

OAS, Data Processing Merge as New Office

Chancellor Paul E. Gray has announced the formation of a new Office of Administrative Information Systems (AIS). This Office combines the Comptroller's Data Processing Office and the Office of Administrative Systems, a goal towards which the Institute has been moving during the past year in order to achieve both financial savings and improvements in operating efficiency.

AIS will have the functions of serving the Institute's academic departments, interdisciplinary laboratories and centers, and administrative offices in identifying

needs for computer-based administrative systems; developing an MIT-wide plan to meet these needs; and designing and operating compatible administrative systems in accordance with this plan.

Mr. Robert H. Scott, Director of Information Processing Services, will serve as Director of the AIS Office as an additional duty on an interim basis. Chancellor Gray and Vice Presidents Paul V. Cusick and John M. Wynne will constitute a committee to set plans for information systems development, to determine priori-

ties, to assure privacy of information and to review the quality and character of service provided.

According to Mr. Scott, the AIS Office will be concentrating on three major areas of activity during the summer and early fall. These areas are the operation and continuous improvement of current administrative systems, the development of a long-range planning activity to define the current and future requirements of administrative offices and academic departments for information and for administrative systems. This latter study, being conducted by Jerrold M. Grochow, Assistant to the Director of Information Processing Services, together with Mr. Scott and staff of the Office of Administrative Information Systems, is directed at the problems of information collection, processing, storage and reporting; it will identify ways in which our administrative systems can be developed to improve decision making and administrative functions. The study will involve extensive interviews and discussions with MIT departments and offices.

Joining in the administration of this new office will be Mr. David M. Carney, Manager of Planning and Administration; Mr. Robert N. Clark, Manager of Operations; Mr. James L. Linderman, Manager of Technical Services; and Mr. Stanley Miller, Manager of Systems Design and Programming.

Mr. Carney has been at MIT since April 1963, when he joined the Office of Administrative Systems as a computer operator. He was promoted to Manager of Computer Operations in 1968 and, in early 1970, to Assistant Director of OAS. In his new position he will be responsible for administrative activities in the office and for the coordination of its planning and scheduling activities. He will also provide liaison

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Community Invited to Sponsor Events Before Inaugural

The entire Institute community is being invited to participate in the activities of the ten-day period leading up to the inauguration of Dr. Jerome B. Wiesner as thirteenth president of the Institute on October 7.

"We welcome any group in the community to discuss questions in its field of special interest at MIT and to make proposals for what should next be done about them," Professor Peter Elias, chairman of the Inaugural Events Committee said. "Social events and exhibits are also welcome. Any such discussion or event held between September 27 and October 6 can be listed in the Calendar of Inaugural Events."

Departments, laboratories, centers, organizations and living groups are being asked to develop informal programs focusing on the direction of the Institute through this decade in both education and research. Also being planned are exhibits and performances and an Institute-wide reception honoring the new president and chancellor, to be held October 1.

In addition to departmental seminars and meetings, some discussions dealing with emerging areas such as innovations in educational programs, bio-medical engineering, environmental studies and research, transportation and development of the oceans are being planned by Professor Henry Zimmermann, Director of the Research Laboratory of Electronics and Dr. Benson R. Snyder, Dean for Institute Relations. Any group planning a seminar or discussion on such an interdisciplinary topic should get in touch with Professor Zimmermann (Ext. 2512) or Dr. Snyder (Ext. 1896). Professor Donlyn Lyndon, Head of the Department of Architecture, (Ext. 4411) is coordinating planning for exhibits and performances.

These meetings will culminate in two panel discussions to be

held in Kresge on October 7. Provost Walter A. Rosenblith will lead a panel on new directions in research in the morning and Chancellor Paul E. Gray will chair a panel on proposals and developments in education early in the afternoon, just before the inauguration.

Mr. Paul E. Johnson, Associate Director of the Institute Information Services, will act as the information coordinator for all inaugural events. Groups wishing to sponsor an event, exhibit or performance should get in touch with Mr. Johnson at Ext. 3676. He will also assist in scheduling space for various events.

Within the next few weeks, *Tech Talk* will begin publishing a cumulative list of the inaugural events as a separate section of the Institute Calendar. All activities which have been listed with Mr. Johnson will appear in the Calendar of Inaugural Events as they are scheduled.

Hartshorne Appointed to Dean's Office Staff

Jon Hartshorne has joined the staff of the Dean for Student Affairs.

Mr. Hartshorne replaces Jay Hammerness as an Assistant to the Dean. In his new post he will handle many administrative decisions involving student activities. He welcomes visits from students.

