



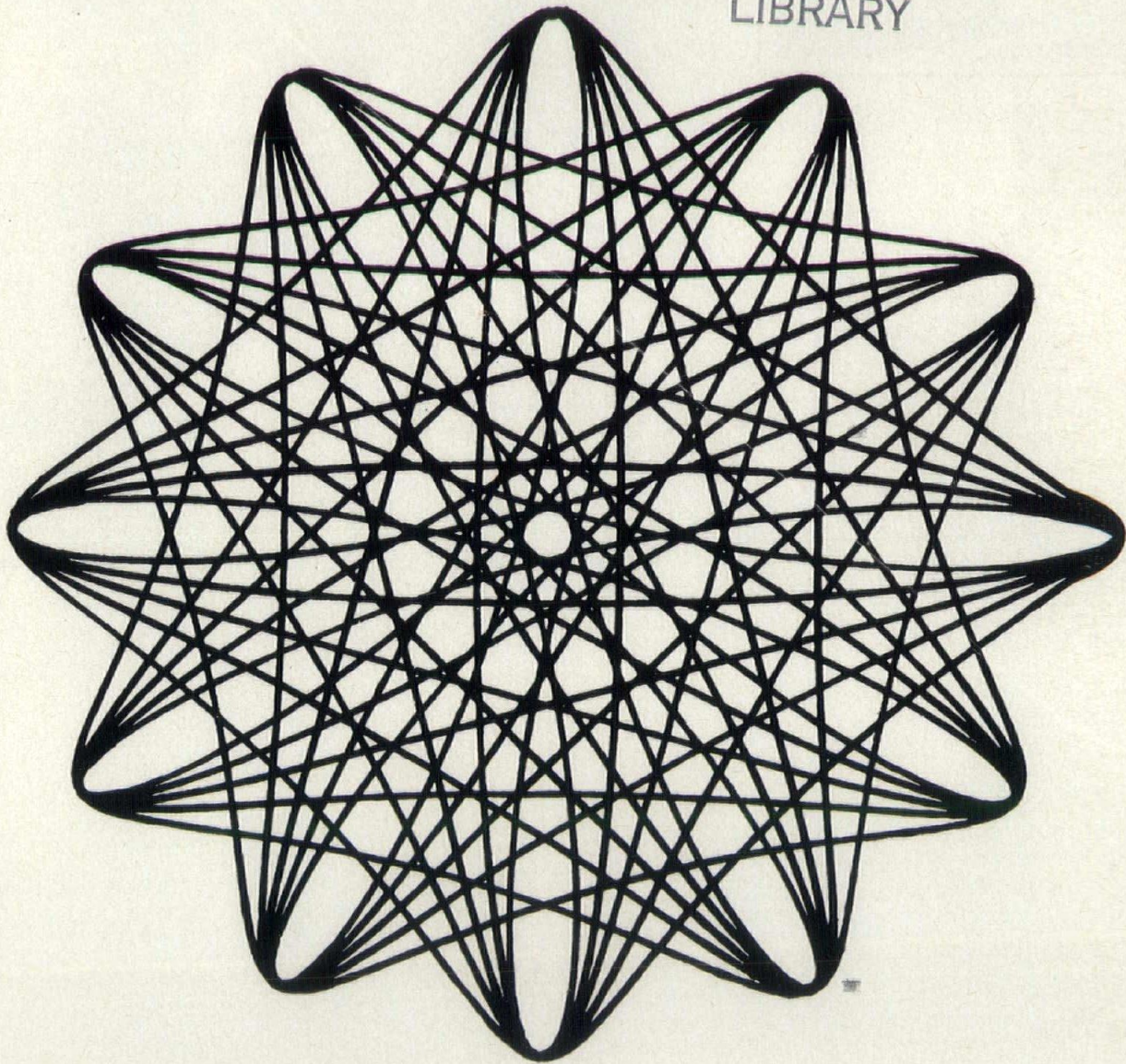
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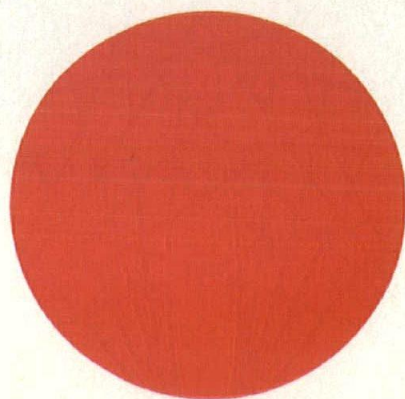


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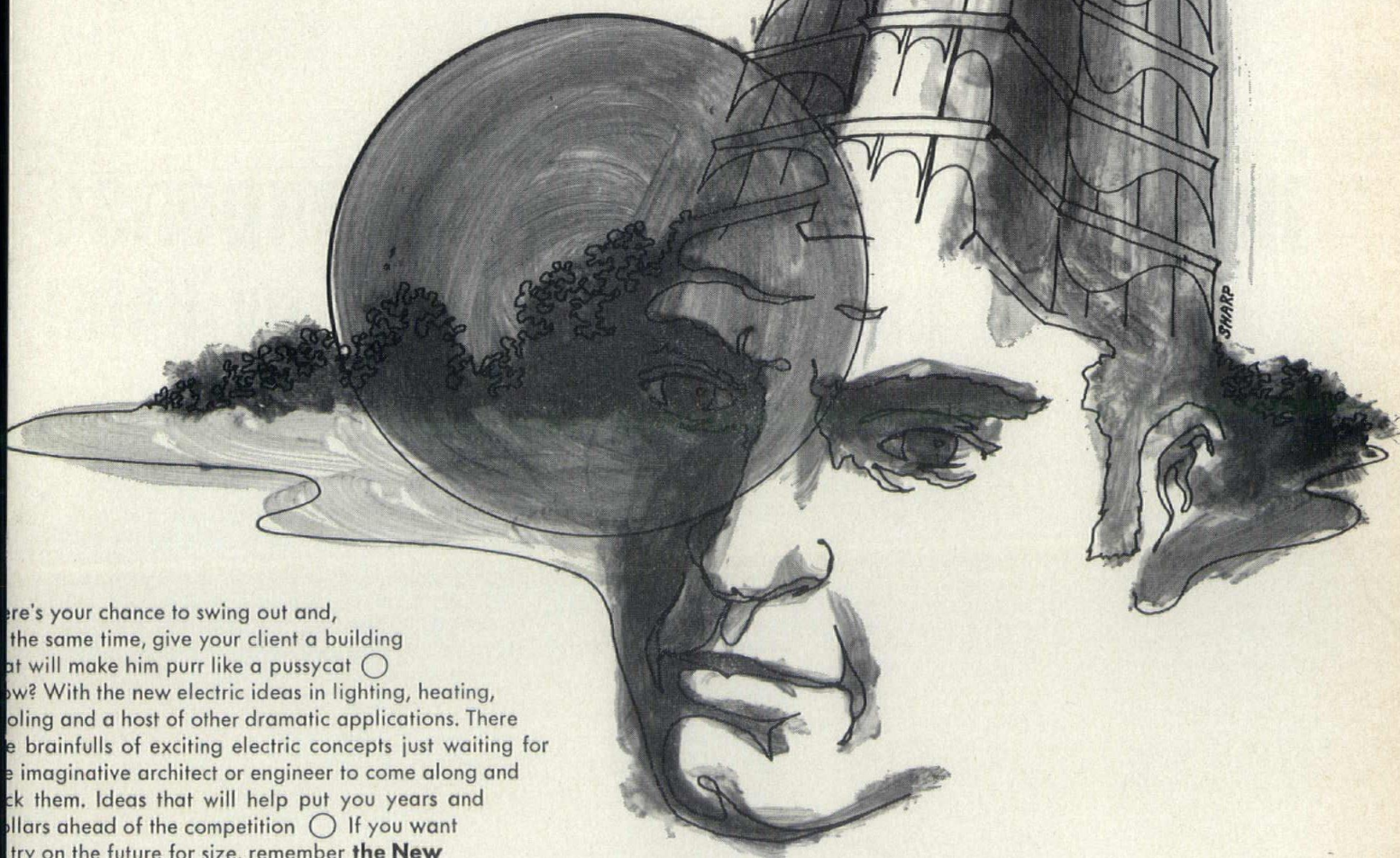
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## COMPUTERS IN ARCHITECTURE

