

MIT Not Liable in '60s Deaths

Jury Rules MGH, Doctor at Fault in Nuclear Medicine Experiment

By Matthew Palmer
STAFF REPORTER

A federal jury found Friday that MIT is not responsible for the deaths of two patients who underwent experimental radiation treatment for cancer in the 1960s.

Massachusetts General Hospital and retired neurosurgeon Dr. William Sweet were held liable, however, and were ordered to pay the victims' families a total of eight million dollars.

George Heinrich and Eileen Siekewicz underwent experimental boron neutron capture therapy from a nuclear reactor at MIT. The suit alleged that MGH and Sweet were negligent in their attempts to treat brain cancer. The Heinrich family was awarded \$2.5 million and the Siekewicz family \$5.5 million.

MIT was named in the suit for providing the use of the reactor facilities, but the doctors were all from MGH.

Questions raised recently

The Advisory Committee on

Pamphlet Appeals to Parents

By Dana Levine

A group of MIT students recently published a brochure to alert parents of MIT students to some common student concerns.

The pamphlet, entitled "Parents At MIT, An Informed Perspective", contains questions that the pamphlet's authors "feel are appropriate for parents to ask the MIT administration and Institute representatives," as the pamphlet states. Released last weekend, distribution of the pamphlet coincided with Family Weekend, an annual event which brings MIT parents to campus for panels, tours, and workshops with members of the MIT community, including high-level administrators.

"MIT does a better job of pretending to respect parents than it does to respect kids," said Richard S. Tibbetts '02, who initially proposed and formulated the organization of the brochure.

"MIT always says, our peer institutions do this, so we should too. We don't have peer institutions," he said.

Pamphlet states student concerns

"Parents At MIT" discusses some of the concerns of MIT students, as well as a list of things which MIT students find special and unique about their college.

The pamphlet divides concerns into four categories: Trust, Money, Mentorship, and Housing. The "Why I Love This Place" section of the brochure contains items which

Parents, Page <None>



ROBERT SUMNER—THE TECH

MIT Nuclear Reactor Laboratory medical treatment room, where Heinrich and Seinkewicz were treated in the 1960's.

Human Radiation Experiments, a body of the Department of Energy, mentioned the deaths in its final report in 1994.

According to Anthony Z. Roisman, attorney for the victims' families, the families did not think

that what the doctors had done was harmful prior to the ACHRE report. This is why the suit was not made for 38 years, he said.

MIT spokesman Kenneth D.

Lawsuit, Page <None>

Snowberg Seeks Student Representation

By Frank Dabek
EDITOR IN CHIEF

The entrance of MIT student Erik C. Snowberg '99 into this year's race for Cambridge City Council has created a new interest on the part of students in Cambridge politics. In a way, the 22-year-old political

Election '99

rookie has already partially accomplished his goal — improving student representation in local government.

"Students will never have any real power over MIT," without government representation, Snowberg said of his motivation for his run for the council. Students "don't have anything the administration wants" and their tuition is just a "drop in the bucket" he said, but the Institute must obey the local government.

The run doesn't appeal to students exclusively, however — "student interests and community interests are not that different," he said. Snowberg

points to affordable housing as an example of reform needed as much by students as by other Cambridge residents.

Despite endorsements from the Cambridge Civic Association and the Lavender Alliance, Snowberg has been criticized for a lack of experience in politics. The nascent Cambridge Progressive Forum, created as a progressive force to fill a perceived void left by the aging CCA, is also supporting him; Richard Clarey, one of the Forum's organizers, lauded Snowberg for his positions on Town-Gown relations and rent stabilization.

In response, Snowberg, who is majoring in physics, earth atmospheric and planetary sciences, and mathematics, says that he has "held offices of responsibility" and has acquired the knowledge necessary to govern effectively.

"It just takes commitment," he said. In addition, the issues that Snowberg is focussing on are issues relating to students and universities

Computer God Speaks About God, Computers

By Thomas Lin

In his syndicated newspaper column, Bill Gates once responded to a reader: "If you think you're a really good programmer, or if you want to

challenge your knowledge, read The Art of Computer Programming by Donald Knuth."

Knuth, "one of the most well regard computer scientists in the world" according to MIT AI Lab's Dr. Anne Foerst, is visiting MIT this Fall to give a series of Lectures for the the AI Lab's "God and Computers" lecture series. During these lectures, Knuth will describe how he has applied his computer science knowledge to matters of religion. He will also answer individual questions on any topic, as he hopes to help help individuals, particularly computer scientists, answer any tough life questions. The

Tech spoke with Knuth about his ongoing lecture series.

The Tech: What will the lecture series be about?

Knuth: The lecture series is about things that I learned about things, learned about God and about issues of faith and science. I'm telling a story of events that have happened to me that I find interesting and that I think other people might find interesting too. I'm not trying to change people's views, I'm just trying to express my views and what I've learned. I'm trying to say "Here are something things that I think are neat. What do you think?"

The Tech: "So what do you hope that the audience gets out of these lectures?"

Knuth: "I'm hoping that a few people will tell me that they really enjoyed the lectures. I'm sure that some people will think I'm crazy and off the beam, but I'll just be myself and hopefully I'll strike a chord with some people. Also, I had hoped that I'd have had people like me to talk to about topics like this."

The Tech: Do you think that there's anything special about MIT that makes this an ideal place to give such a lecture series?

Knuth: I thought, "If I'm ever going to give a talk about this, what better place to give it than at MIT?" MIT has such a great cross section

which he understands well due to his position as a student, he says.

Affordable housing important

Snowberg is a supporter of returning rent control to Cambridge alongside other housing reforms.

"Housing is for homes, not for investment," he said. Snowberg has proposed the creation of a landlord

Snowberg, Page <None>

Knuth, Page 9

Strategic Advisory Committee Offers RSSC Counter-Proposal

By Mike Hall
STAFF REPORTER

The Strategic Advisory Committee to the Chancellor held an open discussion last night on plans for its Unified Proposal, a counter-proposal to the oft-maligned Residence System Steering Committee's Final Report.

The Unified Proposal, a student-initiated plan for the impending 2001 restriction on freshmen to dormitories, is scheduled to be officially unveiled next Monday.

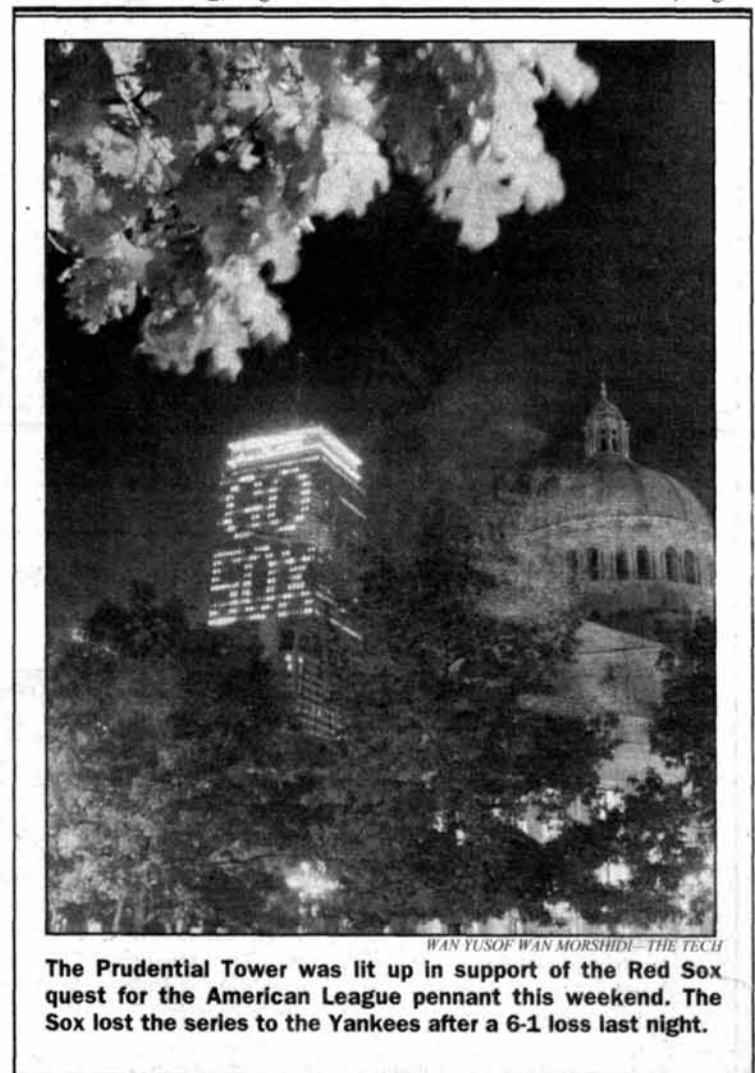
In its report, the SAC proposes three main objectives for the new MIT residence system: the basic need for housing, the creation of a

home environment for new students, and increased interaction between all members of the MIT community.