Born in Bennington, Vermont, Mr. Hartshorne was graduated from Hamilton High School, Hamilton, New York, in 1958. He received the B.A. degree in religion from Lawrence University in 1963 and the B.D. degree from the Yale Divinity School in 1967.

Mr. Hartshorne served as Director of International Student Ser-

vices at Texas Technological College until 1969, when an attack of arthritis at age 28 disabled him. "I was on crutches most of the time," he says, "and I had to stop playing the sports I enjoyed so much." Fully recovered now, he enjoys swimming, playing the guitar and writing poetry.

He is also enthusiastic about traveling. "I've spent a year in Europe and a year in the Middle East. My immediate family is now spread out over three continents," he says.

A bachelor, Mr. Hartshorne is a member of Phi Beta Kappa. While a student at Yale, he was also a Woodrow Wilson Fellow.



Dr. Hollomon, seated, and Alan Harger.

HOLLOMON ARTICLE SAYS: *R&D Costs Limit Civilian Progress*

Massive federal investments in US defense and space research in the 1950s and 1960s led to an inflation in the cost of research that indirectly restricted the quantity and quality of research civilian industries are able to buy, say Dr. J. Herbert Hollomon, '40, and Alan E. Harger, '68, in an article in the July-August issue of *Technology Review*.

Dr. Hollomon, who was Assistant Secretary of Commerce under President Kennedy and later President of the University of Oklahoma, is now a special consultant to the president and provost. Mr. Harger is Dr. Hollomon's administrative assistant.

In the article, which appeared this week, the authors show how

this special dose of added inflation brought on by hyperactive research activity meant civilian industry has been and still is getting less for its research dollar, certainly in terms of quantity and probably in terms of quality.

The article points out that it is the massive expenditures—not the nature of the defense and space activity itself—that brought about the phenomenon in the civilian sector. And it says that several of the problems we face today are a result of this situation, given the 10-year lag in the impact of technical research on economic and social circumstances.

They agree that there have been spinoffs from the defense and space research to benefit civilian industry, but they say that the value of these spinoffs is significantly less than the negative impact of the inflation.

In support of this conclusion, this reasoning is offered:

Starting about 1953 federal programs created a huge demand for technical manpower—actually more manpower than was available. Between 1950 and 1965 there were 100,000 more engineers listed in the employment statistics than the total number of engineers who had graduated from college during this period.

Who were these engineers? The authors presume they were upgraded technicians.

At the same time, scientists and engineers discovered that in this seller's market they commanded very much higher salaries in relation to the rest of the

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Jon Hartshorne.

—Photo by Margo Foote



A renovated classroom in the Department of Aeronautics and Astronautics.

—Photos by Margo Foote



Planning Officer O. Robert Simha, standing before one of many colorful floor-to-ceiling maps in the Planning Office.

Planners Tackle Variety of Projects

The bright main corridor exhibitions, MacGregor House, 16 new gardening plots for Westgate families, locating a teen-age center in Cambridgeport, staff work on a new building for Chemical Engineering and annual changes in space assignments all have one thing in common—professional help from the Institute Planning Office.

Since its establishment in 1958, the Planning Office has provided technical assistance to all those concerned with the development of the campus and its environs. Under the direction of Planning Officer O. Robert Simha, '57, a group of planners, architects and designers carry on an exciting and varied activity program through five operating sections:

- 1) Long-Range Planning Group
- 2) Planning Systems Group
- 3) Building Programming and Design Review Group
- 4) Community Development Section
- 5) Space Administration

The Long-Range Planning Group looks at the future needs of the Institute and prepares technical studies of the consequences these needs have on land use, traffic and circulation patterns, location of new facilities, and the overall quality of the environment. It has contacts with similar offices all over the world and is an important stop on the itineraries of foreign architects and planners visiting the United States in search of new ideas and practical experience in campus planning.

Keeping track of each of the Institute's seven million square feet of space is the job of the Planning Systems Group. The computerized Institutional Space Inventory system (INSITE II),

designed by the group, makes this task manageable and efficient. Working with INSITE II, the Planning Systems Group can easily keep track of MIT's annual space inventories, space usage by other colleges and universities, and when a particular classroom was last painted.

Other institutions have found INSITE II a valuable planning aid and have requested assistance from the Planning Office in setting up similar systems on their own campuses. "Cooperative efforts of this kind will lead to an overall improvement in the management of space resources everywhere," says Mr. Simha, who sees MIT leading the way again with INSITE III, an expanded version of the present system.

Translating an idea into a workable building—one that meets the requirements of the user and restrictions of cost and design—is the responsibility of the Building Programming and Design Review Group. The process is elaborate and thorough, as the Institute's buildings must serve several generations of faculty and students. A building's capacity for change and adjustment over time must be considered from the beginning.