This month's feature section concerns the Computers in Architecture program conducted at Ball State University under the direction of John Maddocks and Marvin Rosenman, both Assistant Professors in Architecture at Ball State.

The article and photos by Professor Maddocks include highlights of the course, an evaluation and assessments by participants, faculty, architects and students. The cover art also is by Professor Maddocks.

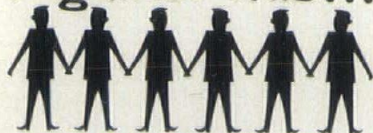
Our News section this month includes Roll McLaughlin's advancement to Fellow, Fran Schroeder's election to the CSI Board, a letter from Bert Westover and other tidbits of information.

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**JOHN MADDOCKS**

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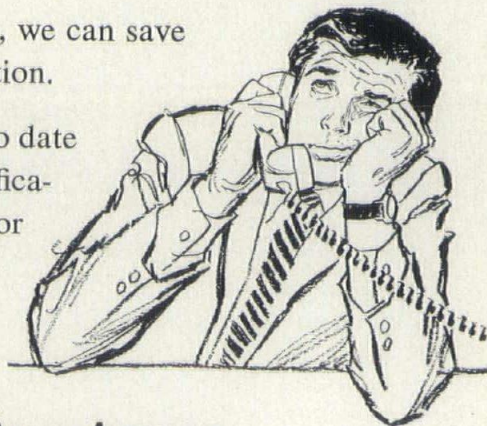
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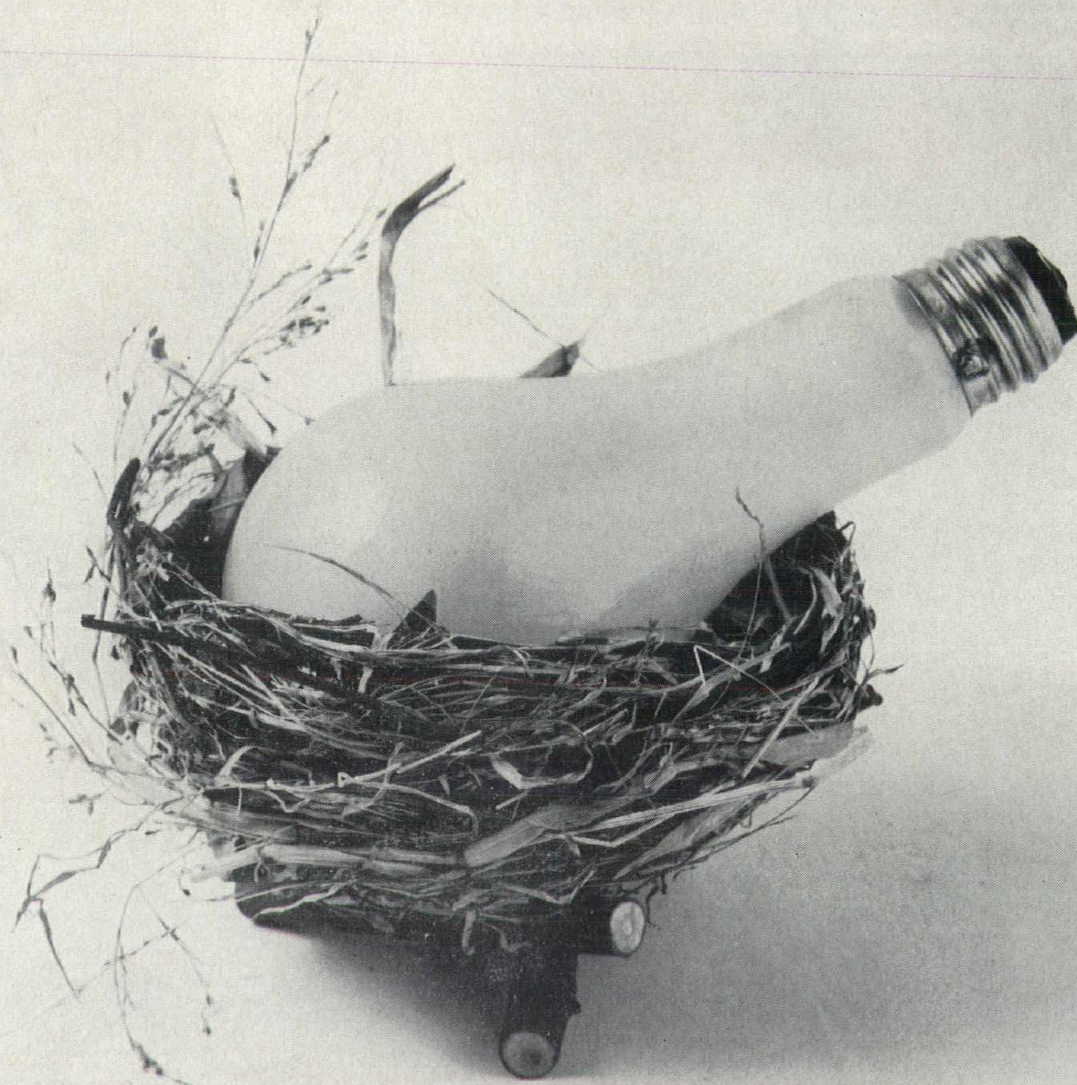
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# SPECIFICATIONS CLINIC

BY HAROLD J. ROSEN

## Protecting Architectural Concrete

**Clear coatings can preserve the appearance of exposed concrete, but architects must choose carefully from among the available products. Rosen is Chief Specifications Writer for Skidmore, Owings & Merrill, New York City.**

The increasing use of concrete for exterior facades has exposed some problem areas that were not too apparent to designers and specifiers when they first started using this material. The areas of concern include the following: the temporary mottling and darkening of the surface after a rain storm; the accretion of dirt and soot on exposed aggregate surfaces; the change in color of the matrix due to attack by atmospheric pollutants; and the etching of gray and bronze glass when alkalis leach from the concrete onto the glass.

