

# TECH TALK TECH TALK TECH TALK TECH TALK

MASSACHUSETTS INSTITUTE OF TECHNOLOGY December 31, 1970



A portrait of MIT in 1970.

## SUMMING UP

What we had at MIT in 1970 was a mixed bag. This is true of most years, of course, but the events of this year seem to contrast more sharply than usual. Included in our happenings were a pending change in administration, the establishment of several important new programs, some interesting events involving students, a troublesome budget reduction and some advances in research.

Last June, Dr. James R. Killian, Jr., announced his retirement as Chairman of the Corporation, effective in July 1971, bringing formally to a close a 48-year association with the Institute. In September, the Corporation elected President Johnson to succeed Dr. Killian as Chairman. At year's end, the search was on for a new president.

Appointments announced during the year include: Peter S. Eagleson as head of the Department of Civil Engineering; Howard Webber as director of the MIT Press; Robert H. Scott as director of Information Processing Services; Albert G. Hill as vice president for research and later as chairman of the board of the Draper Laboratory Division; Paul V. Cusick as vice president for business and fiscal relations; Louis G. Smullin as head of the Department of Electrical Engineering; Gerald P. Dinneen as director of Lincoln Laboratory; Lloyd Rodwin as head of the Department of Urban Studies and Planning; Charles Stark Draper as president of the Draper Laboratory Division; Constantine B. Simonides as vice president and assistant to the president; Eugene B. Skolnikoff as head of the Department of Political Science; Edward A. Mason as head of the Department of Nuclear Engineering; Paul E. Gray as dean of the School of Engineering and Everett E. Hagen as director of the Center for International Studies.



Two new buildings were dedicated during the year: the Camille Edouard Dreyfus Chemistry Building in April and MacGregor House, named for Frank S. MacGregor, '07, who contributed to its funding. After a three-year, floor-to-ceiling overhaul, the Engineering Library was renamed for James Madison Barker, '07, and formally reopened in the spring. Another major renovation doubled the space of the hydrodynamics laboratory which was renamed the Ralph M. Parsons Laboratory for Water Resources and Hydrodynamics.

The prodigious building program of the sixties has slowed down. Only two new buildings are under construction now. One is Westgate II, which will house more than 400 students when it is completed. Funding for Westgate II and expansion of the central heating and chilled water plant is largely provided by the first series of tax exempt bonds issued to an educational institution through the Massachusetts Health and Educational Facilities Authority.

The other new building, announced only last week, is the George R. Wallace, Jr., Astrophysical Observatory in Westford, scheduled to be completed in the spring. The Wallace Observatory will be directed by Professor Thomas B. McCord of the Department of Earth and Planetary Sciences and will house the Institute's first optical telescope.

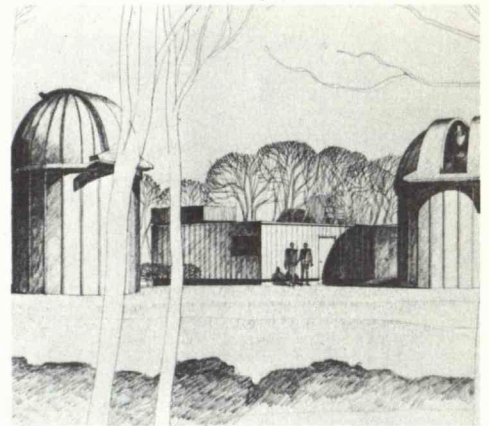
Though MacGregor and Dreyfus are handsome, the construction which commanded most attention in 1970 was the half-a-bus bus shelter--a novel idea in reclamation which arrived in January and was demolished in December. Soon it will be replaced by a real shelter, which should be in place any day now. Bus waiters on the east side of Massachusetts Avenue will also have a shelter.

Two new multi-disciplinary laboratories were established in the School of Engineering. The Electric Power Systems Engineering Laboratory, under the direction of Professor Herbert H. Woodson, studies problems posed by the increasing complexity of power systems serving the world. A Commodity Transportation and Economic Development Laboratory, established in February, is tackling the education of modern transportation engineers and analyzing commodity transportation systems.