"The frontiers of knowledge are really exposed in this process," notes Mr. Simha, "for the central purposes of the faculty are rooted in research and education, and the information required by the architect demands painstaking detail."

As it has in other areas, this Planning Office group has pioneered in establishing methods by which client representatives can participate in the planning and design of new facilities.

The Building Programming and Design Review Group has made many contributions to the state of the art of campus planning. Their

computer-assisted techniques in recording and summarizing data enable them to predict the consequences of erecting a building on a particular site. More recently the staff has investigated ways of projecting capital requirements for future construction.

The Community Development Section consists of professional planners who, with other members of the administration, are concerned about civic affairs. "Since the campus cannot be considered a place apart from the city, professional assistance in special studies of a community-wide nature help maintain and improve our environment," explains Mr. Simha. Many community organizations, private and public, have consulted the Section over the years. MIT's sponsorship of housing for the elderly, the assignment of classroom space after hours for community programs, planning for a city-wide summer recreation program, technical advice on day care programs, mass transportation proposals, planning for a teen center, advice on rehabilitating a community center, and other projects all are helped along by the Planning Office.

The Space Administration Group manages and allocates office, classroom, work and study areas. They handle all aspects of existing spaces at the Institute—planning, determination or evaluation of requirements, preliminary cost estimates, space change scheduling, negotiations, budget preparation, accounting, monitoring, assignments, surveys, inventory input and studies of space usage. Much of the Group's work involves physical space changes. Working with the Physical Plant Department, the staff plans and executes all space changes, ranging in scope from the addition of simple partitions to major renovations.

Viewing itself as a flexible, service-oriented, professional group, the Planning Office has been particularly attractive to young professionals entering the field of campus planning. "A number of the 'graduates' of the office," notes Mr. Simha, "hold major administrative jobs at other colleges and universities, bringing about fundamental changes in attitudes and procedures about what is a relatively recent art-campus planning."

Blood Needed by Red Cross

The Red Cross Regional Center in Boston is now in the midst of a serious shortage of blood. Blood droughts frequently occur in the summer and are particularly dangerous when so many people are traveling. MIT blood donors can help alleviate the shortage by giving a pint of blood at Cambridge Hospital (3-6pm Monday-Friday) or at the Regional Blood Center at 812 Huntington Avenue in Boston (9am-midnight Monday-Friday, 9am-9pm weekends). The Red Cross will be pleased to credit donations to the MIT Blood Bank account.

Space, Defense R&D Hurt Civilian Progress

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nation than they had in the late 1940s.

So industrial companies in civilian fields that wished to develop new technology had to pay more for it and often had to use less able researchers.

The results are now becoming evident, say Dr. Hollomon and Mr. Harger.

"During the last several years the decline of the federal effort has not been compensated for by the slight increase in industrial activity," the article says.

It observes that salaries are still high and foreign high-technology competition is making inroads in some American markets.

The authors suggest that if the amount of civilian research and development activity going on in this country is compared with that in Europe and Japan, it appears that in real terms the US has been trailing the field for many years. For example, they say, even in the early 1960s Japan employed 70 percent as many professional research and development personnel in their civilian effort as did the US despite the fact that Japan had only one-half the US population and one-fifth the US GNP.

The article uses this and other evidence to show that individual companies in the US tend to underinvest in the risky business of research, knowing that any useful payoff will be achieved

only at great expense and will inevitably be shared with others who have not contributed. And the inflation in the price of research during the past two decades has magnified this underinvestment.

As research activity has declined in the past couple of years while research costs have remained high "the result has been unemployment of scientists and engineers, particularly those that were connected with space and defense. Crude estimates indicate the total unemployed to be on the order of 100,000.

"While it is probably impossible to assess all the effects of federal policy over the past several decades, there are several possibilities that appear reasonable... For example, the rate of increase in productivity might begin to diminish." And the authors cite the 1970 Annual Report of the Council of Economic Advisers as an indication that indeed this seems to have happened.

Dr. Hollomon and Mr. Harger call their article "America's Technological Dilemma." The dilemma they see is this: If our unemployed researchers are reemployed by massive federal programs, this will lead to the same kind of situation as before. But leaving them unemployed in large numbers "would eventually lower their relative prices, but there would be a period of costly and inhumane readjustment."

AIS Office Formed

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with offices considering improvements in their information systems in the future.

Mr. Clark joined the Institute's Accounting Office in 1961 following his graduation from Northeastern University with a bachelor's degree in accounting. In 1962 he transferred to the Comptroller's Data Processing Office as a programmer and was subsequently promoted to systems analyst and, in 1966, to Manager for Operations. In the AIS Office Mr. Clark will be responsible for all operations and will serve as the contact point for offices requiring changes in the day to day production of reports.