To overcome these problems, specifiers have been specifying the application of the clear coatings to preserve the initial appearance of exposed concrete. Generally, the preferred coating should be clear, water repellent, and a breathing type. They function primarily as follows: by reducing water penetration, they minimize mottling and darkening due to rainstorms; by reducing water penetration, free alkali in concrete is not leached out to the same extent as on uncoated concrete; they tend to make the surface self-cleaning, reducing the accumulation of dirt; they tend to reduce atmospheric attack on the cement matrix; and the breathing qualities provide for uniform weathering.

Many coating types have been marketed by manufacturers as a panacea for the problems outlined above. However, they are not without their own contributory problems. Some have a relatively short life span. Some actually attract soot. Some develop a glossy ap-

pearance that changes the architectural effect. Some darken the exposed aggregate and the cement matrix considerably, thereby altering the architectural appearance.

The ideal coating should be clear, nondiscoloring, long-lasting, and should not make any discernible change in the color of the aggregate or in that of the matrix either.

The Portland Cement Association investigated a wide variety of clear coatings, and published its findings in Bulletin D137, 1968, "Clear Coatings for Exposed Architectural Concrete." Sixty products were investigated to determine their effectiveness in protecting exposed aggregate concrete and smooth concrete surfaces against the elements. These coatings consisted of acrylics, polyurethanes, polyesters, silicones, waxes, epoxies, styrenes, and in some products, mixtures of these chemical formulations.

★ **In the accelerated tests, the PCA found that by and large, the coatings based on a methyl methacrylate formulation provided better protection on exposed aggregate surfaces than other types of coatings. The laboratory test results were confirmed by the outdoor weathering exposure. Similarly, on smooth concrete surfaces, methyl methacrylate coatings with a higher solids content gave better protection.**

Generally, the polyurethanes, polyesters, and epoxies tended to cause a glossy appearance, and created a yellowing or darkening effect.

The results of the PCA test program



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put architects in a better position to use architectural concrete as a design medium, since specifiers now have a choice of several materials that will protect exposed concrete from the elements. Also, manufacturers can improve their products since they have a test program that can be applied for testing their own products.

In a nonindustrial area with little or no air pollution, a coating may not be required. The only consideration in a suburban environment would be a designer's decision as to whether temporary darkening due to rain was sufficient reason to require the application of a proven clear, water-repellent coating to prevent it. In this same non-industrial environment, a specifier might elect to specify a water-repellent coating if gray or bronze glass is used where water running off the face of the concrete might wash onto the glass surface. A water-repellent coating will reduce water penetration into concrete, thereby minimizing the possibility of dissolving free alkali and leaching it onto the glass surfaces. The leaching will result in noticeable etching of the glass.

In industrial areas, the use of exposed aggregate concrete is questionable because the surface is sure to entrap industrial pollutants. In these climates, smooth concrete surfaces or very lightly sand-blasted surfaces are preferred, provided they are protected with a proven clear, water-repellent coating.

Copies of the PCA Bulletin D137 may be obtained from any local PCA district office.

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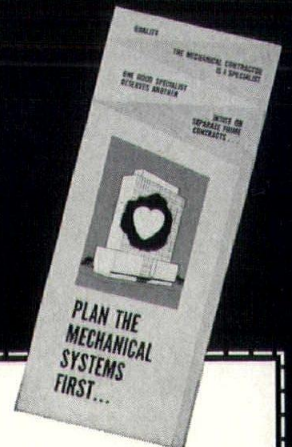
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# COMPUTERS IN ARCHITECTURE

"Computers in Architecture" was a survey course offered by the College of Architecture and Planning at Ball State University during the Spring term of 1969. It was organized and directed by John Maddocks and Marvin Rosenman, both Assistant Professors in Architecture at Ball State. The course consisted of prominent guest lecturers, computerized gaming sessions, and demonstrations of computer equipment. It was offered for credit not only to students as a part of their architectural curriculum, but also to practicing architects in Indiana as a program of continuing education.









The following description of the course is from a paper delivered by John Maddocks to a University of Michigan conference on computers in architectural education involving participants from architectural schools throughout the nation.

I would like to describe to you a course which was just completed at the new College of Architecture at Ball State University. The course, which was entitled **Computers in Architecture** was offered to third year students as a required part of their curriculum and to practicing architects throughout the State of Indiana as a part of our program of continuing education for professionals.

A primary goal for the course was that it be sufficiently general to reveal to the students a wide range of implications and possibilities for architectural applications of computers. To accomplish this goal, we chose to invite a series of guest speakers who would discuss, in depth, various aspects of computer application.

Our reasons for adopting a general approach to the course involve both policies and facilities. As a new school of architecture we have unusual opportunities for innovation, but we also have unusual problems with development of facilities. It will probably be several years before we can achieve the sophistication of equipment, programs and students which we believe appropriate to the use of computers in architecture.

But even if we have optimum facilities, would we want to subject our undergraduate students to an intensive research effort in computer technology? One can argue a convincing case for the desirability of maintaining a general approach to computers in architectural curriculums regardless of the sophistication of facilities which are available. Most students, after all, will never have the opportunity to design a computer program, will not become deeply involved in computer development, and will easily incorporate limited computer usage into the normal procedures of their homes and offices.

There is perhaps a danger in becoming so involved in the mystique of the computer and the excitement of exploring new theories and applications, that one overlooks the students' point of view and fails to fulfill the needs of his education in terms of future professional performance.

An undergraduate education in architecture must provide the student with general information and abilities in several technical fields which become tools of architecture in later practice. Schools of architecture must present computers as one of these tools, and resist the very attractive