SAC: More money for housing

Funding for new dormitories is one of the SAC's top priorities. The Unified Proposal currently calls for a \$273.5 million capital expenditure in the next ten years. Benefits provided by the proposed expenditure include two new 500-bed graduate dormitories, a new 400-bed undergraduate dormitory, and renovations to East Campus, Walker Memorial, and Stratton Student Center. The

SAC, Page <None>



WAN YUSOF WAN MORSHIDI—THE TECH

The Prudential Tower was lit up in support of the Red Sox quest for the American League pennant this weekend. The Sox lost the series to the Yankees after a 6-1 loss last night.

OPINION

Michael J. Ring considers city council policies and election system.

Page 5



Comics

Page 12

FEATURES

Faculty Chair Steven Lerman provides a peek into the workings of MIT faculty

Page 7

World & Nation2
Opinion4
Features7
Police Log30

WORLD & NATION

Nissan Restructuring to Include Cutting 21,000 Jobs

LOS ANGELES TIMES

TOKYO

Nissan Motor Co., once a high-flying icon of Japanese economic might, on Monday announced a restructuring plan providing both a stark reminder of its fall from grace and the most dramatic evidence yet that Japan is on the road to meaningful restructuring after years of paralysis.

Any thought that new Nissan Chief Operating Officer Carlos Ghosn might go easy on his Japanese colleagues was dashed when he unveiled the plan — more sweeping than even the most dire predictions — to close five factories, cut 21,000 jobs, pare \$9 billion in costs, overhaul its supply system, stop selling bland cars and fundamentally alter its Japanese management practices.

The precedent being set by Nissan — albeit one forced on the company by a non-Japanese partner, Renault of France — may encourage other Japanese companies in overbuilt smokestack industries to follow suit.

It also underscores a stunning reversal from the '70s, when Japanese automakers had forced their American counterparts to undertake the same kind of painful downsizing now facing Nissan.

Pentagon May Ban ATM Surcharges on Bases

LOS ANGELES TIMES

The battle over ATM surcharges has opened on yet another front, and it could present the banking industry with its most formidable opponent ever: the U.S. military.

The Department of Defense has entered the fray over the \$1 to \$3 fees that banks charge noncustomers for using their automated teller machines, proposing new rules that would prohibit banks operating on military bases from assessing the surcharges.

The rule could affect dozens of U.S. banks, ranging in size from giant Bank of America to small community institutions, which currently operate on more than 400 major domestic bases and serve about 1.4 million military personnel.

"Lower-paid troops can ill afford to pay these fees every time they use the machine," said Glenn Flood, a department spokesman.

Flood said the ATM fees were particularly hard on enlisted soldiers who are frequently transferred to different bases and cannot change their bank accounts every time they move. In addition, most bases are served by only one bank, leaving soldiers with fewer choices, he said.

Complaints from soldiers about the fees helped spur the proposed rule, according to Flood.

House Votes to Limit Mexican Trucks' Access to U.S. Roads

LOS ANGELES TIMES

WASHINGTON

In the most concrete victory yet for labor interests opposed to the North American Free Trade Agreement, the House has voted to levy severe financial penalties on Mexican shipping companies whose trucks venture more than a short distance inside the United States.

The legislation, passed on a 415-5 vote as a last-minute amendment to a highway safety bill last week, undermines a key NAFTA provision by severely limiting the access of Mexican trucking companies to U.S. roadways.

The result of an intense lobbying effort by the International Brotherhood of Teamsters, it comes amid mounting opposition in Congress and in the Clinton administration to opening the border to Mexican trucks.

While the legislation requires Senate approval and President Clinton's signature, it is supported by the administration and seems almost certain to become law within weeks.

Clinton to Meet on Budget With Congressional Leaders

By Charles Babington and Eric Pianin

THE WASHINGTON POST

WASHINGTON

After weeks of resisting a face-to-face encounter, congressional leaders agreed Monday to sit down with President Clinton Tuesday afternoon to try to begin settling the budget differences that have left billions of dollars in spending decisions unresolved.

Key congressional Republicans accepted the president's invitation after he vetoed a foreign aid spending measure and vowed to veto other appropriations bills that fail to meet his priorities. GOP leaders, aware they lack the votes to override such vetoes, finally acknowledged they must negotiate directly with a president whom many in their party distrust.

The top-level talks could point the way to a bipartisan resolution of what has so far been an acrimonious budget process, marked by efforts in both parties to score political points. Until now, GOP leaders have been wary about negotiations with the president, in part because of Clinton's past successes in extracting concessions on spending programs.

But with Clinton having already vetoed two spending bills — and

threatening several more — congressional Republicans have apparently come to the conclusion that they need to deal directly with the White House to bring closure to a budget battle that has exposed divisions in their own party and elicited criticism for alleged accounting "gimmicks."

In accepting the presidential invitation, the Republicans stressed they will consider no deals with Clinton that tap surplus funds generated by Social Security payroll taxes — even though the Congressional Budget Office says GOP spending plans already have done that.

"We will not agree to a summit that would try to find secret ways to spend the Social Security surplus," said House Speaker J. Dennis Hastert, R-Ill.

Clinton, too, says he doesn't want to dip into Social Security funds. But his alternative is based on proposed tax hikes that Congress is unlikely to accept.

In the end, fiscal experts predict, Congress and the White House will settle on a compromise that will rely in part on Social Security surpluses — but involve enough budgetary gimmicks to obscure the picture. For example, Congress has labeled cen-

sus expenses and routine military maintenance as "emergency" costs, a designation that keeps them from being counted against spending limits. Ultimately it makes little difference, say authorities on Social Security, because the government for years has used the trust fund's surpluses to cover other spending needs without affecting program recipients.

"This meeting may be as much for show as anything else," said Stanley Collender, a budget authority at Fleishman-Hillard consulting group. "Both sides are looking for a little political cover here."

As they have rushed to finish work on the last of 13 spending bills, Republican lawmakers have substantially narrowed their differences with the administration. In some areas, including defense, veterans health care, space and education, they have approved more money than the president requested.

But the two sides have profound philosophical differences, particularly over education. The administration's priorities include hiring additional teachers and shrinking classroom sizes, while the Republicans favor block grants that states and local authorities can spend as they see fit.

Starr Yields Probe to Top Aide

By Bill Miller

THE WASHINGTON POST

WASHINGTON

Kenneth W. Starr officially relinquished control of his five-year investigation into President Clinton Monday, passing the baton to a top assistant, Robert W. Ray.

Starr submitted his resignation to the three-judge panel that had appointed him, ending a tenure that generated 14 criminal convictions, the impeachment and acquittal of the president, and a cascade of criticism from Democrats. In his resignation letter, Starr complained about "the intense politicization of the independent counsel process."