Mr. Linderman received the S.B. degree in mathematics in 1964 and the S.M. in management in 1966, both from MIT. He has been associated with the Office of Administrative Systems on a part-time basis during his undergraduate and graduate years and joined its staff full-time in 1968 as Assistant Director with responsibility for the development of applications programs and programming systems. He was promoted to Associate Director in 1970. Mr. Linderman's new responsibilities will include the development of internal educational plans, programming standards and software tools for the

AIS Office. He will also provide technical leadership for the office.

Mr. Miller received the bachelor's degree in accounting in 1953 and the M.B.A. in 1960, both from Northeastern. In 1956 he joined the Institute's Accounting Office with responsibility for payrolls and, subsequently for payrolls and travel. In 1961 he transferred to the Comptroller's Data Processing Office on its formation, and served as leader of the applications group until 1966 when he was appointed Manager for Applications Programming. In the AIS Office, Mr. Miller will be responsible for the detailed design, programming and maintenance of all administrative systems.

Information Move

The Information Center has moved to temporary headquarters in Room 7-108. Telephone requests for information can be made at Exts. 4795 and 4796, as usual. The Information Center in Room 7-111 is being renovated and redecorated, but will reopen its doors in late August.

THE INSTITUTE CALENDAR

August 4
through
August 13, 1971

Send notices for August 11 through August 20 to the Calendar Editor, Room 5-111, Ext. 2701 by noon Friday, August 6.

Wiesner Cited for Work with Sensory Aids

President Jerome B. Wiesner will receive the 1971 Migel Medal from the American Foundation for the Blind, it was announced last week.

Dr. Wiesner will be honored October 27 in New York for "his many years of personal interest in the development of technological research designed to alleviate the problems of blind persons, especially in the areas of reading and mobility. It was due to that interest that an evolution occurred which created a corps of faculty and students at MIT for evaluation and development of sensory aids."

Dr. Wiesner also helped organize the Foundation's first advisory committee on technological research and served as its chairman. Still a member of that committee, he is also a member of the Foundation's Board of Trustees.

Many Happy Returns, Joe

"I've promoted a lot of people in my years here," notes Joe McAllister, who has been painting the letters on office doors for 42 years.

"I've been doing sign work all my life," he says. Using a black paint that he himself concocts and a small cardboard palette, Joe has lettered most of the office doors in the main complex—some of them many times.

Today is his 84th birthday, though he looks about 20 years younger. His hand and eye are still remarkably steady. Though he retired as an employee 19 years ago, he continues to help out the Institute on lettering jobs on a contracting basis.

"I left school at 14 to be an errand boy," Joe says. "Later I learned how to do lettering and in 1916 I started a sign shop in Harvard Square. Harvard Square was almost a vacant lot then," he adds.

Joe's first job at MIT was painting the signs for Open House in 1929. "I also ran the old hobby shop in Building 2 for 12 years," he said last week as he prepared to inscribe "Undergraduate Seminars" on the door to Room 7-105. After marking four quick, neat lines on the glass with a length of chalked string, he measured out the letters and began painting the sans serif letters that are his trademark. The whole process took about 45 minutes.

"Since I retired I've been doing a lot of gardening and fly fishing," he says. He ties his own flies in his workshop at home where he also does inlaid woodworking. "Once I gave Dr. Killian one of the flies I had made. He was very pleased with it."

Joe is proud of the flowers he has raised, and frequently brings bouquets to his various friends

Seminars and Lectures

Extracting Scientific Information from Interplanetary Spacecraft Radio Teaching Data *

Louis D. Friedman, graduate student, Department of Aeronautics and Astronautics. Instrumentation doctoral thesis presentation. Wednesday, August 11, 2pm. Room 33-206.

MIT Club Notes

Baker House SPAZ Jogging Club **

Jogging around BU and Harvard Bridges. Daily 10:45pm. Baker House, Second Floor West.

Science Fiction Society *

Every Friday, 5pm. Student Center, Room 421.

Classical Guitar Society **

Summer classical guitar classes every Monday and Thursday, 5pm. Room 1-132.

Outing Club *

Every Monday and Thursday, 5pm. Student Center, Room 473.

Nautical Association **

Basic Sailing Shore School. Repeated every Wednesday throughout the summer, 5:15pm. MIT Sailing Pavilion.

MIT/DL Duplicate Bridge Club **

Every Tuesday, 6pm. Student Center, Room 473.

Movies

Gate of Hell **

Lecture Series Committee. Wednesday, August 4, 7 and 9:30pm. Room 10-250. 50 cents.

Sail a Crooked Ship and Operation Mad Ball **

Lecture Series Committee. Saturday, August 7, 7 and 9:30pm. Room 10-250. 50 cents.