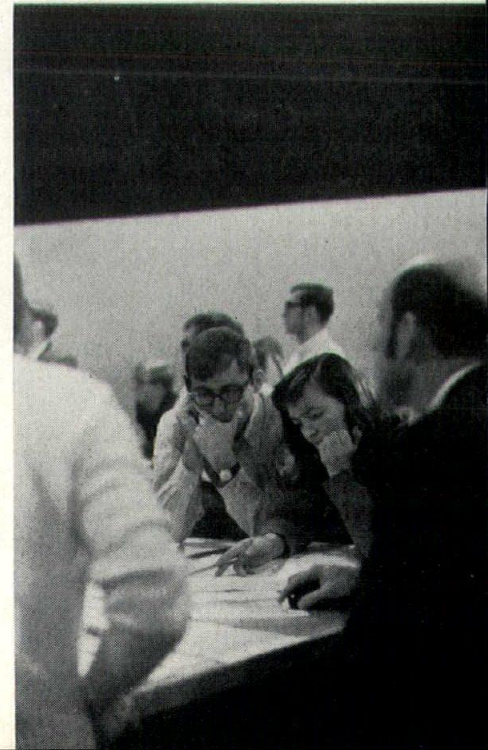
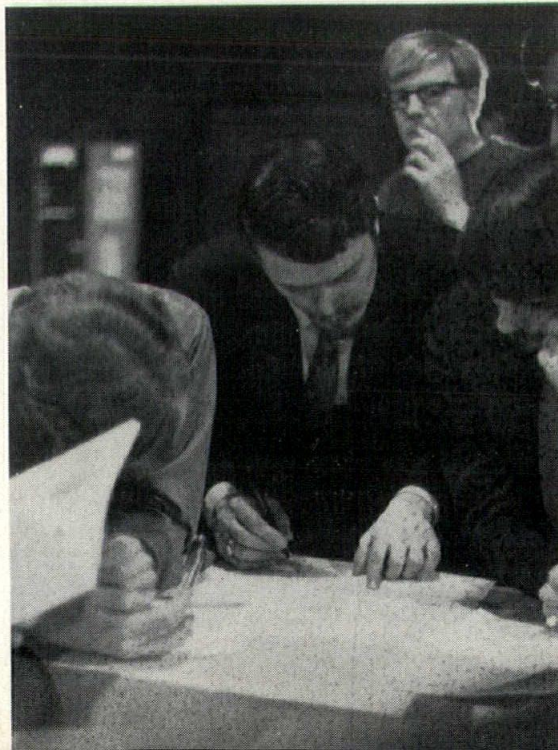
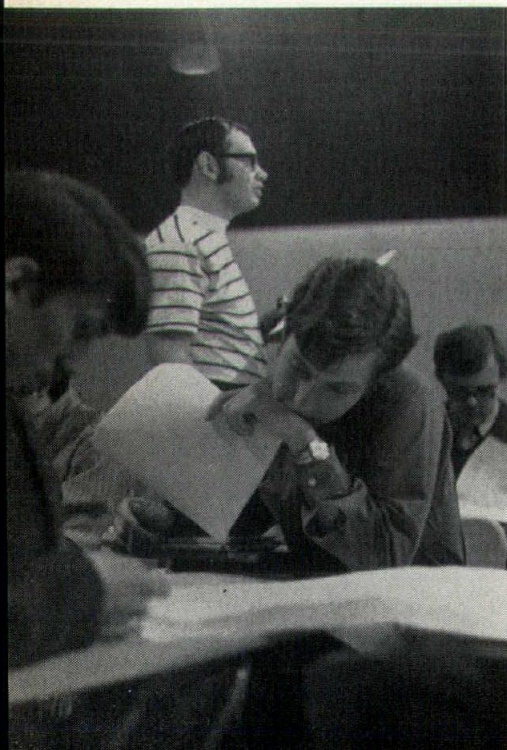


# CITY I

AN URBAN STIMULATION—WASHINGTON

CENTER FOR METROPOLITAN STUDIES

This computerized game simulating social, political and economic decisions on an urban scale, was a part of the course. Students adopted roles representing different forces in the community which interacted on property purchases and development, municipal decisions, taxes and profits, public facilities, etc. The game situation allowed relatively fast results of economic decision and an opportunity to explore several alternative interactions.





temptations in allowing computer activity to become an end in itself.

But on the other hand, there is every indication that the computer will alter not only our techniques, but also our basic philosophical approaches to architecture; perhaps within our lifetime. Such dramatic changes in the progress would induce considerable reform in curriculum structure and course content, and require the best research efforts of faculty, students and practicing professionals. A highly refined and well equipped research program in computers and other fields will be essential to progress in the profession.

One obvious answer to this dilemma is to develop a generalized undergraduate sequence of courses within a program of highly sophisticated facilities. This would allow for quality in undergraduate survey courses together with options for further undergraduate development-plus the feedback from graduate research projects to undergraduate students. This is in no way an innovative solution—since many schools have developed in this direction already. But the argument is worth discussing again, because it emphasizes the importance of maintaining a relevance check on undergraduate programs which too often become entangled with research projects of faculty and graduate students, leaving the undergraduate student to fill the gap as best he can.

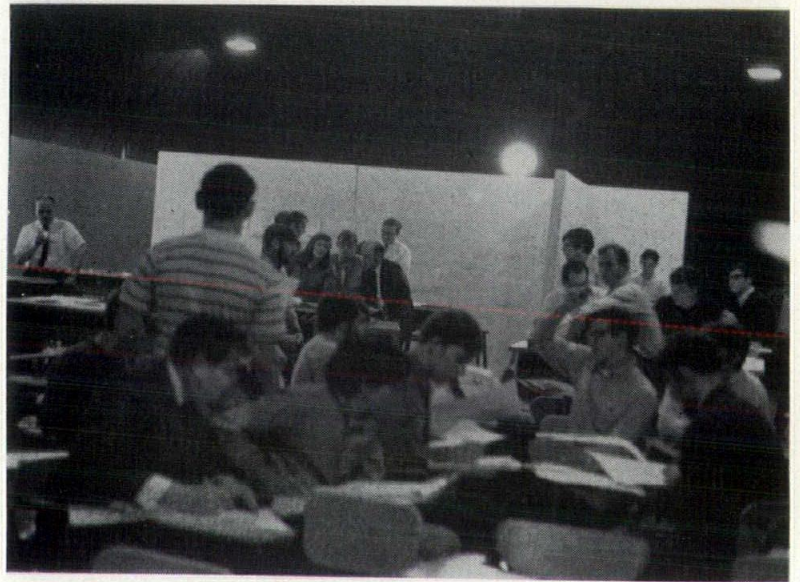
We at Ball State University, recognize the advantages inherent in both approaches, and have tried to combine them, with minimum compromise into the course which I am describing to you here.

Basically, the course was comprised of five all day Saturday sessions. Saturday was selected for the convenience of the attending professionals. Each session began with two guest lecturers, continued with discussions between students and speakers, and ended with a several hour session of the CITY I Urban Stimulation Game.

The first meeting was an introduction to the CITY I Game by Peter House, formerly of the Washington Center for Metropolitan Studies. There was no other presentation and the remainder of the day was given over to game playing so that the problems of understanding the CITY I Game could be overcome and later sessions could run smoothly. I will not take the time to elaborate on the game itself except to say that the students enjoyed the gaming sessions as much as any lecture in the course—and are clamoring for more.

The second session teamed Nicholas Negrophonte and Stuart Silverstone, both from MIT, who discussed artificial







intelligence, man-machine-communication, and the ideological implications of computers on social and cultural behavior.

The third session included a thorough description of currently available hardware by Herb Wheeler of Penn State—and a description of his own computerized office practice by Carl Bradley, a Fort Wayne, Indiana, architect. We also had a demonstration of graphic display hardware in the CalComp traveling van which was an impressive supplement to the real applications described in the lectures.

The contrast from the theories of session two to the pragmatism of session three was intended to illustrate the exact distance from a modest computerized practice to a non-computerized practice.

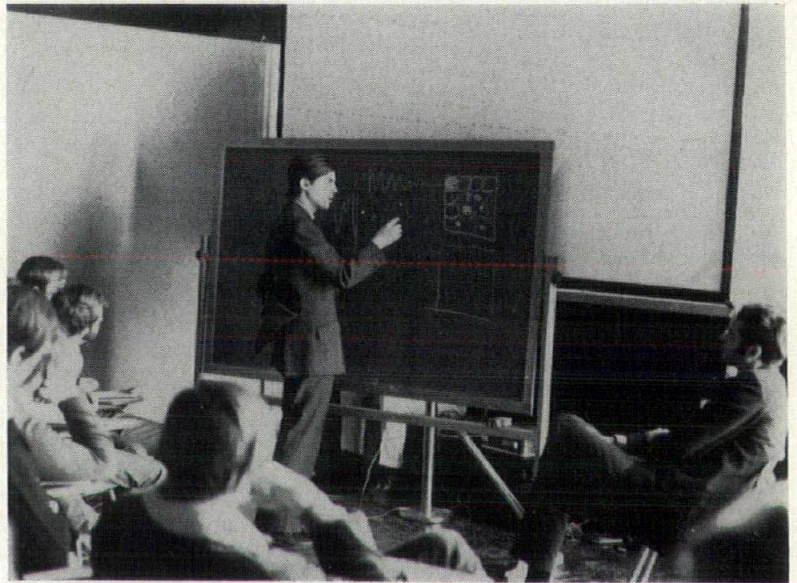
Session four presented Charles Davis of the University of Kentucky and Lavette Teague of Skidmore, Owings and Merrill in Chicago. Both lectures referred to computer aided design processes: Davis on a theoretical level dealing with computerized design methods and Teague on a practical level showing optimization techniques for high rise office building design.

