vision

In this architecturally "unadventurous" house, the male client has hooked all the house's functions to a small computer terminal. With a pocket-size relay system he is able to turn on lights, (in a programmed sequence) heating, ventilating, air conditioning, stereo, TV, kitchen equipment, security surveillance, etc. The telephones (which have clocks, intercom, two-way outdoor public address system) link up with the computer so that it can be given instructions from anywhere the client can

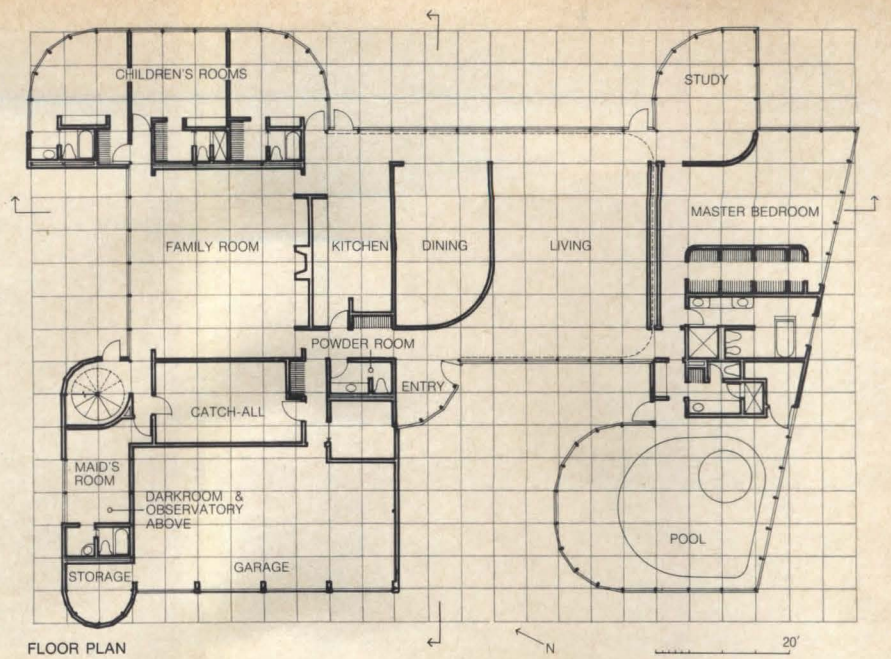
get to a phone.

Since the client will be marketing this home computer and software system next year through his firm (Gimix, Inc.), he regarded his new house as a definite live-in experiment. There are other indulgences such as an observatory and radiant-heated pool. The client also took great interest in the planning and construction of the pre-fab custom house, (including wiring the floor for a computerized service cart), and even acted as his own contractor.

The mistress of the house characterizes herself as more "conservative." If her husband was inclined toward a *machine in the garden*, she had a country villa in mind—preferably in white brick. Her reaction to the architect's and husband's initial proposal for stainless steel cladding on the house can be easily imagined. Eventually she agreed to the duller pewterlike finish of the aluminum panels, and now claims no regret. Interior furnishings remained