"To reduce the unfortunate personalization of the process, in particular in the wake of the inherently divisive impeachment proceedings, the wiser course, I believe, is for another individual to head the organization," he wrote.

Starr, who has talked of return-

ing to his private law practice for months, initially had asked the Justice Department to take over any issues remaining from his probes. But the Justice Department declined to do so, and Starr began pushing for the appointment of one of his top deputies to succeed him. Although Congress allowed the independent counsel statute to expire last summer, those investigations already under way were permitted to continue.

Ray, 39, vowed to "live up to the finest traditions of what it means to be a professional prosecutor" and carry out his duties in a "prompt, responsible and cost-effective manner." Ray joined Starr's office in April, after a four-year stint working on independent counsel Donald Smaltz's investigation of former agriculture secretary Mike Espy, who was acquitted of corruption charges last December.

Starr, whose investigations have

cost more than \$47 million, leaves Ray with some critical unfinished business. Ray also will oversee the preparation of a final report summing up the office's many investigations, which cover activities dating to the Clintons' days in Arkansas. Depending upon its timing and content, the report could emerge as an issue in next year's presidential race or in Hillary Rodham Clinton's anticipated Senate campaign.

Starr referred to the judicial disagreement in an interview with CNN Monday, declaring that allegations that he had been overzealous were "bogus, totally made up, without foundation."

"My job was to carry out the assignment given to me. And that's exactly the point of the politicization," Starr said. "Even the judges have found themselves embroiled in the politics of this process."

WEATHER

Below Average

By Greg Lawson
STAFF METEOROLOGIST

With the remains of Irene well to our northeast, the winds and rain have finally ceased. A high pressure system is nestled comfortably above New England and will rule with a cool and clear fist. Temperatures today will be capped at about 50°F (10°C), more than 10 degrees below average. Clouds will return tomorrow as a weak low approaches from the southwest. The forecast challenge is whether this system will bring precipitation. I am tending towards it remaining dry and overcast, but there may be a light sprinkle Wednesday night. The low will blow out to sea as quickly as it came, and Thursday will end clearer than it began. Unfortunately, temperatures will still remain below their climatological averages. Yes, after a beautiful 70 degree weekend, we're settling back into another cold regime — winter's around the corner.

Today: Cool and partly cloudy. Light northerly winds. High of 51°F (10°C).

Tonight: Chilly and clear. Low of 37°F (3°C).

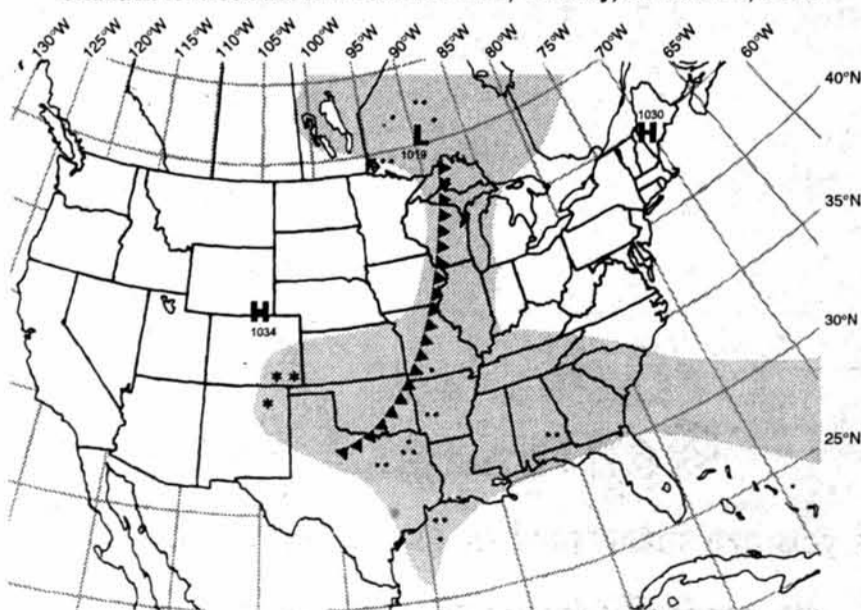
Wednesday: Clouding up. Overcast by the afternoon. Should remain dry though a slight chance of drizzle in the evening. Winds increasing slightly. High of 50°F (10°C). Low of 40°F (4°C).

Thursday: Clouds clearing to partly cloudy by early afternoon.

Temps remain in the low 50s (10-12°C). Low in the mid 40s (6-8°C).

Friday Outlook: Gradual warming back to normal — 61/45°F (16/7°C).

Situation for Noon Eastern Standard Time, Tuesday, October 19, 1999



Weather Systems	Weather Fronts	Precipitation Symbols	Other Symbols
H High Pressure	--- Trough	Shower	Fog
L Low Pressure	- - - Warm Front	Light	Thunderstorm
S Hurricane	▲▲▲ Cold Front	Moderate	Haze
	▲▲▲ Occluded Front	Heavy	
		Snow	
		Rain	

Compiled by MIT Meteorology Staff and The Tech

As Election Looms, Indonesian Presidency Is Still Up for Grabs

By Keith B. Richburg
THE WASHINGTON POST
JAKARTA, INDONESIA

For more than three decades, Indonesia's People's Consultative Assembly has been largely a rubber stamp, ratifying the appointment of presidents already in place. Now, as the 700-member assembly meets for its first session in Indonesia's new era of democratic reform, no one — including the members themselves — has a clue who Indonesia's next president will be.

The incumbent, President B.J. Habibie, made it clear he is in the race to stay, despite huge daily demonstrations against his rule and sharp criticisms from assembly members.

"I hope to continue the struggle until the last minute," an emotional Habibie told soldiers and security personnel at a ceremony. "I don't want to say goodbye. I don't want to bid farewell."

Trying to oust Habibie is the hugely popular but politically inexperienced opposition leader, Megawati Sukarnoputri, the daughter of Indonesia's founding father, Sukarno. Her supporters staged one of their daily demonstrations Monday in Jakarta's central business district, turning a traffic circle into a sea of red — her trademark color — and warning that unless she is elected diehard followers will stage what they call "revolution."

Megawati's "red army," as they are called, run the spectrum of age and income. "I came here to sympathize with her supporters," said Adung, a retired bank employee who, at 75, was one of the oldest people turning out for a Megawati rally. He said he supports Megawati because of her famous father.

At the opposite end of the age divide, and holding up one side of a banner declaring "Megawati Or

Revolution," was 17-year-old Taufik Karuhman, a high school student. He knows nothing about Sukarno, he said, but supports Megawati because, "She's well-educated. And she's famous."

The third candidate, Abdurrahman Wahid, or "Gus Dur," is a blind Moslem cleric who leads Indonesia's — and the world's — largest Moslem organization. Wahid is an erstwhile Megawati ally, and had pledged to support her during campaigning for last June's parliamentary elections, which Megawati's party won.

Wahid's candidacy is being pushed by a Moslem grouping in the 700-member assembly that wants to see Habibie removed but does not think Megawati capable of the job. The three-way race has led to confusion, with analysts divided over whether Wahid takes more votes away from Megawati or Habibie.

Wall Street Voices Concern That New Report Will Damage Market

By Thomas S. Mulligan
LOS ANGELES TIMES
NEW YORK

A late-day rally partly reversed an early sell-off in technology shares Monday but failed to ease fears that an inflation report due out Tuesday morning could cause more damage to beleaguered markets.

Wall Street is worried that the September consumer inflation report, like the wholesale inflation report that was issued Friday, will give Federal Reserve Chairman Alan Greenspan more evidence to justify raising short-term interest rates again when the Fed meets Nov. 16.

Bracing for the report, investors pushed bond yields up Monday and sent stocks lower overall. But the Nasdaq composite index cut a 99-point loss in half in the final hour to

close down 42.68 points, or 1.6 percent, at 2,689.15.