In the spring a new Center for Macromolecular Structure was formed at the Institute. Using crystallization, x-ray diffraction and computer analysis, scientists can determine the individual atomic arrangements of proteins and nucleic acids. The Center is used not only by MIT researchers, but by biologists, chemists and medical scientists from throughout New England.

The spring also brought anxiety, not only to the campus, but to the world, when Apollo 13 lost electrical power in its command module as it neared the moon. Concerted effort followed at the Draper Lab, testing equipment like that aboard the crippled spaceship to duplicate the emergency and determine how the guidance system would react. Throughout the ordeal, the astronauts and their thousands of earth-bound support personnel were optimistic. Their optimism proved true when Apollo 13 splashed down in the Pacific on April 17, less than half a nautical mile off target.

Other anxieties centered around the students, whose activism seemed to reach a climax during the spring term. In January a group of students occupied the President's office for a day and a half, resulting in civil prosecution as well as disciplinary action. Later, in May, classes were halted for three days in response to the



Architect's rendering of the Wallace Observatory.



military incursion into Cambodia and the shooting deaths of students on other campuses.

In May, President Johnson announced that the Draper Laboratories would be separated from the Institute. The first step in the procedure was to establish a Draper Laboratory Division which manages the Lab's present activities and is planning toward eventual divestment.

During the summer, much of the Institute's attention was riveted on an adventurous undertaking called the Clean Air Car Race. More than 40 low-pollution vehicles arrived at MIT in mid-August for a week of testing before departing on a cross-country race which ended on the campus of Caltech in Pasadena.

For the members and staff of the MIT Commission, 1970 was a year of concentrated activity focused on the directions the Institute should take during the years ahead. A report summarizing the Commission's findings to date was issued in November, and further reports will come out as the Commission completes its studies during the coming year.

For the second year in a row, an MIT professor received a Nobel Prize. This year it was famed economist Paul A. Samuelson. Professor Jay Forrester of the Sloan School received the Valdemar Poulsen Medal from the Danish Academy of Sciences for his contributions to the development of the computer and the annual publication award from the Organization Development Council for his book, "Urban Dynamics." Professor Charles Stark Draper received the Founders Medal of the National Academy of Engineering and Professor Bruno B. Rossi was awarded the 1970 Gold Medal of the Italian Physical Society.

MIT's programs for industry remained popular. Four new companies joined the Industrial Liaison Program: A.B. Dick Company, First National City Corporation, The Singer Company and Teledyne, Inc. The MIT Associates also welcomed four new members: American Optical Corporation, Consumers Power Company, Mohawk Data Sciences Corporation and G.A. Saxton and Company, Inc. And, there was a steady flow of visitors from abroad. More than 800 visitors, representing 61 countries, signed the guest book in the Registry of Guests during 1970.

For the first time in many years, the Institute's population decreased, and we ended 1970 with 7,799 students and 9,530 employees for a total of 17,329 people. But we talked on the telephone just as much as ever. Using 8,348 telephones in Cambridge, we chattered away to the tune of \$203,926.88 in message units and \$376,239.56 in toll calls. The total telephone bill was \$1,398,818.10 including installation and rental fees and data lines and transmission. Mail continued to arrive at the level of about 35,000 pieces per day.

We bought some interesting things this year. In addition to the standard office and lab supplies, the Purchasing Office placed orders for one adult tarantula, one sheep and one goat--including transportation and board--extra long earrings, one 910 rainbow climber and a Methuselah of champagne.

The various learning programs at the Institute continued to be attractive. The Personnel Orientation Program helped 421 new employees get acquainted with the Institute. Tuition Assistance aided 430 people in pursuing their education for a total of close to

\$80,000. More than 120 wives of foreign students participated in the Matrons' English classes, while their children made use of crayons and clay in a kind of international pre-school. The Libraries circulated 322,065 books and other library materials and dispensed some 820,000 rapid print copies of documents.



There's no language barrier with crayons.

One of the great services the Institute performs is answering questions, both for its own people and for the general public. The two major answering agencies are the Information Office and the Reference Desk in the Libraries. Here's a sampling from the Information Office: How do you keep a pond lily alive after you take it out of the pond? How do you decorate a cake to celebrate an engineering degree? and When was Iceland founded? But the award for the most searching question went to the Reference Desk--an inquiry about whether the Institute had done any research, and if so, what.