For the final meeting, we had the pleasure of hearing Steven Coons of MIT and Eric Teicholz of Harvard, who explained what was being done today in architectural application of computers and what we could expect in the immediate future. This appropriately left our course open ended.

To evaluate the course, I would like to explain only some of the issues which were revealed as the course proceeded. To begin with the favorable, we found the technique of using guest lecturers as a primary source of information an enormous success. It offered all of the academic advantages of having a visiting professor plus the intensity of a conference. Through this technique, we were able to tap the best resources which the profession has to offer. In combination, these lecturers gave a quality and diversity of information which no one man in a normal teaching situation could have done.

By bringing this quality into our school, we expanded the school's facilities in many ways. Of course, the students and practitioners who attended the course are the major beneficiaries, but students from other classes were welcome to attend and several of the lectures stimulated discussions throughout the school for several weeks afterward. Mr. Rosenman and myself, and other faculty, had ample opportunity for discussions with the speakers concerning our own directions. As a result of this contact, we are in a better posi-







tion to help determine future computer development goals for our school.

We think this expansion works in another way as well, for we hope that the visiting speakers leave Ball State with an appreciation of the quality of students, faculty and programs which we are developing. We are ultimately interested in the stimulation derived from national and international interaction between students and faculties of all schools, and want all to know what we have to offer.

As a teaching technique, guest lecturers seems to us to be an exciting and extremely useful innovation which we will continue to use in different courses each year.

An important criticism of the course concerns computer hardware facilities. During the course, the students indicated a desire to participate in the programs which were being explained to them. Their demands were naive in some cases. They wanted to see Nicholas Negroponte's hair cutting robot in action, and wanted to wear Steven Coons environmental stimulation helmet. But in most cases, the points were valid. Direct experience with the computers should be a part of even the most general survey course. The CalComp van at the third session was a step in the right direction and the CITY I game sessions helped relieve some of this need even though the data was processed in the Washington computer.

In evaluating the course, this stands as our major short coming. In the future, we will supplement lectures with demonstrations of the same quality as the lectures.

Finally, we must ask: What is the relevance of this course to these particular students and to the problems they will confront in professional practice? The course has not taught the students how to design a computer program which will select materials or design a beam, or determine critical path. It did not teach them how to use a computer or even offer them time at a computer console. But the course did confront them not only with a survey of available equipment and programs which are available today, but also with the people who are leaders in the field, both in theory and practice. The students heard and discussed ideas for uses of computers in architecture past, present and future. In terms of the facilities of our school, the goals of our program, and the educational and professional needs that now exist, we can only judge our recent computer course successful.







"Gaming is a learning process that reflects this age. It is a modern situation using modern equipment which can be utilized by the masses in large quantity. Because of the scope of the experiences the gaming situation provides, its potential seems almost limited. The gaming situation could become the educator of the future."

MARK MATTOX

"Adding machine computerization is using the computer as a static rather than dynamic instrument in the architectural profession. Instead of using the computer to further the knowledge of man, it is being used only as a beast of burden. This approach to the use of the computer does not seem to be the most important or the most likely to succeed."

DAVID W. BAILEY

"Hopefully, man can minimize his quasihuman intentions through dehumanized machines as his self control cannot. The computer can give new energy and vitality to the profession, more competence and greater expediency which in the twentieth century is demanded from the public."

M. L. ERTEL

"It is the objective of the CITY I model to provide professionals and students with a tool with which they can see more clearly the relationships between public and private decisions in urban development and their effect over time, the inter-disciplinary scope of urban studies, and the problems of the collection and disbursement of public funds. With such a tool, it is hoped they will find it easier to make policy decisions in the urban environment."

PETER HOUSE

"My concern is not with the speeding up of the existing design process, nor with automated specification writing, automated working drawings, cost analysis and so forth. I am interested in finding out what happens when you re-analyze the design process and introduce the computer as a partner or as an element in this process."

STUART SILVERSTONE

"The design of man's environment involves many variables, and too many to keep using today's design process. Architecture machines, with the designer relying on the machines and their capability of storing vast amounts of knowledge, plus its rapid recall ability, greatly increases the designers scope of design possibilities."

JACK HENRY

"If Random House were to send its manuscripts to a monastery to have each copy hand lettered by monks, they would be no less efficient in the conduct of their business than the average architectural firm is presently. Architectural practice, to step into today's pace, should utilize all the tools and organizational procedures available for efficient performance."

JAMES GOODEN

"You don't need a computer to gain benefits from the new processes. A realization of the way the process works is stimulus enough to make us look at our own methodology, see the new kinds of information available to us, see the unintended limitations that we impose upon ourselves, and start to structure or re-structure our thinking processes."

DAN FOGERTY











"No doubt man is on the threshold of artificial intelligence, but will the goal really be of man's choosing? Most assuredly man will control the machine, yet will man control himself. Artificial intelligence will be a great innovation, but what role will it really play in man's freedom of choice."

JAMES R. UNDERWOOD

"The computer will affect the role of the architect. It will not take away the architect's job as much as it will change the functions of his job. He will be more involved in the sociological effects of design upon his clients. Computers of this type are truly a step in the right direction."

TERRY A. PASTORINO

"I think it is obvious to all of us who are working in the environmental area that we can't do the way we did it twenty years ago or five years ago. The area that we are working in is so sophisticated and the possibilities are so exciting for new techniques of practice that I believe we have to accept the new way of doing things."

HERBERT WHEELER

"Automation that we see extant in the profession is merely a speeding up of the same old processes that we've been going through for many years. I hope we'll begin to evaluate not the efficiency of which we can process our methods, but take a look at the methods themselves and be able to do things that we couldn't do before and do them in different ways."

CARL BRADLEY

"There are two prevalent attitudes toward the use of the computer in helping make decisions. One is that man just can't keep up with all the facts involved in making a building or solving a complex problem. The other is a much more involved problem, but it's certainly conceivable that if the computer can remember all these things, it can certainly deal with them as well. We can let it assume the responsibility."

CHARLIE DAVIS

"There are still very real breaks in the psychological barriers that have to be overcome before architects are willing to use machines; even if you can prove that it's going to save time or money or the real world constraints that he has to deal with. Assuming these can be overcome, there are ways in which machines can be used."

ERIC TEICHOLZ

"We now understand that tools have caused tremendous increase in our intellectual capability. The computer, being a tool of a kind, and being a tool of a hyper-kind, probably will cause us to improve our intelligence in a hyper-way. Probably one hundred years from now people will be incredibly intelligent in comparison to what they are now because of the influence of this tool. Man makes a better computer and the computer makes a better man."