The Big Mouth *

MIT Film Society. Monday, August 9, 8pm. Room 10-250. \$1 admission.

The Wrong Box **

Lecture Series Committee. Wednesday, August 11, 7 and 9:30pm. Room 10-250. 50 cents.

Theatre and Shows

MIT Community Players *

Auditions for September production of Harold Pinter and Floyd Barbour's one-act play, "Day Work." Musicians and black actress needed. Production position also open. August 2, 3 and 4, 7:30-10pm. Room 8-119. For more information call Jane, 492-6832 after 5pm.



Joe McAllister completes a new inscription on Room 7-105.

—Photo by Margo Foote

around the Institute. "I used to run flower shows from time to time," he says, "and once Dr.

Compton called and asked why I had never invited him out to see my garden. I was floored."

Dance

Modern Dance Class **

MIT Dance Workshop. Intermediate/Advanced. Every Thursday, 7pm. McCormick Gym.

Israeli Folk Dancing *

MIT Folk Dance Club. Every Thursday; party last week of each month. 7:30-11pm. Student Center, Room 407. Basics taught from 7:30-8pm.

Friday Afternoon Dance Break *

MIT Folk Dance Club. International Folk Dancing on the oval lawn in front of Kresge Auditorium. Every Friday, 12-1pm.

International Folk Dancing *

MIT Folk Dance Club. Every Sunday, 7:30pm. Student Center, Sala de Puerto Rico.

Balkan Dancing *

MIT Folk Dance Club. Basic, Intermediate, Advanced. Every Tuesday; party first week of each month. 7:30pm. Student Center, Room 407. For more information call Jane Weiman, 876-5609.

Square Dance Club *

Every Tuesday, 8pm. Student Center, Room 491. For information call x6213.

Folk Dance Practice *

New England Turkish Students Association. Every Wednesday at 8pm and every Sunday at 6pm. Student Center, Room 407. For more information call Y. Ayasli, 864-8276.

Modern Dance Technique Class **

Elementary/Intermediate. Every Monday, Wednesday and Friday, 5:15pm. McCormick Gym.

Exhibitions

Seymour Lipton: Recent Sculpture *

20 sculptures from the past five years, of nickel, silver or bronze on Monel metal. Sponsored by the MIT Committee on the Visual Arts, courtesy of Marlborough Gallery, NY. Drawings by Seymour Lipton are on exhibit in the Hayden Lobby. 1-5pm daily through the summer. Hayden Gallery and Courtyard, through September 19.

Steamboat Design *

Details of Robert Fulton's steamboat "North River" and other early American steamboats. Hart Nautical Museum, Building 5, First Floor, through the summer.

Deep-Ocean Mining *

Material from Sea Grant Project Office. Hart Nautical Museum, Building 5, First Floor, through the summer.

Main Corridor Exhibitions *

Presented by students and departments. Buildings 7, 3, 4, 8.

Athletics

Summer Rugby *

Every Tuesday and Thursday, 5pm. Briggs Field.

Religious Services and Activities

Christian Bible Discussion Group *

For details contact Professor Schimmel, x6739. Every Thursday, 12:15pm. Room 20B-031.

Islamic Society Prayers

Every Friday, 12noon. Student Center, Room 473.

Roman Catholic Mass

Every Sunday, 11am. MIT Chapel.

The Chapel is open for private meditation from 7am to 11pm every day.

Don't Forget

Join your friends at the Muddy Charles Pub, 110 Walker Memorial, 11:30am to 7:30pm daily. *

*Open to the Public

**Open to the MIT Community Only

***Open to Members Only

†Freshmen interested in departmental program encouraged to attend.

CLASSIFIED ADS

New Insurance Plan Available

Blue Cross-Blue Shield is offering a new medical insurance program, the Master Medical Student Health Plan, for children 19 to 25. This program may be valuable to Institute personnel with children who are not covered by the MIT plan and who are attending Massachusetts schools that do not offer Blue Cross-Blue Shield. Arrangements for this medical insurance plan should be made before September 1. For further information and brochures, call the Benefits Office, Ext. 4271.

Here and There

—Mark Feldman, '72, and Ken Lebensold, Ph.D. '69, were members of a contract bridge team that tied for fifth place in the national Spingold Master Teams contest recently held in Chicago. One hundred teams competed for the award, one of the two most highly prized trophies in American bridge. The team that included Feldman and Lebensold was eliminated by the Aces team which has won the last two world championship contests.

—Gerald Gallagher, manager of the Space Electronics Environmental Test Laboratory at Lincoln Laboratory, was honored recently by the Institute of Environmental Sciences. The Institute, a professional society of environmental engineers and scientists, elected him executive vice president.