FOR SALE, ETC.

Elec coffee grinder, slightly used, \$8. Mike Molnar x7263 or 876-8111.  
Men's skates, sz 7 1/2 - 8, almost new, v reas. x2465.  
Goodyear snows, 7.75x14, used 1 seas, \$20; General E 78x14, reg tires, \$20.  
Pollock x1717.  
Wheels 15" (2), for Jeep Wgner, w/4 fancy covers & clips. Carl Benner x2250.  
Northland wdn skis, step-in bndgs, 5'11", \$7.50; buckle ski boots, sz 7 1/2, \$7.50;  
Timex men's wrist watch, almost new, \$8.50. 547-9331 evgs.  
Minolta hy-matic 9 w/case, \$50; Judson electronic magneto, slightly used, \$20.  
Don Mekay x5445.  
Broil King broiler, exc cond, \$5. Margie x7543.  
Northland metal skis, 6'8", poles, bndgs, \$70 or best; men's lace ski boots, sz 9,  
\$20. 492-1831.  
GE tbl radio, 6 mos old, lk new, \$20. x5272.  
Brumberger slide proj, Colonial styl, wdn mantel w/side supports, exc cond, \$10.  
Ann Smith x4679 or 862-8771.  
Sml GE port tv, audio nds repair, \$20. Steve Weinberg x6264.  
Free kittens, ideal gift. Craig Work x570 Draper 7 or 456-8860.  
Zenith console tv, 23" b&w, exc cond, UHF, \$75. 643-9666 after 7:30 pm.  
Gold decorated bed spread, lk new, was \$80, now \$25. Jane x478 Draper 7.  
Pr 7.35x14 stud snows, lk new, \$23/pr. Irv x5781 Linc or 862-7041.  
Kimball piano console, w/bench, exc cond, \$500; Gibson folk guitar, narrow neck,  
steel strings, was \$110, now \$75; beginner's cello, \$50. Armenti x7374 Linc.  
Maple crib, 31"x56", \$20. 244-4299.  
Sturdy kitchen set w/6 chairs, \$15. Pelletier x6385 or 491-6287.  
English setter pups, registered Amer Field Stud Bk, males \$100, fem \$75. Manny  
x6980 or 663-2491 evgs.  
Women's skates sz 10, \$6. Diane x5783.  
Kenmore elec dryer, fabric master 700, soft-dri, 11 mos old, pd \$180, now \$125.  
729-2283.  
Rossignol Strato skis, 210, w/bndgs, \$60 or best. Ted x1639 or Suzanne x3533.  
Boy's skates, sz 12, \$5. Jack Arabian x2921 or 269-0588 evgs.  
Bavarian china, new, formal, serv for 8, worth \$100, now \$70. Sherry x7365.  
Battery, 12 volt, 2 mos old; pr tires, 7.75x14, lk new. Chet Janiak x3451.  
Girl's Hyde fig skates, sz 4, \$8; sz 2, \$4. Paul Barrett x3933.  
DynaCO PAT-4 Stereo preamp; Dynaco Stereo 120 amp; Scott 312-D-1 Stereo FM  
tuner, all yr old, perf cond. David Perlman x5820 or 491-3488.  
Royal office typwrtr, manual; heatkik sixer. Larry x5528 or 322-1086 evgs.  
Cartridges (3), 8 track: Richie Havens "1983"; James Taylor "Sweet Baby James";  
"Electric Lady Land" \$10. Kenny 492-2262.  
Men's fig skates, sz 8 1/2, \$5. Frank Gillespie x7383.  
Seal & chocolate pt siamese kittens, \$25. Britting x3750.  
Sears Lady Kenmore dshwhs, serv contract thru April 1971, \$100. x2380 or 547-7025.  
Stnotype mach w/stand, new, \$75. Alice Ryer x7410 Linc.  
Sofa & chair set, green/blue, fair cond, \$40 or best. Ivan Johnson x368 Draper 7  
or 731-5188 evgs.  
Emerson mod 32P08, compact port stereo, exc cond, \$60. Art x7232.  
Olivetti port typwrtr, exc cond, \$70 new, now \$40. Harry x7236.  
High chr convrts to youth chr \$6; infant seat \$3; jump chr \$5; car seat w/safety  
belt \$8; automatic swing \$5, crib, matt, & used linens \$35. x1469.  
Design Research couch \$600. Peter x7365.  
Siberian husky pups, AKC registered. 1-774-8479 after 3 pm.  
Navy officer uniforms: blue, khaki, white, 3BR, \$50 ea; misc access. Robert  
Campbell x6010 or 491-4392.  
Polaroid film, color pack 108, new, not seconds, \$3.25/pack. x7398.  
Sml refrig, 2.5 cu ft, \$40; popcorn popper \$7; GAF super 8 mm camera, nvr used;  
old brownie movie camera \$5; jig saw; ht plate & port rcrdplyr. Jane x5640.  
Beautiful puppies looking for a home, free. Martha 547-3312.  
Pr snows 6.50x13, studs, on Dart rims, gd cond, \$20; new pr full chains, \$5.  
x6392 or 862-0178.  
US proof sets (10), 69S, \$6 ea. Bill x4956.  
Reg tires (2), 7.50x14, serviceable, \$7/pr. G. Sullivan x4093 after 4 pm.  
Scott Multiplex adapter for LT-10 FM tuner. Mario x417 Linc.  
Pups: 1/2 Golden, 1/2 Lab Retriever, gd w/kids, \$25. Gundersen x6085 or 332-8251.  
Ski boots: ladies Reiker buckle 6 1/2 - 7N; men's lace 10 1/2 - 11. x325 Draper 7.  
Nikon FTN Photomic camera w/43.86 mm nikkor zoom lens. Bill Shilling x3315.  
Full length brwn lthr coat, sz 10, was \$140, now \$75; blond human hair fall, 22",  
was \$60, now \$25. x4531.  
Chevy rims, 14", used 2 yrs, \$8/pr. Joe x3448.  
Retina Longar Xenon C f/4, 3 1/2" (80 mm) telephoto lens; Retina Curtar Xenon  
C f/4, 1 3/8" (35 mm) wide angle lens. Art x341 Draper 7.  
Baby grand piano, perf cond, \$399. 944-2138.  
Red uphol easy chair, best offer. 254-6978 evgs.  
Assorted parts for '65-'67 Saab and tires. Tom Sullivan x5668.