The Dow Jones industrial average, meanwhile, rode a late-afternoon surge to close up 96.57 points, or one percent, at 10,116.28. The Dow repeatedly dipped below the 10,000 mark — an important psychological milestone — during the afternoon before finally rallying above it.

Still, falling stocks outnumbered winners by nearly 2-to-1 on the New York Stock Exchange and on Nasdaq, continuing a trend that has alarmed analysts for months. But after last week's market losses — the worst for the Dow in 10 years — some traders were surprised the damage wasn't worse Monday.

The selling also continued in the bond market, driving yields up across the board. The 30-year Treasury bond ended at 6.32 per-

cent, up from 6.26 percent Friday and matching last Thursday's two-year high.

The Dow was buoyed by big gains in J.P. Morgan, up \$7.31 to \$113, and American Express Co., up \$2.75 to \$137.38. Beaten-down financial shares rallied broadly after leaders such as Morgan, Citigroup and Bank of America reported strong third-quarter earnings.

Another factor in the afternoon rally was a bullish statement from influential Goldman Sachs analyst Abby Joseph Cohen, who said that inflation fears are overdone and that the Standard & Poor's 500 index is actually five percent undervalued, given strong corporate earnings.

Nonetheless, if the September consumer inflation figure comes in much higher than the consensus forecast of a 0.4 percent increase.

Disney Reverses Approach to 'Black Hoe' Controversy

LOS ANGELES TIMES
LOS ANGELES

After initially dismissing its involvement in a radio promotion called "The Black Hoe," the Walt Disney Co. is now moving aggressively to rein in the mounting controversy.

Six weeks ago, Disney balked at demands from civil rights groups to issue an apology for airing a promotion on a local FM radio station during which "Black Hoes" — black, plastic gardening tools — were distributed to listeners and advertisers last year. Disney also vowed to fight a pair of racial discrimination and harassment lawsuits filed against its ABC Inc. division by two black employees of the station, KLOS-FM.

But when black groups asked the Federal Communications Commission to revoke the station's license and threatened to launch a national boycott, Disney quickly apologized. And after an internal review uncovered 11 years of complaints about barbs against Jews, Asians and blacks aired on the station's morning show, the corporation began scrambling to quietly settle the lawsuits out of court, sources said.

Disney also dispatched ABC Chairman Robert Iger, one of the Disney's top executives, three weeks ago to the Los Angeles headquarters of the Congress of Racial Equality, where he spent nearly two hours consulting with civil rights leaders on how to resolve their concerns. On Monday, the two top executives from ABC's human resources department flew in from New York to CORE headquarters to consult with civil rights leaders on how to improve the company's diversity and sensitivity training programs.

U.S. Team Hoping to Save Rare Lemurs

NEWSDAY

A team of Duke University researchers is on an urgent expedition to capture some rare lemurs in a rapidly disappearing patch of forest in Madagascar.

The team is in the island nation off Africa's east coast, hunting for diademed sifakas, the largest living lemurs. The striking animals — with large brown eyes and lush fur of yellow, orange, gray, white and black — are comparable to a medium-size dog in weight and length, according to Ken Glander, director of the Duke University Primate Center.

The Duke researchers hope to capture five of the animals to help establish a captive breeding colony before the species becomes extinct.

Glander said the search will take place in a 600-acre forest tract south of Madagascar's capital, Antananarivo. The tract is quickly being destroyed by wood-gathering and slash-and-burn clearing for farming, he said. Another research group sighted some of the rare animals in the threatened forest region earlier this year.

There probably are no more than 4,000 of the diademed sifakas left in the wild, and that number is decreasing rapidly, Glander said. When he visited Madagascar six years ago, he said, there were places where "you could walk into the forest and see lots of them. Now they are extremely difficult to find."

Like other lemurs, the diademed sifakas exist only on Madagascar.



The MIT Graduate Student Council

office: Walker Memorial, 50-220 (above the Muddy)
phone: 253-2195
website: www.mit.edu/activities/gsc
email: gsc-request@mit.edu

GSC HIKING TRIP WHITE MOUNTAINS, NH SATURDAY OCT. 23, 7AM-9PM

Tickets on sale now at the GSC office (50-220) at \$15 per person. Ticket sale hours are Tuesdays and Wednesdays 10am-2pm. One guest per graduate student. Please call 253-2195 before going to pick up tickets. Check preferred.

Orientation for New Representatives !!

If you are interested in becoming a GSC representative, we cordially invite you to attend the New Rep.

Orientation Meeting on Oct. 20.

5:30pm at 50-220

October - Calendar

- 19 Housing and Community Affairs Committee Meeting*
- 20 GSC Representatives Orientation (5:30pm)
- 21 Academic, Research, and Careers Committee Meeting*

November

- 3 General Council Meeting*
- 8 Muddy Charles Board Meeting
- 11 GSC Representatives Endicott House Retreat

All graduate students are welcome. Food is provided.
* @ 5:30 in 50-220 (above the muddy)

OPINION

Letters To The Editor



Chairman
Satwiksai Seshasai '01

Editor in Chief
Frank Dabek '00

Business Manager
Joey Dieckhans '00

Managing Editor
Ryan Ochylski '01

Executive Editor
Gregory F. Kuhnen '00

NEWS STAFF

Editors: Douglas E. Heimburger '00, Zareena Hussain '00, Jennifer Chung '01, Naveen Sunkavally '01; **Associate Editors:** Rima Arnaout '02, Sanjay Basu '02, Kristen Landino '02, Kevin R. Lang '02, Karen E. Robinson '02; **Staff:** Anna K. Benefiel '00, Gabriel Daleson '00, Laura McGrath Moulton '01, Krista L. Niece '01, Jane Yoo '01, Steve Hoberman '02, Efrén Gutierrez '03, Mike Hall '03, Matthew Palmer '03, Aurora Schmidt '03, Sagara Wickramasekara '03; **Meteorologists:** Véronique Bugnion G, Greg Lawson G, Peter Huybers G, Bill Ramstrom G, Chris E. Forest, Marek Zebrowski.

PRODUCTION STAFF

Editor: Brett Altschul G; **Associate Editors:** Mary Obelnicki G, Ian Lai '02, Jordan Rubin '02, Ágnes Borszékí; **Staff:** Josh Bittker '99, Erica S. Pfister '00, Eric J. Cholankeril '02, Raag Airan '03, Bryan Guzman '03, Carolyn Chang '03, Nancy Kho '03, Linda Liang '03, Verónica Lois '03, Jane Maduram '03, Supriya Rao '03, Jennifer Shieh '03, Gayani Tillekeratne '03.

OPINION STAFF

Editors: Eric J. Plosky G, Michael J. Ring '01; **Columnists:** Julia C. Lipman '99, Elaine Y. Wan '01, Veena Thomas '02, Kris Schnee '02; **Staff:** Wesley T. Chan '00, Jeff Roberts '02.

SPORTS STAFF

Editor: Susan Buchman '01; **Associate Editor:** Ming-Tai Huh '02; **Staff:** Ethan T. Goetz '00, Amir Mesarwi '00, Nisha Singh '00, Deborah S. Won '00, Alvan Eric P. Loreto '01, Jennifer C. Lee '03.

ARTS STAFF

Editors: Vladimir V. Zelevinsky '95, Rebecca Loh '01; **Associate Editors:** Bence P. Olveczky G, Fred Choi '02; **Staff:** Erik Blankinship G, Daniel Metz G, Steven R. L. Millman G, Roy Rodenstein G, Zarminae Ansari '97, Tzu-Mainn Chen '99, Mark Huang '99, Kate Samrandvedhya '00, Francisco Delatorre '01, Amrita Ghosh '02, Daniel J. Katz '03, Heather Anderson.