—Bob Durland of the Purchasing Office is serving as chief referee at the National Pistol Matches in Camp Perry, Ohio this week. He succeeds Dr. Franklin Wells, '18, who has been the chief referee for many years.

For Sale, etc.

Sony tpdck, TC255, \$110. Call 491-6098.

Lving country must sell: all chan GE TV, 6 mos old, \$55; couch/bed, \$45; DR tbl & chrs, \$45; lrg wooden desk, \$20, etc. Call 623-3789.

King size, 78x80 matt w/2 box spr & legs, exc cond, \$100. Call 729-6538.

Hotpt refrig, \$50; GE wash mach, \$100; mod twin BR set: chest, bur, night tbl, box spr & matt, exc cond, \$100, w/ haggle. Call 298-7310.

Chest of drawers (2), \$25 ea; Mato arm chr, \$35; rug, 6x9, \$15; mahogany dbl bed, \$50. Alex, 729-7782.

Lrg din tbl w/6 chrs, \$125; oak server, \$100; fake oriental rug, 9x12, \$100; mahogany bed set, \$240. Call 864-2741.

Ham radio, HA-460, 6 meter xceiver, exc cond, \$85. Tony, x2573.

Unpainted furn: 3 bkcases, dresser w/mirror, 2 hollow-core doors, all gd cond, \$6-\$12 ea. Mary, 354-7215.

Old Span thingamajig, now used as buffet, beautiful old wrought iron, \$200. Call 731-9489.

Power saw, lamps, typwrtr tbl, stools, percolator, ladder. Call 547-2416 evgs.

GE solid state AM clock R w/repeat alarm, \$10; electronic metronome, 40-208 ticks per min, \$10, exc cond. Call 492-5867.

Journals: CACM 9/65, 1/66-5/71; JACM 66-68; IEEE-TEC 8/64, 2/66-2/67; BSTJ 9/66-8/67, best offer. Herb, x7293 or 864-3757.

Free: Commentary magazines, 1966-70. Dorette, x585 Draper 7.

Couch, 3 piece & coffee tbl, \$25; Fisher mono HiFi console, \$25; new Bancroft tennis racket, \$9; Instamatic x-15 camera, \$12. Call x7536 or 628-5598 evgs.

Admiral TV console, 21W, \$15; Olympia deluxe sewing mach, zigzag, \$75; steam iron, \$7; window fan, 22x22, \$15; etc. Call 868-5231.

Soligor 200mm f3.5 telephoto lens, for Pentax. Call x6913.

Zenith westwood hearing aide, used only 3 mos, 2/3 cost. Mrs. Peterson, 332-7839 evgs.

Queen size bed, folding bed, B&W port TV, man's 3 sp bike, others. x5857 or 491-4199 evgs.

Hotpt port dish washer, \$100; shag rug, 10x10, lightblue, w/padding, \$75. Bob, x5518 Linc.

GE tank type vacuum, all access; cooling fans (2) w/humidifier; sabre saw, best offer. Beth, x2750.

Turq print conover colonial sofa, \$190; Rek-O-Cut, 3 sp turntbl w/empire arm, \$35; attachable twin beds (2), \$100; aquarium, 10 gal w/fixtures, \$30. Bill Blatchley, x4575 or 868-5873.

File cabinet, 2 draw heavy duty, \$30. Call 878-0484.

Sears freezer, 15 cuft, 1 yr old, nvr used, \$100 or best. Call 329-9786.

Kitchenette w/6 chrs, \$150 new, now \$80; cots (4), new \$38, now \$10 ea. Call 298-7181.

Mahogany BR set: dbl bed, etc; sgl bed w/wood file cabinet, must sell by 8/27. George, 782-2977 evgs.

Upright piano, easily moved in Camb area, \$55. Call 354-4801 evgs.

Refrig, 2 1/2 cu ft, \$80 new, now \$40. Daryl, dl0559.

Bell helmet, 7/8 short w/goggles, \$13; Honda 305 handlebars, \$4. Barry, x2514.

DR set w/china cabinet, \$300; LR chrs, cof tbl, typwrtr tbl, more. Donald, 862-5639.

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and extension or room number. Ads may be telephoned to Ext. 2707 or mailed to Room 5-105. The deadline is 5pm Friday.

Mamiya RB-67 pro camera, \$400. Bob, x4710.

Bell 500-TX helmets (2), exc cond, 7 1/8, 6 7/8 w/face shields, \$25 ea or \$45 both. Michael, X5665.

Boy's bicycle, amer style 26", \$15. Al, x6712.

Port B&W Zenith TV, 16"; DR tbl, blonde wood w/2 drop leaves & extra leaves, \$35; straight-bk chr, twin bed box springs, \$10. Call 232-0484.