Snows, 6.50x13, hardly used, \$20/pr. Hong Yeung x2380.  
Crib \$30; bbycarrier \$6 or best; living country. Parada x3724 or x6737 or 547-4868.  
Afghan maxi coat, nvr worn, \$100. Bahram Niamir x1422.  
Clothes: children's, women's, men's; baby equip; typwrtr; books; pictures; frames  
etc. Liz Malsky 484-1315.  
Pr 4 ply delta snows, wws, under 1K, 6.95x14. Joseph x3750 or 354-2066.  
Typwrtrs: 1 Royal standard, \$45; 1 Royal port w/case, \$35, both in fine cond.  
x6962 or 862-9462.  
Collie (50%), 1 yr old, intell, beautiful, trained. \$25 or better. x346 Linc or  
259-9130 evgs.  
'54 Ford cus sedan, pwr brks, overdrive, R, \$225 or best; '63 English Ford,  
23 mpg, R, \$275 or best. 547-0950.  
'58 Chevy Impala, auto, gd running cond (body & interior). Debbi Anthony x4671  
or 361-5243.  
'62 VW bug, sunroof, 4 new tires, exc transport, \$350. Sully x4093 after 4 pm.  
'62 Falcon wgn, gd cond, \$150. Jane x6937.  
'63 Rambler sedan, \$125. Maurice 491-0463.  
'63 VW sunroof, gd cond, tires, \$385. Ben Miller x7363 Linc or 862-0981.  
'64 VW bug, 59K, gd cond, \$500 or best; '66 Mustang, 6 cyl, manual, exc cond,  
48K, \$850 or best. Sandy Morgan x6345.  
'64 Chevy Belaire, 6 cyl, standard, gd mech cond, \$165. Bob Gentry x2956 or  
547-3233.  
'65 VW sunroof, R&H, gd tires, 70K, new brks, \$595 firm. Peter x326 Draper 7.  
'65 Dodge Coronet, 4 door, gd cond, \$200. Prof Probststein x2240.  
'67 Pontiac Firebird, exc cond, best reas offer. x5762.  
'67 VW sqback, exc cond, \$1395. 272-4665 evgs.  
'68 Mustang fastbk, auto, 16K, R&H, exc cond, \$1500. 523-3997 evgs.  
'69 Simca, R&H, sports car features, must sell, living country, \$1300. Elliot  
523-1680.  
'69 Javelin, 3 spd/flr, 22K, snows, extras, exc cond, \$1700 or best, living country.  
Alfred x7141 or 868-2684.  
'69 Mustang convert, auto, pwr st, snows, \$2000 or best. Bill x5719 Linc.