PHOTOGRAPHY STAFF

Editors: Garry R. Maskaly '00, Karlene Rosera '00, Annie S. Choi; **Staff:** James Camp G, Rich Fletcher G, Krzysztof Gajos G, Saphir Hamilton G, Aaron Isaksen G, Wan Yusof Wan Morshidi G, Thomas E. Murphy G, Michelle Povinelli G, Omar Roushdy G, Jelena Srebrić G, T. Luke Young G, Joseph Su G, Stefan Carp '00, Rita H. Lin '00, Jörg Scholvin '00, Ajai Bharadwaj '01, Ying Lee '01, Yi Xie '02, Lucy Yang '02, Wendy Gu '03, Cheng Pei '03, Miodrag Cirković.

FEATURES STAFF

Editor: Katie Jeffreys '01; **Cartoonists:** Solar Olugebefola G, Jennifer Dimase '01, Xixi D'Moon '01, Lara Kirkham '03, Jocelyn Lin '03, David Ngo '03; **Staff:** Aaron D. Mihalik '02, Sonali Mukherjee '03.

BUSINESS STAFF

Advertising Managers: Jasmine Richards '02, Huanne T. Thomas '02; **Staff:** Sitij Agrawal '03.

TECHNOLOGY STAFF

Director: Shantonu Sen '02; **Staff:** Chris McEniry '00.

EDITORS AT LARGE

Contributing Editor: Dan McGuire '99; **Color Editor:** Gábor Csányi G.

ADVISORY BOARD

V. Michael Bove '83, Robert E. Malchman '85, Thomas T. Huang '86, Jonathan Richmond PhD '91, Reuven M. Lerner '92, Josh Hartmann '93, Jeremy Hylton '94, Garlen C. Leung '95, Thomas R. Karlo '97, Saul Blumenthal '98, Indranath Neogy '98.

PRODUCTION STAFF FOR THIS ISSUE

Night Editors: Mary Obelnicki G, Ryan Ochylski '01; **Staff:** Eric J. Cholankeril '02, Jordan Rubin '02, Bryan Guzman '03, Verónica Lois '03, Jane Maduram '03, Gayani Tillekeratne '03.

The Tech (ISSN 0148-9607) is published on Tuesdays and Fridays during the academic year (except during MIT vacations), Wednesdays during January and monthly during the summer for \$45.00 per year. Third Class by The Tech, Room W20-483, 84 Massachusetts Ave., Cambridge, Mass. 02139. Third Class postage paid at Worcester, Mass. Permit No. 589. POSTMASTER: Please send all address changes to our mailing address: The Tech, P.O. Box 397029, Cambridge, Mass. 02139-7029. Telephone: (617) 253-1541; editorial: (617) 258-8324; business: (617) 258-8226. facsimile: advertising: subscription and reprinting rates available. Entire contents © 1999 The Tech. Printed on recycled paper by MassWeb Printing Co.

Organic Food Fights

I would like to provide a little balance to a recent opinion piece by Kris Schnee ["Frankenstein's Soybeans", Oct. 15]. I thought it might be useful to point out a few facts about Monsanto and how these facts relate to certain assumptions implicit in Schnee's piece.

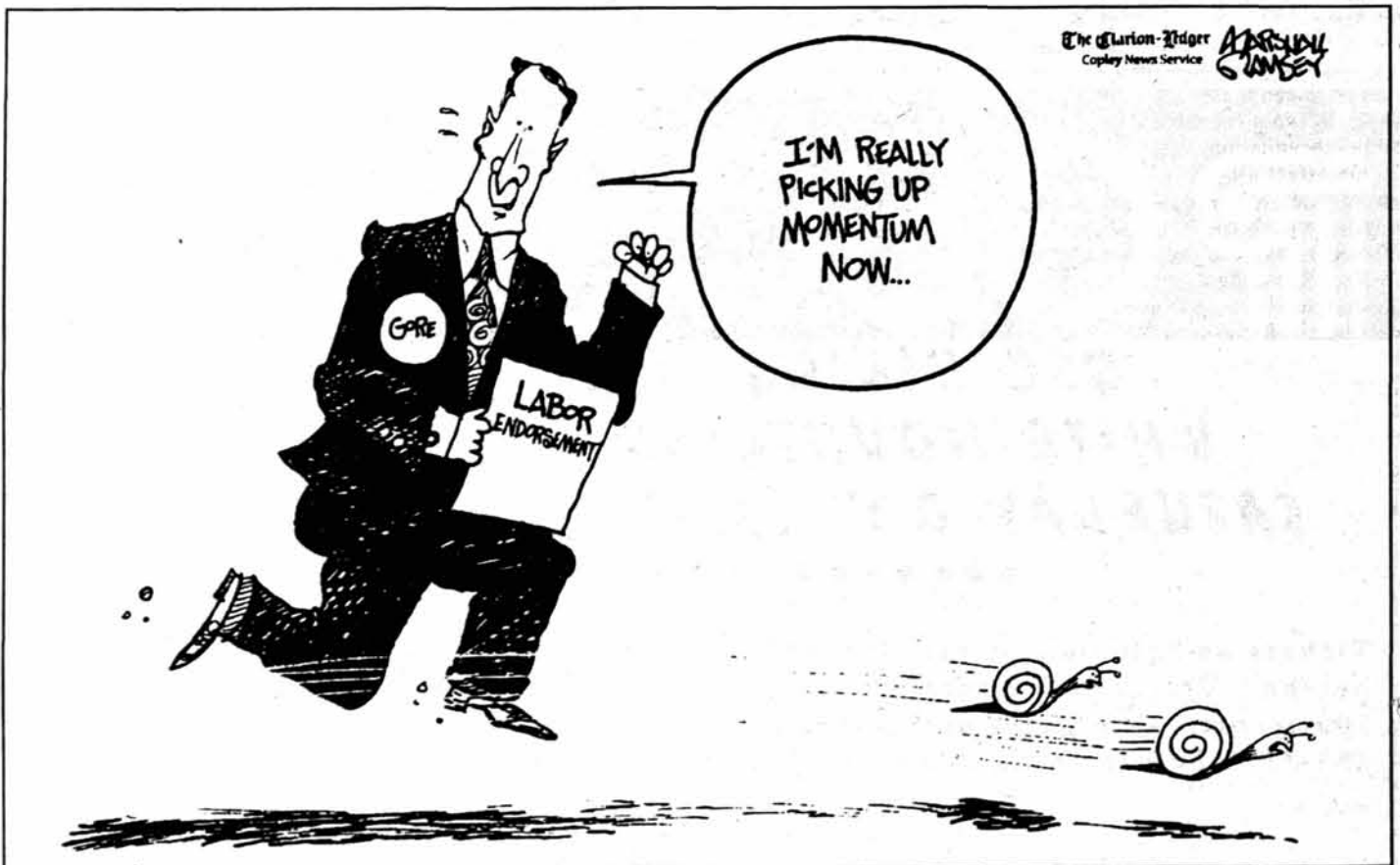
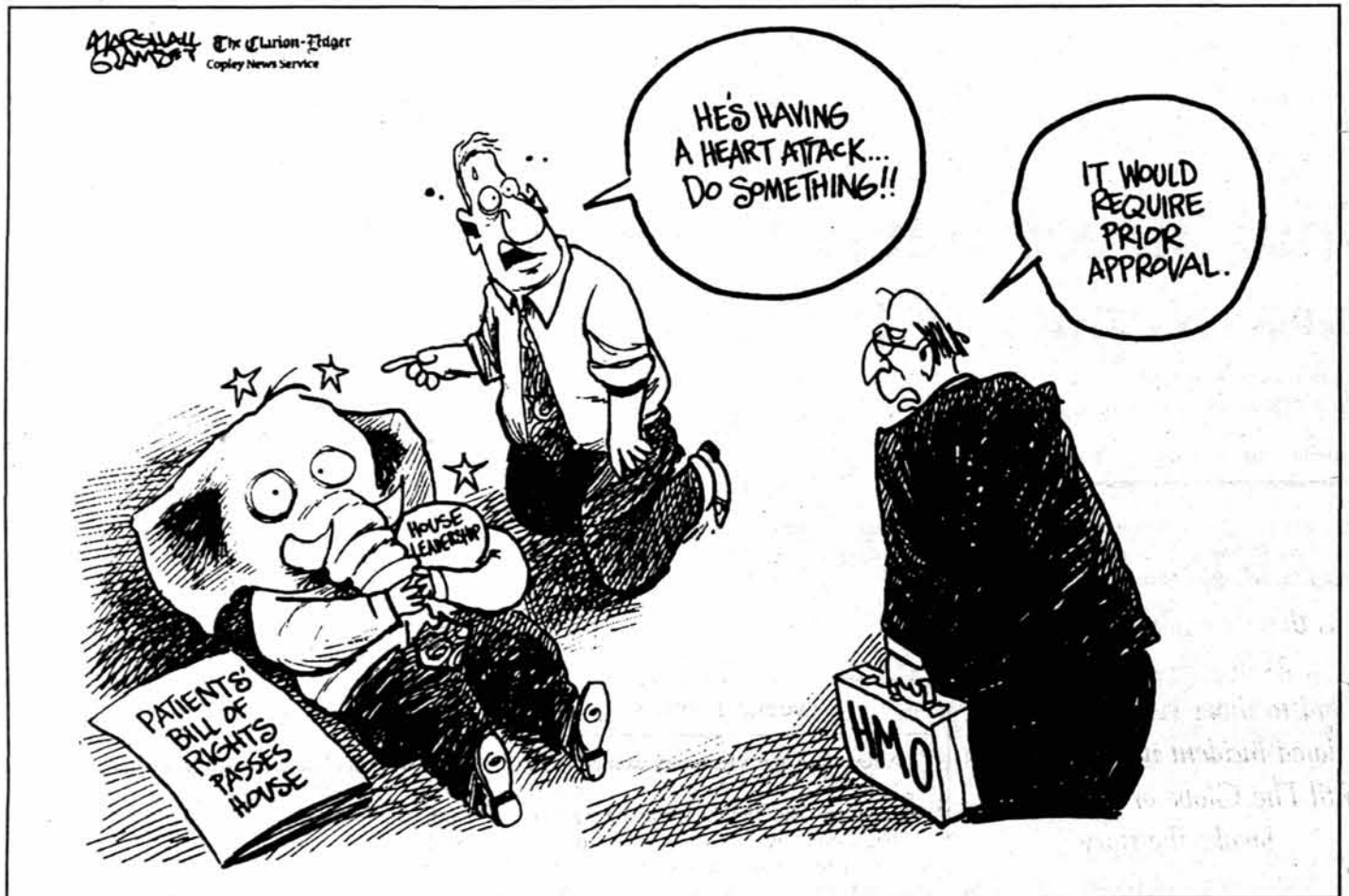
First, Schnee writes, "Will GM [genetically modified] crops help to feed the world's six billion people, or threaten to starve them with superweeds, or poison them?" In the context of his piece, this question might lead a reader to think that GM crops are designed to help feed people. Think again. Ironically, Monsanto was in the news a mere week