Free Coldspot refrig w/top freezer, nvs repair. Steinmetz, x7618 Linc.

Girl's old english bicycles (2), nd repair, \$15 both. Call x5323 or 742-1734 evgs.

Wooden fiberglass canoe, 18', \$100. Call 734-6818.

Carriage, crib matt, iron, hair drier, picture frames for sale cheap; moving. Rich, x2189.

Zenith B&W TV, port typwrtr, Castro conv, others, must sell soon. Call 354-3343.

Speed clean washer, \$50. Call x6757 or 491-4189 evgs.

Rek-O-Kut trnttbl, Grado tone arm, handsome cabinet, Empire-Heath-Dyna-EV fine mono system, all \$100. Bill V., x2445.

Desks (2), \$40 & \$30; sets of curtains (3), \$5 ea; metal wardrobe, \$15; lrg mirror, \$10. Call x6834 or 734-8561.

Br. new air cond, 1/2 price. Call 666-5474 evgs.

Sears frost-free refrig, \$175, 1 yr old. x181 Draper 7 or 484-0071.

Sony radio, FM/AM/SW w/elec adapter, 9 mos old, \$30 or best offer. Okuda, x2413 or 547-3997.

K Aid port dish wash, coppertone, exc cond, \$125, lrg crib w/matt, spring rocking horse. x7431 Linc or 438-4772.

Vehicles

'61 Ford V8, gd cond, pwr st, auto, R & H, \$100. Labitt, x7465 Linc.

'61 Valiant, runs well, \$75 or best. Rhim, x5155 or 491-6986 evgs.

'62 Chevy Belair, 4 dr, 6 cyl, std, gd mech cond, \$100. x7235.

'62 Econoline van, gd tires, body gd, \$200. Charlie, x5274.

'62 VW, 71K, runs well, reasonable. Call x5771.

'63 Chevy, clean, gd cond, \$275. Paul, x7803 Linc.

'63 Porsche, super 90, mint cond, under coated w/epoxy glue, no rust, \$2600. Call x189 Draper 7 or 862-4936

'64 Barracuda V8, all pwr, \$125. Call 495-2817 or 527-9110 evgs.

'64 Chevy wgn, auto, pwr st, R, new tires & snows, gd cond. Call 232-9584.

'65 Dodge Dart, 2 dr sedan, std, 6 cyl, R & H, tires, gd cond, \$300. Call 894-5320 evgs.

'65 TR4A, 34K, Mich radials, wire whls, lugg & ski rack, new top, mech exc, \$900 or best. Doug, x5353 or 262-3192 evgs.

'65 Triumph Spitfire, \$400 or best. Lew or Phil, x3784 or 262-3192.

'66 Fiat, 4 dr sedan, eng nds work, make offer. x4878.

'66 Ford Galaxie 500 conv, auto, pwr st, R, \$600. Call x4334 or 862-8757.

'66 Mustang, 289, 47K, auto, new tires, exc cond. Call 868-0792.

'66 Sprite, lving area, must sell, \$200 or best. Call x6942.

'68 Ford Fairlane wgn, 6 cyl, std, 62K, \$1050. Call 862-3515.

'68 Rally Opel, 4 sp, new tires, brks, gd cond, \$650. Call 475-8761.

'68 Rambler Amer, 2 dr, 54K, R & H, 7 gd tires, exc cond, \$1000. Call x7398 or 326-3072.

'69 Dodge Dart, 4 dr, 17K, exc cond, \$1600 or best. Hans, x7267 or 868-9015.

'69 Fiat 124 Spider, 5 sp, DOHC, 4 whl discs, 4 new radials, snows, \$2100. x2665 or 547-0155.

'69 VW sqbk, red w/sunrf, exc cond, 45K, 5 new tires, new brks, \$1595. John, x7202 Linc or 369-6436.

'69 VW sqbk, new tires & muff, snows, rf rack, avail, 8/15, \$1550. Call 237-3935 evgs.

'70 MGB, exc cond, AM/FM, new snows, lugg rack, \$2500. Eric, x5510 or 354-8833.

'67 Honda CL77 scrambler, exc mech shape, many accessories, \$350. Jim, 926-1561.

'68 Kawasaki, 650cc, like new. Call 646-4761 evgs.

'69 BSA, 250cc, 4K, \$475 or best. Call 438-0607.

Cape May 26, 34', sloop, \$1800. Call x241 WHOI or x5749.

Housing

Allston: 3 BR, H, elevated bldg, \$250, avail 9/1. Mady, x7001 or 783-1064.

Beac Hill, 6 R apt, avail 9/1, \$350. Larry Kelly, x2627 or 227-2842 evgs.