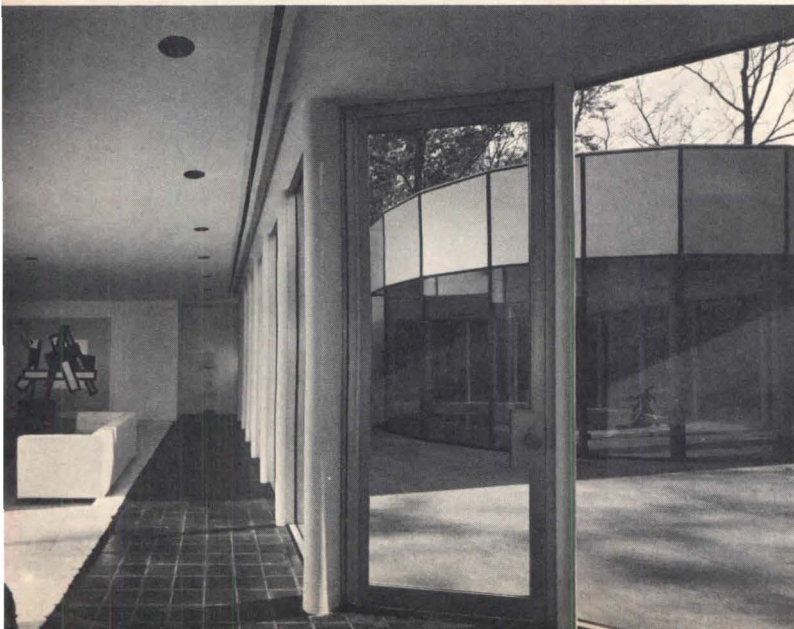
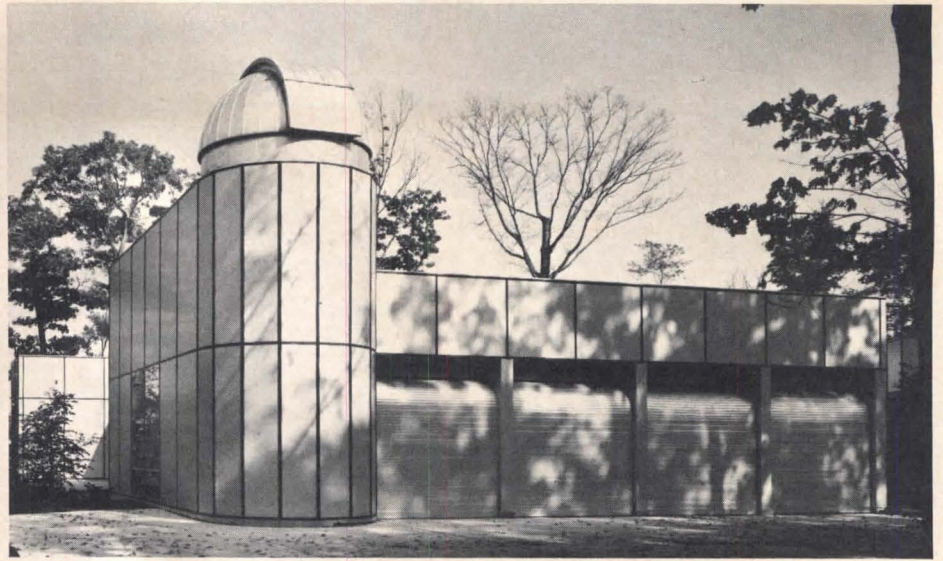


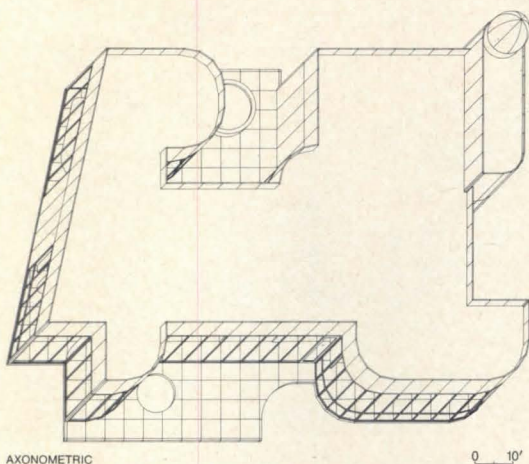
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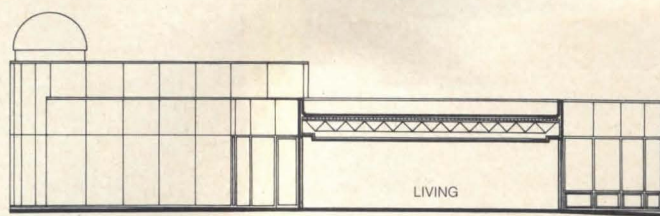
Tigerman

Observatory, roll-up doors, and heated drive can be operated by house's own computer system. The fire-resistant structure permits long spans, so that clients may alter partitioning if desired. Visitors are announced through an electric eye or tv monitor; they enter the foyer near garage (bottom, left); then are directed by perimeter corridors to living room (bottom right), or the family room.