before this opinion piece because it finally (at least partially) relented in its attempts to market so-called "terminator" seeds [CNN, October 7, 1999 — "'Terminator' victory a small step in long war"]. Terminator seeds are genetically engineered so that the resulting plants will only produce sterile seeds. Such a technology, while possibly highly profitable to seed companies, is extremely unlikely to "help feed the world's six billion people."

Second, Schnee writes, "Companies operating in America will probably have the choice of voluntarily choosing to label their GM-based food, or having labeling forced on them by law." He is ignoring a third way, which is to have a lack of labeling forced on

companies operating in America. Monsanto has been at the forefront of this exciting option in its forays against opponents of bovine growth hormone. As noted in a 1996 Business Ethics magazine article, "Monsanto also has used lawsuits and threats of lawsuits to prevent dairy farmers and retailers who want to identify their milk as bst-free" (bst is a particular bovine growth hormone). Even the United States Department of Agriculture got in on the act last year; they proposed national organic foods labeling standards which would have allowed GM crops to be labeled organic and would have made any alternate organic labeling which excluded such crops illegal.

James R. Hockenberry G



Opinion Policy

Editorials are the official opinion of *The Tech*. They are written by the editorial board, which consists of the chairman, editor in chief, managing editor, news editors, and opinion editors.

Dissents are the opinions of the signed members of the editorial board choosing to publish their disagreement with the editorial.

Columns and editorial cartoons are written by individuals and represent the opinion of the author, not necessarily that of the newspaper.

Letters to the editor are welcome. Electronic submissions are encouraged and may be sent to letters@the-tech.mit.edu. Hard copy submissions may be addressed to *The Tech*, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. No letter or cartoon will be printed anonymously without the express prior approval of *The Tech*. *The Tech* reserves the right to edit or condense letters; shorter letters will be given higher priority. Once submitted, all letters become property of *The Tech*, and will not be returned. *The Tech* makes no commitment to publish all the letters received.

To Reach Us

The Tech's telephone number is (617) 253-1541. E-mail is the easiest way to reach any member of our staff. If you are unsure who to contact, send mail to general@the-tech.mit.edu, and it will be directed to the appropriate person. *The Tech* can be found on the World-Wide Web at <http://the-tech.mit.edu>.

Another Look at Disclosure

Guest Column
Christopher D. Beland

So once again, I am seriously wondering why I always find out about the latest fraternity drinking mishaps from the off-campus press. This latest incident apparently involves a Wellesley freshman being taken to the hospital after drinking at an SAE party.

When municipal police start an investigation of some alleged crime, this fact is made public — indeed, it's a sign of a healthy law enforcement department. At the Institute, we have instead the *Boston Globe* reporting: "Neal Dorow, an associate dean and head of MIT's Intrafraternity Council, would neither confirm nor deny yesterday that a formal investigation by the school is ongoing. 'I really do not feel comfortable commenting,' he said."

The next day, MIT sent out a press release declaring that the Campus Police have already investigated the incident and have reported their findings to Office of the Dean of Students and Undergraduate Education. Is this a case of MIT's right hand not knowing what its left hand was doing, a flub during an interview with a reporter, or was the Institute deliberately trying to hide the fact that an investigation was ongoing? And was this tactic rapidly reversed when the administration woke up Thursday morn-

But in a community the size of MIT with violations as serious as these — which affect all of us here — we cannot afford to shove every substance-related incident under the rug until The Globe or The Herald breaks the story.

ing to read all about the alleged incident in the *Globe*?

I'm all in favor of keeping the details of police investigations secret until finished — how else can a fair and complete job be done? But in a community the size of MIT, and with violations as serious as these — which affect all of us here — we cannot afford to shove every substance-related incident under the rug until the *Globe* or the *Herald* breaks the story. Not that I am in favor of slandering living groups or individuals needlessly — it's just as important to exonerate as it is to condemn.

But how many incidents have occurred at MIT that have been covered up and the responsible parties given a slap on the wrist, or otherwise subtly warned to be more careful not to get caught next time? The rash of revelations following the Krueger incident in September, 1997, highlighted MIT's longstanding practice of covering up events of this sort, a tendency to which it unfortunately still clings.

In this particular case, once again, we see the Boston Licensing Board taking care of the business that the IFC and ODSUE cannot or will not. Every time an MIT living goes before a city review board with an alcohol incident it makes it that much harder for the rest of us to maintain a positive relationship with our neighbors and the city administration.

I'd like to see MIT and the IFC take a hard look at their disclosure and disciplinary procedures. Effective enforcement of alcohol and safety-related policies in MIT FSILGs is seriously lacking, and the cloud of secrecy surrounding enforcement procedures is not helping one bit. This is something that affects the entire MIT community, and I think the community should get more involved in seeing that these issues are addressed in a timely and substantive fashion.