Camb sublet, furn, 3BR, all util, prking, heat, \$300/mo, avail 1/15. 547-7959.  
Dedham, 7 rm split-level ranch, 2B, 2 frplce, ww carpet, LR, DR, 3BR, seen  
by app't only, \$42.5. George Kouri 326-6565 or 524-5260.  
Waltham apt, 2BR, \$215/mo, avail 2/1. 899-6932 after January 3.  
Watertown apt, 3 rms, enc porch, combination windows, tile B, prking, no util,  
\$155, avail now. Sandra x7881 Linc or 923-8985.  
Watertown apt, 2BR townhouse, w/basement, \$225, avail 1/1. Dan x1706.  
Wayland, cus contemp, v priv 1 1/2 acre wooded lot, 4BR, 2B, 2 frpl, cent ht &  
air cond, 2 car gar, wl consider rental, \$49.9. x303 EDC or 358-4297.  
Pleasant Mt, Maine, ski lodge, nr N Conway, NH, 12 BR, 3B, sleeps 20, \$1800.  
Sue O'Brien x3468.

WANTED & MISC.

Juilliard grad wl give piano instruction. Evelyn Siegel, 484-3610.  
Wl do tech typing. Katie Hallinan x1880.  
Fireplace logs. Ken x5382.  
Grad student rmmate for furn Boston apt, 2/1. 542-2819.  
Old fireplace grate. Gay Warner x4905.  
Fem rmmate (1 or 2) for Brookline apt starting 1/1. Betsy x5695.  
Daily ride: Everett to MIT, 8-5 or 9-5. x2285.  
Zig-zag sew mach. x3933.  
Car to rent part of January. Eduardo x5820 or 623-8754.  
1960 T-Bird shop repair manual. x7873 Linc.  
Rm in Camb, owned either by male or female. Carr x7273.  
Wl do non tech typing. Bertha Berry x1785 or 864-4351.  
Wl bbsyt in Westgate. 547-9142.  
Ride from Quincy to MIT, wl pay. Diane Sharkey x4621.  
Thesis typing, IBM Selec w/symbols. Barbara Lynn 876-4744 evgs.  
Free: 4 mos old male cat, part Persian, part tabby, w/shots. Rose Calvo x7207.  
Men's black riding coat, sz 44; black riding boots, sz 10 1/2 - 11. Carl Benner  
x2250.  
'65 Plymouth Valiant, V-8 engine. Michael x5668.  
Subjects needed for hearing experiment, repetitive but challenging task, training  
& testing wl last sev mos, wl pay. Jeff x2575 or 566-2640.  
Lost: earring, non-pierced, blue stone in gold setting, reward. Laura x7748.  
Wl do thesis typing, etc. Joan 284-3269 evgs.  
Need tv set for less than \$20. B. Stoykov x5915.  
Visiting prof needs 3BR apt, 9/71 - 6/72, nr Harvard Sq. Nancy Ahlquist x4714.  
Pinochle players, Lexington area. Wally Crowe 862-5964.  
FM radio for '62 Chevy. Joel 924-1773.  
Ride from Wellesley (Rt 9 to Draper 7) and back, 8-5, wl pay. Bernie x385 Draper.

The next issue of Tech Talk will be out on January 20. Ads may be telephoned to Ext. 2707 or mailed to Room 5-122. The ad deadline for the January 20 issue is January 8. Ads not accompanied by full name and extension or room number will not be printed. Ads are limited to one per person per issue and may not be repeated in successive issues. Send only news and comment to Joanne Miller, Room 5-105, Ext. 2701.