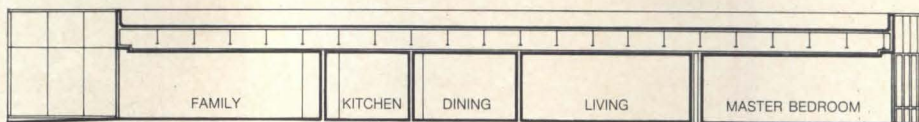




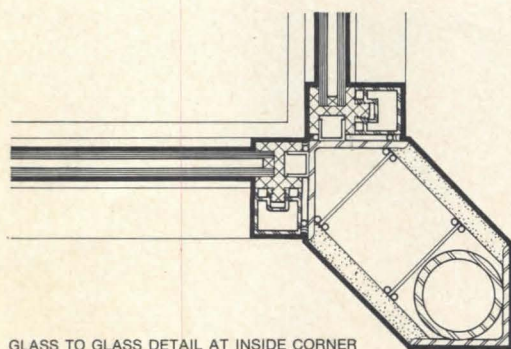
AXONOMETRIC



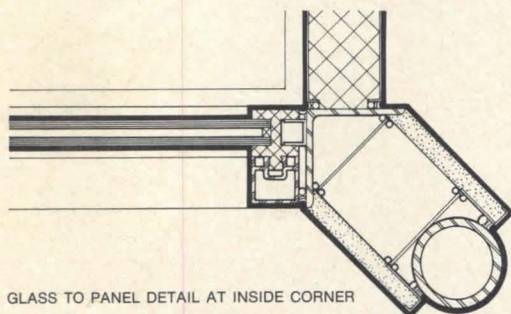
TRANSVERSE SECTION



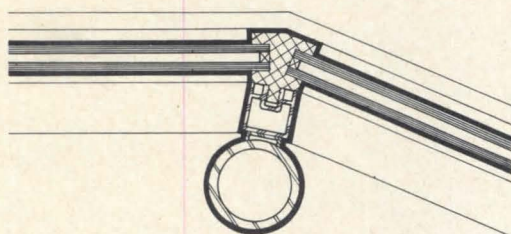
LONGITUDINAL SECTION



GLASS TO GLASS DETAIL AT INSIDE CORNER



GLASS TO PANEL DETAIL AT INSIDE CORNER



BENT GLASS TO GLASS CONDITION DETAIL



Indoor pool has radiant computer-operated heating.

steadfastly in her domain. Tigerman naturally would have liked to continue the mechanistic imagery of the house to the interiors, but the client decided to hire someone else: she wanted the modern look softened up a bit.

In discussing their reactions to the house's distinctively idiosyncratic style, both partners felt it satisfied a certain longing to have something different: they had lived almost 20 years in a smaller ranch-style house in the same town. The clients also made it clear, however, that their attraction to this scheme was affected by its secluded site, where the house would not have to be seen in context with an assortment of other houses.

P/A reaction

The apparent affinity of the aluminum house to Fuller's Dymaxion and the Chicago industrialized housing efforts of the 1920s and 1930s marks a worthwhile attempt to build on and refine past experimental efforts with lightweight housing. If it generates interest once again in exploring these materials and techniques for single family or multi-family housing, it will have made an architectural contribution. (For more details on prototypes see Stuart Cohen's essay in *Chicago Architects* (Swallow Press Inc. 1976). But, of course, neither the construction nor the imagery necessarily belongs exclusively to Chicago. Another prototype for the construction could be Kocher & Frey's 1934 Aluminaire House on Long Island. And in terms of imagery, the curved segmented sections (including the observatory) recall Bruno Taut's work, especially his steel industries pavilion for the Leipzig Fair in 1913, designed with Franz Hoffman.

Paradoxically, it is this *antiquated/visionary* aspect of the house that makes it likeable despite the awkwardness of the gaskets or the choppieness of the curves. The early expressionist imagery also helps make the interiors a little more compatible with the shell: the time warp between the two is paradoxically lessened by the more retardataire (technologically speaking) appearance of the exterior.

Thus one client is allowed to integrate her taste and lifestyle into this "machine" without feeling too compromised. Yet the house still carries enough of the futuristic feel to act as an appropriate setting for the other client's computer-fixation.

Although the house is too customized to offer any lesson in the economic benefits of this metal prefabricated construction, it does make another point. It demonstrates the accessibility of a highly technological idiom to house design (and other architectural building types). By applying these techniques in a highly individualistic personalized manner, Tigerman shows it's not what you use, but the way that you use it. [Suzanne Stephens]

Data

Project: Aluminum house, near Chicago, Ill.

Architects: Stanley Tigerman & Associates, Chicago; Stanley Tigerman, partner in charge; Anthony Saifuku, associate-in-charge.

Contractor: Kelmer Construction Management.

Client: Name withheld.

Program: a 7200-sq-ft house for a family of five; observatory, indoor pool, family room, and separate bedrooms for the children, maid's room.

Site: one and a half acres on secluded cliff overlooking Lake Michigan in one of Chicago's older suburbs.

Structural system: "metal bearing wall" (structural mullion) system of lally columns 5 ft on center supporting steel open web joists spanning 35 ft. Lateral bracing is provided by diagonal tension cables with turnbuckles.

Mechanical system: all electronic, low voltage, computer-controlled system. Composite radiant and air bar comfort conditioned.

Major materials: three-in.-thick insulated aluminum panels; aluminum tubes, channels, and mullions for window wall construction; neoprene gaskets; wallboard, plaster, tile, steel, insulated glass. (See *Building materials*, p. 90.)

Consultants: Raymond Beebe, structural; Joe Karr and Associates, landscape architect; Robert Phillips, electronic engineer.

Costs: withheld at request of client.

Photographs: Philip Turner, except David Woodhouse, left.