Maybe for once, the campus media will recognize this substantive issue and step up to the plate in its role as administrative watchdog. Student governments and administrative advisory committees, too, should not shirk their responsibility to deal with these problems.

Christopher D. Beland is a member of the Class of 2000.

City Council Reforms for Cambridge

Expand Size of Council and Use District Representation

Michael J. Ring

In Friday's edition of *The Tech*, City Council candidate Helder "Sonny" Peixoto's campaign manager mentioned the campaign was focusing on one neighborhood in particular — East Cambridge. Peixoto is not alone in his targeting of a specific neighborhood. Incumbent Timothy Toomey has been quite successful by emphasizing East Cambridge as well. Other candidates seem to be focusing their efforts on other parts of the city — Kathy Born in Porter Square, for example, and Marjorie Decker in Cambridgeport. And yet, these candidates are all seeking citywide offices.

Cambridge's system of proportional representation is not working if it elects councillors more beholden to a neighborhood than to the city at large. The city's election system becomes a *de facto* district system. Why go through the rigmarole of proportional representation when it's much easier to have the real thing — a true district system?

A second problem with the Cambridge City Council is its size. As a legislative body, it must be closely connected to the people it represents. And as a local government, working on a scale on which pure democracy is sometimes workable, it should be as democratic as possible. But with just nine councillors representing nearly 100,000 people, is this level of responsiveness really possible? Consider that the nearby town of Framingham, with a population of 65,000, elects a legislative body of 204.

Several candidates have embraced charter reform as part of their respective campaign platforms. Reforms to the Cambridge City Council should be a part of these proposed changes.

First, the City of Cambridge should implement a system of district councillors, similar to the system used in Boston, Somerville, and other surrounding communities. District councillors would serve as a natural office for those seeking to represent a particular neighborhood, allowing candidates for at-large seats to focus more on city-wide concerns and issues.

Cambridge is divided into 13 neighborhoods. Each of these neighborhoods generally has a coherent population with shared interests. These neighborhoods could serve as a natural base for council districts. Some adjustments to neighborhood boundaries may need to be made to insure a roughly equal population in each neighborhood, but these changes should not serve as an impediment to using the neighborhoods as a base for city council districts.

As an added bonus for students, a district system based on neighborhoods would greatly increase the chances of electing a student representative to the council. Area 2, for example, consists almost entirely of MIT, and an Area 2-based district would be highly likely to send an MIT student to the Cambridge City Council. Significant populations of Harvard students live in Areas 6, 7, and 8, and student candidates would also be competitive in those neighborhoods. This proposal offers a better chance of consistently electing students to the Cambridge City Council than at-large candidacies such as that of Erik C. Snowberg '99, which must compete in student-indifferent and student-hostile areas of the city as well as in friendly neighborhoods.

The institution of district councillors would give proportional representation a chance to work its real magic, offering an opportunity for normally disenfranchised groups not concentrated specifically in one

neighborhood to gain representation on the council. Some groups may be too diffuse in population throughout the city to succeed at electing a district-based candidate; these are the groups for which proportional representation was designed. But in a proportional representation system which becomes a *de facto* district system, these groups are crowded out.

Ultimately, the Cambridge City Council proposed here would consist of 21 members. Thirteen members would be elected in neighborhood districts, through a traditional primary-final election process. Proportional representation would probably not work well given the small size of the districts. Eight at-large seats would be contested through the current proportional representation system.

The weak mayor-city manager system should be preserved. The administration of a city manager brings professionalism to the city government and reduces partisanship. It also augments the power of the City Council, which hires — and fires — the city's executive authority.

Strong mayor systems look less like democracy and more like quasi-tyranny. The city of Boston is a perfect example: the City Council is reduced to a rubber-stamping agency and three-ring circus for political gadflies, while Mayor Thomas Menino calls all the shots and enjoys little criticism of his administration. The weak mayor system preserves the vibrancy and relevancy of the city council.

As the City of Cambridge considers charter reform, its leaders should change both the size and composition of the city council. A larger council, composed of both district councillors and at-large representatives, can best represent the city's voters and meet the challenges facing city government.

Hoaxes in Cyberspace

Veena Thomas

A few days ago I was very excited to hear the familiar sound of the Eudora mail chime. I got up to see who sent the incoming message.

The e-mail was from a friend of mine notorious for passing along any e-mail forward in her path. Surprise, surprise — this too was a forward. This one warned me of impending doom if I were to open an "apparently harmless Budweiser screensaver. Once opened, you will lose everything on your PC. Your hard disk will be completely destroyed and the person who sent you the message will have access to your name and password via the Internet."

Sounds pretty ominous. I seem to receive this kind of message a lot, and by now I thought I had become immune to them. I've been warned so many times that they are almost all hoaxes and not to pass them on. Usually I just delete them and forget about them.

But for some reason this one really upset me. Maybe I had been particularly looking forward to real e-mail from someone, or maybe I had just seen too many of these virus warning forwards. I was so tired of all these junk forwards I had been getting.

Just to be sure that this e-mail wasn't among the maybe one percent of legitimate virus warnings, I decided to do some research. A few clicks later, I reached the website of Data Fellows <<http://www.datafellows.fi>>, a Finnish company that hails itself as "the industry standard information source for new virus hoaxes and false alerts." It provides a comprehensive list of virus hoaxes, along with actual virus alerts. "Hoax warnings are typically scare alerts started by malicious people — and passed on by innocent users who think they are helping the community by spreading the warning. Do not forward hoax messages,"

the site warns.

I looked through the compilation of the latest virus hoaxes in search of the Budweiser screensaver one. Sure enough, I saw the exact e-mail forward that I had received, word for word, with the message that it was a hoax and should not be passed on. I wasn't surprised. My anger grew as I saw the tremendous number of hoaxes listed on the website. Several of them I had seen before. I can't even remember how many times I received the one "from Microsoft," saying they were testing out some e-mail tracking system and that I would supposedly receive money proportional to the number of people to which I forwarded the message. The one "from Disney" promised a

Such is the danger of the Internet. Never before could rumors travel so fast and to so many people. Hoaxes and useless forwards will die off if we refuse to perpetrate them.

free vacation to Walt Disney World if I forwarded the message. One especially popular one among my friends, "from the GAP," said that if I passed on the message, I would receive a pair of cargo pants, and for every person those people forwarded it to, I would receive a fisherman's hat, and so on. Apparently this would culminate in my receiving the entire warehouse of the GAP via UPS. This forward was followed by others "from Old Navy" and "from Abercrombie and Fitch" who also "wanted to get in on the action" with similar offers. The website listed all of these as hoaxes.

Gullible people pass these forwards on, in hopes of quick rewards for doing virtually

nothing. Well-meaning but uninformed people pass on virus hoaxes trying to inform others. In reality, they are only perpetrating a myth and clogging others' mailboxes.

By this point I was completely fed up and I decided to take action. I hit 'reply to all' and informed my friend — and everyone else to which she had forwarded the 'virus alert' — that it was a hoax. I included the Data Fellows virus hoax page <<http://www.datafellows.fi/virus-info/hoax>> and wrote, "Refuse to send on hoaxes! It only takes a minute to look it up on the website and to prevent hoaxes from spiraling out of control." I added the address showing documentation of this particular hoax, and I sent it off.

My friend e-mailed me back, asking me if I was sure it was a hoax, because, she said, "I have heard about this very dangerous virus from many people." Such is the danger of the Internet. Never before could rumors travel so fast and to so many people. Just because you hear about something from more than one person doesn't make it true, and hearing something repeatedly doesn't make it gospel. Hoaxes and useless forwards will die off if we refuse to perpetrate them.