Camb: 2 furn rms, pvt bath, \$30/mo plus supervision of 1 child 11:30-2:30 and 2 children 2:30-4 schl days. Call 547-0950.

Camb business office for rent, approx 1500 sq ft, ww carpet, air cond, in Fresh Pond Shop Center. Call 862-8466 evgs.

Cape Cod (Harwich Pt) cottage, w/ht, frpl, sleeps 6, nr beach, stores. 1/2 rate after 9/16, \$75/wk. Ed, x5646.

France, Versailles: furn apt avail 1 yr begin 10/1, 3 BR, LR, DR, gar, \$350. Connie, x3256.

Lex, 3 BR house, lrg LR, K, dining area, deck, in wooded area, \$325, avail 8/16. Call 862-7628.

Maine, Moose pond nr Conway, lake-front 3 BR cottages, frpl, elec K, weekly or monthly rental. Ruth, x2476.

N Chelms, sublet 4 1/2 R apt, 2 BR, ww carpet, air cond, various extras, \$160 heat includ, no pets, avail 9/1. Don, 251-8065 evgs.

Woburn, 3 BR duplex, immed vacancy, \$250. Ken, x3970.

Animals

Free: puppies, mixture of sheep/collie/huskie, M & F, come and see. Call x6634 or 242-4132 evgs.

Springer spaniel M & F puppies, AKC, \$75 ea. Bill Harney, x366 Linc or 543-7128.

Wanted

Tricycle for 4 yr old child. Call 275-1290.

Ride between Wakefld & MIT. Diana, x4751.

F rmmate for August, own room, ultra mod, reg \$98, w/ negotiate. Call 547-2748.

Mature M Parakeet from gd home for mating purposes. Call 492-4297 evgs.

Lady's bycl, 3 sp. Mary, x1723.

Canning jars, cheap or free. Don Anderson, 492-3320 evgs.

Man's bicycle, 3 sp. Call 623-1336.

F rmmate 9/1 or earlier, quiet MIT affil, own lrg BR, mostly furn, BYO matt, across from Orson Welles, \$75/mo. Sally, x6746 or 876-8159 evgs.

M rmmate for lrg house in Winchester, own rm, lots of pkg, \$75/mo. Call 729-6180.

Babysitter for 9/1, to care for 2 yr old girl in Newton, 4 days per wk. x7729.

F rmmate to share lrg Winch apt. x7410 Linc or 729-5699.

Rowing dinghy, 7-8'. Vic, x7711.

Dirt bike or raler, in nd of repair, consider basket cases. Chuch, x7360 or 774-2045 evgs.

Air cond, 110 V, gd cond, reas price. Art, x4472 or x4475.

Camb, 28 yr old working girl seeks safe sunny 1 BR apt, w/ pay up to \$150. Vanessa, 868-5600 or 661-8461 evgs.

Small living space in country setting, separate from owner's hse, 40 miles from Lex. Lloyd, x7510 Linc or x422, lv message.

MIT couple nds apt 9/1, 1 BR, LR, K, B, \$180 or less, nr MIT or T line to MIT. Connie, x5243 or 354-6164 evgs.

Multiplex adapter for FM tuner. Dave, x1418.

3 sp man's or woman's bike. Mark, x2094.

Miscellaneous

Quiet couple would like to bbsyt your home starting 9/71. Call 876-1371 evgs.

Thesis typing: technical and general. Call x2311.

Experimental teacherless writing class meets wkly, new members welcome. Nan Hughes, x7641.

For charter: 25' sloop on Buzzard's Bay, 4 bunks, well equipped for cruising. Sailors call 547-0835 before 9am.

Wl type on IBM exec. Lynn, 491-4312.

Lost and Found

Slide rule, engraved w/Falabella, in brown case, lost 7/23. Call x7167.

Positions Available

The Office of Personnel Relations is seeking individuals from within the Institute to fill the following openings at the staff or exempt level. If interested in any of the openings, please call Ext. 4278.

Administrative Assistants (2). Individual should have a facility or interest in dealing with administrative responsibilities, specifically in the accounting, purchasing and personnel areas. Knowledge of MIT procedures desirable.

Supervisor, Medical Records Room and Reception Area. Position involves training and supervision of 8-12 employees. Individual will develop administrative techniques to improve medical records program. Prefer RRL or candidate with ARL degree. Will substitute experience for degree if applicant interested in pursuing education in medical records science.

Assistant Advertising Manager, Technology Review. Individual will be responsible for sale of advertising space in *Technology Review*. Handle servicing of present advertisers and solicitation of prospective ones. Responsible for research, interpretation and production of sales promotion material, direct mail programs and space advertising.

TECH TALK

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