STEVEN COONS



**SPEAKERS**

Peter House  
Jan Cooper  
Nicholas Negroponte  
Stuart Silverstone  
Herbert Wheeler  
Carl Bradley  
Charles Davis  
Lavette Teague  
Eric Teicholz  
Steven Coons

**FACULTY**

John Maddocks  
Marvin Rosenman

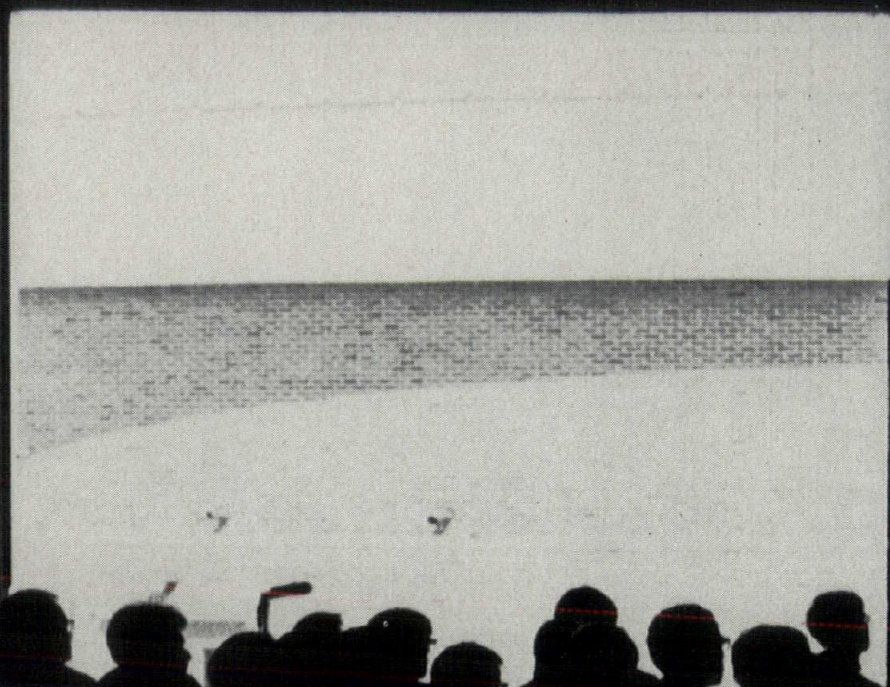
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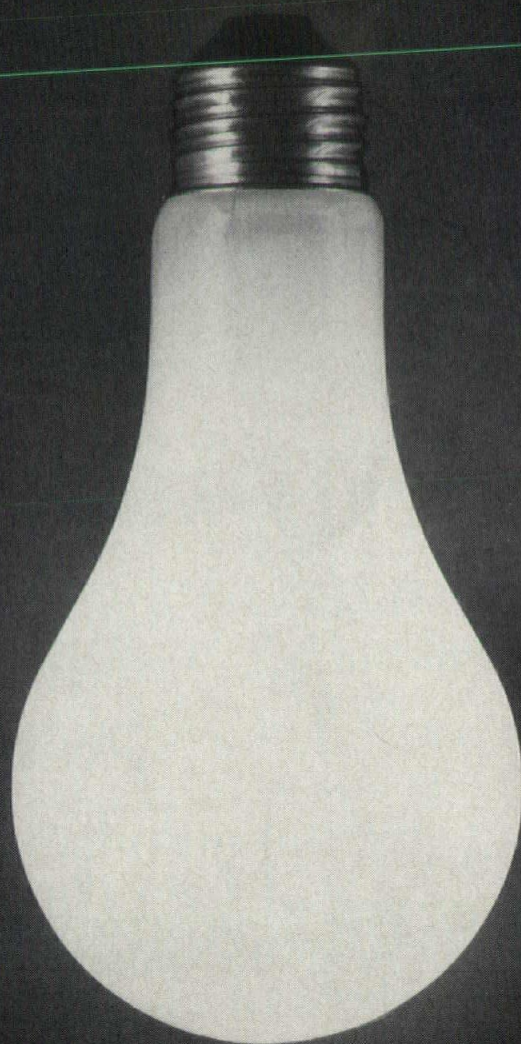
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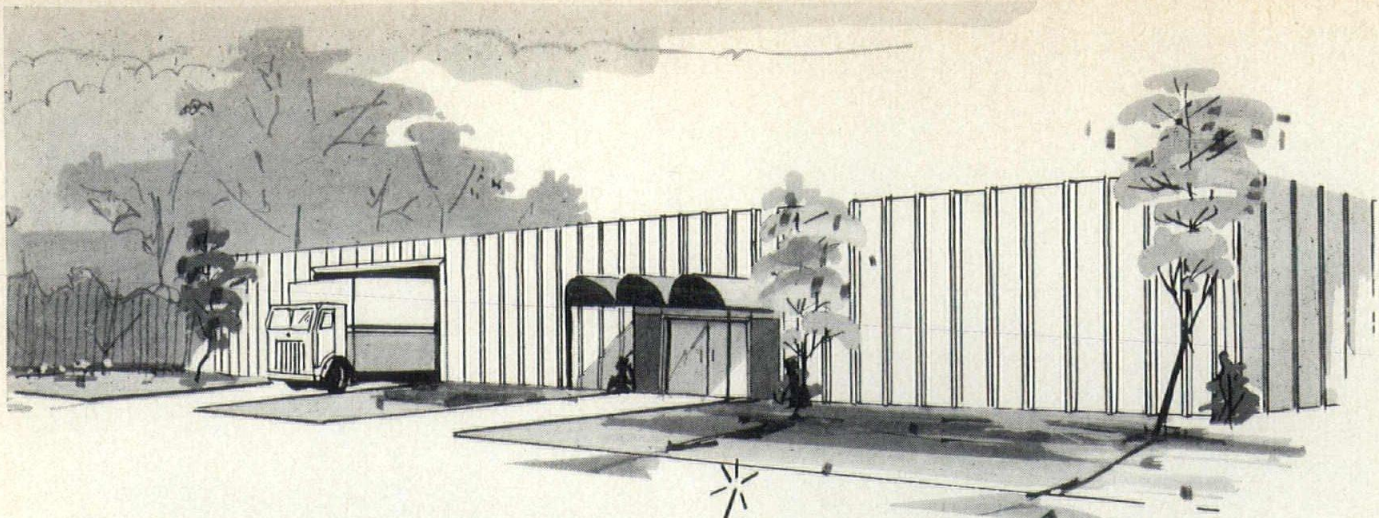
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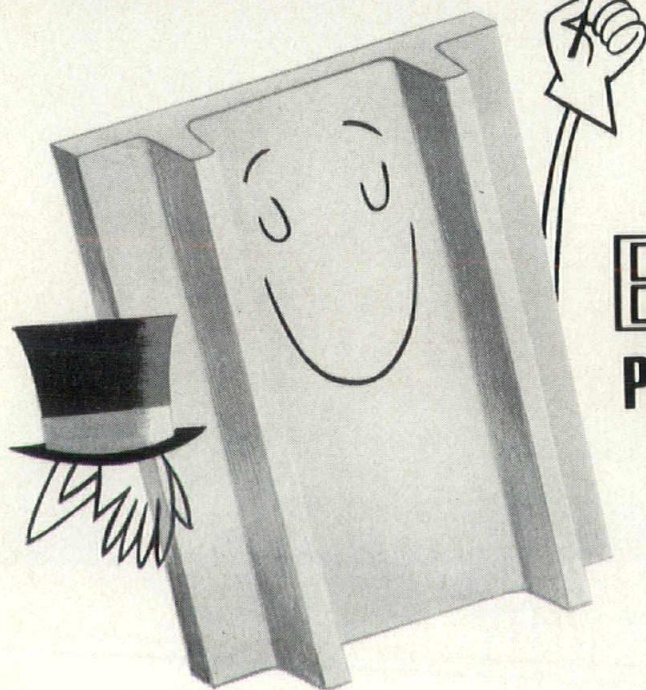


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# AWARDS IN ARCHITECTURE/1970

**PURPOSE:**

To recognize Architects, Owners and Contractors who have made significant contributions to Architecture in Indiana from 1965 to 1970.

**ELIGIBILITY:**

Open to all registered Architects who are members of the Indiana Society of Architects. Architect of Record must have had prime responsibility for development of the project. Projects need not be located in Indiana.

**ENTRIES:**

Structures of any type, urban design projects, historical restorations. Project must be substantially completed by date of submission. More than one entry may be submitted, but each entry must be submitted as a separate entity. Projects which did not receive awards in the 1968 Honor Awards Program may be resubmitted.

**PRE-REGISTRATION  
& ENTRY FEE:**

Each separate entry shall be pre-registered on forms provided by the Indiana Society of Architects and shall be accompanied by a check in the amount of \$15.00.

**SUBMISSION OF  
ENTRIES:**

All entries must be submitted in binders to be provided by the Indiana Society of Architects on receipt of pre-registration. All entries must be submitted so as to arrive no later than Monday, September 14, 1970. Entries received after that date shall be returned unopened.

**JUDGING:**

Will be based on contributions to the advancement of Architecture, originality of design, construction techniques, effective and suitable use of materials, esthetic appearance, excellence within limited budgets or restricted projects, appropriateness within an urban or historical context. The nature of each project will influence the importance given to each consideration. There will be no categories of entry.

**AWARDS:**

Shall be as determined by the Jury. Awards will be announced at the Indiana Society of Architects' Annual Convention at Indianapolis on Saturday evening, October 17, 1970. Award certificates will be presented to individual Architects, Owners and Contractors in the respective communities after the convention.

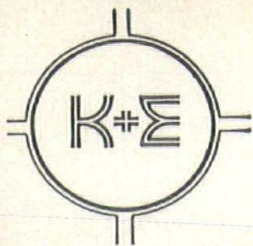
**EXHIBITION:**

All entries will be exhibited during the Annual Convention and thereafter as determined by the Public Relations Committee.

**INFORMATION:**

Contact the Indiana Society of Architects, 300 East Fall Creek Parkway, Indianapolis, Indiana 46205.





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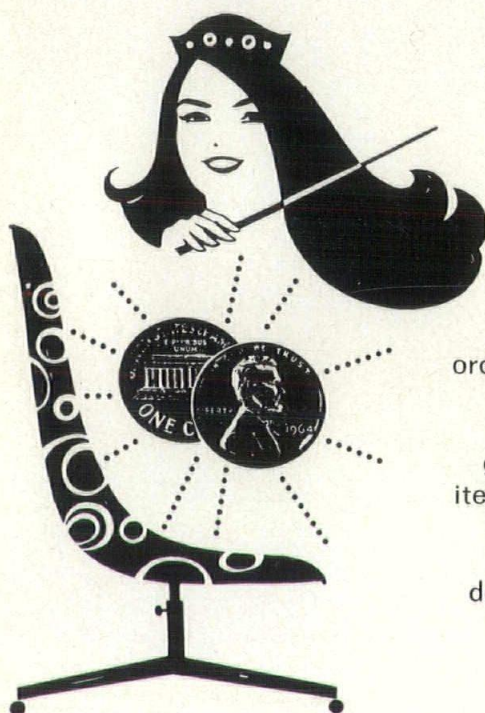
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Indianapolis Architect H. ROLL McLAUGHLIN has been elected to the College of Fellows of The American Institute of Architects, a lifetime honor bestowed for outstanding contribution. Mr. McLaughlin becomes the eleventh living Fellow in Indiana and is one of less than 1,000 of the AIA's 24,000 members ever to be so honored.

A native of Indianapolis, he attended Shortridge High School and John Herron Art School, and has been a member of the AIA since 1959. An authority on historic architecture, he has served as Preservation Officer for the State of Indiana for several years, and currently is chairman of the National AIA Historic Resources Committee, a member of the Advisory Board to the Historic American Buildings Survey, National Park Service, and a member of the Board of Advisors to the National Trust for Historic Preservation.

He also is president of Historic Landmarks Foundation (of Indiana), a member of the Board of Advisors to The Indiana University Preservation Committee, Conner Prairie Museum (Earlham College), and Historic Madison, Inc. He serves as an advisor to the Indianapolis Sesquicentennial Commission, the Indianapolis Historic Preservation Commission and the Downtown Improvement Council for Indianapolis.

Mr. McLaughlin is a partner in the Indianapolis based firm of James Associates, Architects and Engineers, and an officer and director in the firm of James and Berger, planners and economists. His work largely has been devoted to preservation and restoration of historic and architecturally significant buildings and districts. Among his major projects are restoration of the Old Opera House at New Harmony; the Old State Bank State Memorial and Market Street restoration at Vincennes; the Blackford-Condit House restoration at Indiana State University, Terre Haute; the Wylie House restoration at Indiana University, Bloomington; the Morris-Butler House restoration in Indianapolis; and the James Ball Residence restoration in Lafayette. He is consulting architect for the Lockerbie Square Restoration project in Indianapolis, architect for the rehabilitation and restoration of the community of Zionsville, and consulting architect for the comprehensive master plan of the Conner Prairie Museum at Noblesville.

Mr. McLaughlin is well-known as a lecturer on historic preservation and restoration, averaging four to six talks per month, and has been a frequent contributor to the INDIANA ARCHITECT and other publications.

The Fellowship Honors will be conferred during the annual convention of the AIA in Boston, June 21-25.

## A I A

Two Indiana architects are campaigning for seats in the Indiana General Assembly, Mr. Edward J. Malo AIA of South Bend and Mr. Michael C. Sutton AIA of Indianapolis. Both are candidates in the Primary Election for the House of Representatives, and both are graduates of the School of Architecture, University of Notre Dame.

Mr. Malo operates his personal practice of architecture at 54380 North 31st Street, South Bend. A native of Chicago, Mr. Malo has been a registered architect and a member of the AIA since 1959. He has served on the Board of Directors and several committees of the Northern Indiana Chapter.

Mr. Sutton is a principal in the firm of Sutton and Sutton Associates, 5257 North Tacoma Avenue, Indianapolis. Born in Lima, Peru, of American parents, Mr. Sutton has been a registered architect since 1960 and a member of the AIA since 1961.

## A I A

MARVIN ROSENMAN, assistant professor of architecture at Ball State University, has been awarded the McClintock Award for 1970. The 11th annual award to a Ball State faculty member for research or writing is given by Dr. James A. McClintock, Muncie surgeon, in memory of his Father James A. McClintock, a plant pathologist in the Horticulture School, Purdue University.

The McClintock award will support Professor Roesnmann's study of "The 'Inside-Out' University, an Alternative to Status-Quo Campus Planning."

Professor Rosenman joined the College of Architecture and Planning faculty at Ball State in 1967. He teaches design classes and serves as a consultant in the design of educational facilities. He earned his B.A. and B.Arch. degrees at the University of Pennsylvania, and an M.S. in Architecture at Columbia University, specializing in the design



of educational facilities. He previously worked in architectural offices of Gruzen and Partners, New York, and Leon Clemmer, Philadelphia. In 1969 he served as a lecturer in the use of computers in architecture at the University of Buenos Aires, Argentina.

#### A I A

FRAN E. SCHROEDER AIA, Indianapolis, has been elected to the Board of Directors of the Construction Specifications Institute, representing Ohio, Michigan, Kentucky and Indiana. CSI is a technical society comprised of architects, engineers, specification writers, material suppliers, educators, attorneys, contractors and others interested in construction specifications.

Mr. Schroeder joined CSI in 1960 as a charter member of the Indianapolis Chapter, and served as chapter vice-president, president, originator and editor of the local newsletter, member of the Board of Directors and chapter historian. He was elected to Fellowship in CSI in recognition of his services.

Mr. Schroeder assumes his duties on July 1st, succeeding John C. Fleck AIA, also of Indianapolis, the regional director for the past three years.

#### A I A

BERT J. WESTOVER, retired Director of the Indiana State Administrative Building Council and

an Honorary Member of the Indiana Society of Architects, has requested that the INDIANA ARCHITECT convey his appreciation for the reception in his honor earlier this year. In a letter to the ISA, Mr. Westover wrote:

"My new stationary is still at the printers, so I have been delayed in acknowledging all of the construction fraternity that sent letters or telegrams or came in person to the open house afforded me through the Administrative Building Council on January 21st.

"I would appreciate it if through your magazine you assure your members that wrote, wired or attended the wonderful open house engineered through the ABC that I intend to write each one that in any way were a part of that memorable occasion.

"I have the best TV (color and remote control) in our Senior Park Complex. Maude and I are enjoying it no end. I couldn't have enjoyed the last week's basketball any better had I been at any of the field houses where tournaments were held.

"If you can grant this request through a small item in your magazine, I will appreciate it. Thanks, and best wishes.

"Sincerely,  
"Bert"

Mr. Westover retired January 1st after 24 years as Director of the Administrative Building Council. He and his wife, Maude, now reside at 2010 Senior Drive, Fort Wayne, Indiana 46805.

#### A I A

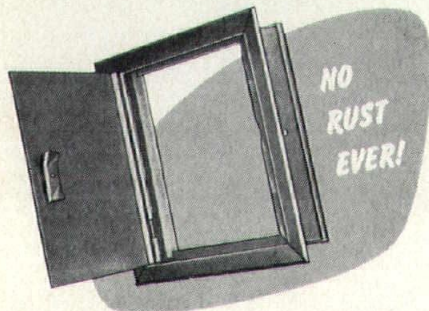
JAMES W. WEIR, AIA, has joined the firm of DAVID L. RICHARDSON, AIA, Indianapolis, as vice-president. Previously director of design for Business Furniture Corp. of Indianapolis, Mr. Weir also has served as an interior designer with L. S. Ayres & Co. and Ramsey Interiors, and taught interior design at Butler University for nine years. He is a graduate of the University of Illinois.

CHARLES B. DECK has joined the firm of Architectural Brick Sales, Indianapolis, as architectural representative. A native of Indianapolis, educated at Ball State University, Mr. Deck has eight years' experience in construction, specializing in structural clay masonry.

#### A I A

DON E. GIBSON, executive director of the Indiana Society of Architects since 1959, has been appointed to full membership on two national committees of the American Institute of Architects: The Component Affairs Committee and the newly-created Task Force on State Government and Uniform Legislation. He is the first state association executive director to be appointed to full membership on any AIA committee.

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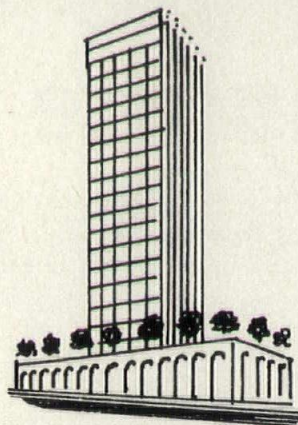
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# PROBLEM SOLVERS

Years ago the use of ventilation in buildings was minimal, and air conditioning, as it is currently known and used, was almost nonexistent. It is understandable, then, that the portion of the mechanical work performed



by the air handling contractor was relatively insignificant. However, the significance of the air handling contractor's role has steadily increased over the years, and today the air handling installation on buildings equals, and, in many instances, exceeds the work performed by the me-

chanical contractor. Nonetheless, the preparation of specifications in large part has remained unchanged during the same course of years. The air handling contractor is still expected to place his bid through the mechanical contractor based upon specifications which do not separate the air handling installation from the mechanical portion of the specifications.

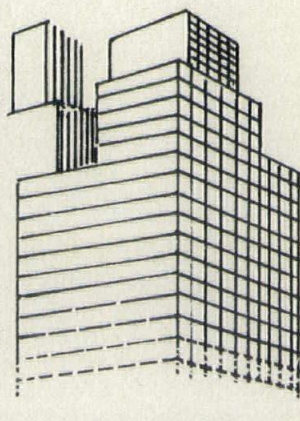
Reason and economy dictate that the separation of the air handling specifications is the better practice. For instance, the mechanical contractor, like the electrical contractor, bids directly to the owner, architect or prime contractor; and since his bid includes the air handling portion of the work, three to fifteen percent is added to that portion to compensate the mechanical contractor for assuming the responsibility of overseeing the air handling installation. The success of an air handling installation, however, depends largely on the degree of co-ordination between the

air handling contractor and the architectural trades; and these trades are supervised not by the mechanical contractor but by the general contractor.

Furthermore, because of the mechanical "middle man," bid auctioning (composed of equal parts of bid shopping and bid peddling) often results. This practice has been a constant plague in the construction industry and ultimately leads to a reduction in the quality of the work performed.

With separate and distinct specifications, the architect and/or engineer can readily check the thoroughness of the specifications and also be assured that each contractor's bid will include all of those items specified. The use of separate specifications will minimize the possibility of misunderstandings, duplications and overlapping.

In view of the foregoing, it is the hope of the Indiana Sheet Metal Council that air handling contractors will ultimately achieve a position comparable to the mechanical and electrical contractors; and to this end, the Council is pledged to the active promotion of separate specifications and separate bids. The benefits derived by the entire construction industry from separate specifications and separate bids are becoming increasingly obvious, and it is our conviction that they will more than compensate for the time involved in changing outmoded policies and ideas.



Indiana Sheet Metal Council  
Box 55533, Indianapolis, Indiana 46205

John Murphy (Fort Wayne)	219-432-0080
Ralph Potesta (Hammond)	219-845-5033
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