Next time you receive a forward — whether it be a virus alert, a scheme to get free goods, or a 'warning' against flashing your headlights at someone driving without them, do a little research. About 99 percent of these forwards are fictional 'urban legends.' There are many websites documenting these hoaxes and legends. Most likely you will find that the warning is nonsense. Before deleting the e-mail, inform the person who sent it to you that it is a hoax, and ask him or her to do research before passing along such alerts. By using some common sense and informing others of these hoaxes, we can help curtail the onslaught of junk mail. Refuse to be a participant — make sure that junk mail stops with you.

Flaming on your mind?

Join *The Tech's* Opinion Department!

Call Mike or Eric at 253-1541



TEAM BUILDING DINNER

B
U
I
L
D

Y
O
U
R

T
E
A
M

OVER 250 PEOPLE SHARED IDEAS TO START EXCITING NEW VENTURES IN THE LAST TEAM BUILDING DINNER.

JOIN US AGAIN IF . . .

Graduate Students

You DO NOT HAVE AN IDEA BUT WANT TO BE A PART OF A NEW BUSINESS.

Undergrads

You JUST WANT TO BE A PART OF SOMETHING NEW AND EXCITING.

MBA's

You HAVE AN IDEA BUT WANT TO MEET GREAT PEOPLE.

6:30pm 1st Floor, Bldg 34

Tuesday Oct. 19th

RSVP @ <http://50k.mit.edu>

FEATURES

Now That the Party's Over: A Look At Freshman Disillusionment at MIT

By Sonali Mukherjee
STAFF REPORTER

I really don't know what it was that triggered the memory. Perhaps it was when the significance of the "Halfway to Hell" mark on the Harvard Bridge finally struck me as I was completing my running route from Boston. Perhaps it was during one of those numerous strolls down the Infinite Corridor when I remain deep in-thought about that one frustratingly impossible question in my latest problem set. Whatever it was, it clearly brought to the surface a memory that I had managed to forget. A high school friend of mine who is now a freshman at Princeton once made a remark to me: "you'll never have experienced failure until you work incredibly hard at something and get nothing out of it."

Speaking as a member of the class of 2003 at MIT, I must acknowledge the truth of part of that statement, but not all of it. Orientation Week was a time when the freshmen got to know one another, explore the campus, and in general be lulled into a general sense of comfort about the Institute. Of course, the freshmen were warned about the difficulty they were going to face at MIT.

"In every speech during Orientation they acknowledged that point from the beginning. Newspaper articles rank MIT students as one of the hardest working in the nation. But there is nothing... no brochure, no summer program, no study guide that can prepare a freshman for the first month here" said Edward J. Toro '03, a current freshman.

The shock of coming from educational backgrounds where one is used to achieving the best that one's school has to offer to MIT where one can toil all night and still barely pass a test, is as jolting as jumping into a pool of freezing water. Coming from a magnet school in Virginia, I honestly believed that I had worked hard in high school. As one of the few people who refused to succumb to "senioritis," every iota of effort I put into my work and my extracurricular activities paid off quite well.

This situation may sound familiar to many freshmen because we have to acknowledge the fact that MIT students are the best and the brightest; that is the reason why we are here. Then why are we having such a tough time? Why are we subjecting ourselves to all-nighters and the never-ending stresses of problem sets? How on earth did we even end up here in Cambridge? These questions are the real problem sets, not the ones assigned in class.

"MIT was founded to apply science for the benefit of mankind", said Marilee Jones, Dean of Admissions, keynote speaker at the Parent/Alumnae Volunteer Dinner on Friday. The only way MIT can live up to this one true value is to make sure it is doing its job of making MIT students cutting edge members of society. When we emerge into the real world in June of 2003, "will be the people running the whole damn show," as Jones put it.

She acknowledged the fact that with every incoming class there is more and more new information about science that students have to master. As a result, undergraduate work at MIT is an initiation period and fresh-

men are "samurai in training." However, Jones's full faith in the class of 2003 was exemplified by the way she described the contrasts between different generations of MIT applicants.

Whereas the baby boomers were very gender orientated, and the Generation X-ers were extremely cynical, our generation is realistic. "They've seen the things happen in Littleton and they know that adults do crazy things they can't control. They know the world's not perfect, and that's OK — but they want to fix it," said Jones.

In thinking about my place at MIT, I realize that I am not among the first group of freshmen to go through this initiation period. If this university were really an impossible mission, then from where are all these seniors and alumni coming? The truth is that it is not impossible to be a student at MIT, much as it seems that way. We may be working harder than any college in the nation, but we should be truly proud of it, not disillusioned.

The tough times at MIT should bring us together and increase our school spirit, not drive us apart and increase our apathy towards our school. One cannot measure success by just passing one test or one class during freshman year. It's the whole experience, from freshman year to senior year that will determine whether one failed or succeeded. One must make the most out of every moment, tough as it is, because from every moment of our initiation, we learn something new. As for my friend at Princeton, I cannot answer his question yet: I still have three and a half years to go.

Interview

Steven Lerman

By Aaron D. Mihalik
STAFF REPORTER

Steven R. Lerman '75, the current Faculty Chair, discusses industrial partnerships, changes in the residential system and undergraduate curriculum, women's issues, and student-faculty relations.

Lerman, an MIT alum (BS '72, MS '73 and PhD '75), has played a conspicuous role in the MIT faculty in 1975 and remained a professor in Civil and Environmental Engineering. While at MIT, has directed Project Athena from 1983-1988 and is currently the director of the Center for Educational Computing Initiatives.

Over the last few years, he has become very influential in faculty government. He has been the on the Committee for the Undergraduate Program, Committee for Graduate Student Policy and on the faculty policy committee for two years. He became the Chairman of the Faculty in June 1999. He has two years prior experience as associate chair and chair elect.

The Tech: Many students are concerned by the apparent lack of faculty involvement in student issues. Many students point out that the faculty government meetings are often empty and use that as a gauge of lack faculty participation. As faculty chair, how do you respond to that?

Lerman: I think there is probably some truth to that. I think there are parts that the students don't see. Most of the interesting discussions and interesting decision-making doesn't happen when the faculty meets as a whole. Most of it really happens in the committees. And the students, who participate in the committees as student members, see a more active and more involved faculty.

It is fair to say that there is a group that is not involved that should be. I do think that faculty should be more involved in student issues and student life. What's competing against that is time and that will never go away. What we need to do is shift the balance some. We need more faculty to spend more time in student related activities.

We are always going to have faculty who are deeply involved in their research and graduate education. But they, too, ought to have some familiarity and some stake in student issues.

Little things: I think students ought to be inviting faculty to dinner more and faculty ought to be making time for that. Just having faculty see what the dorms are like by eating there, even if it is just occasionally, would help give them sense of student life. We need to do more little things that just shift the margin some in the face of what is an every more complicated competition for time. The same way that students often feel pressed for time, it is equally an issue for the faculty. We just need to create the incentives and make it easier for the faculty to spend some more of their time on student issues.

The Tech: Female faculty issues have been important issues in the recent past. What has been done recently about these issues?

Lerman: You may have seen last year the release the status of women in the school of science report. It was actually a process that went on within the school of science to look at the equity issues for women faculty. It was a very productive process; it produced some changes. I far as I can tell, the faculty within the school of science are pleased with how it turned out. Right now, there is discussion on how to generalize that sort of 'looking within ourselves' at equity issues to the other schools. And I think we are going to see that process unfold in the other schools.

The faculty government system is very involved in that. The previous chair, Lotte Bailyn, played a strong leadership role in making that happen. It was a very valuable thing for us to have done. We managed to make changes in ways that makes everyone better off. It was done through internal processes, rather than through legislation,

This Week in MIT History

By Katherine H. Allen
STAFF REPORTER

This week in 1986 was exciting for Boston sports fans: after a dramatic win over the California Angels in the American League Championship Series, the Boston Red Sox and New York Mets played for baseball's biggest prize — the World Series.

The Sox had not (and still have not) won the series since 1918, but their appearance in '86 was a dramatic and hopeful one. After battling to a seventh game, they made a string of crucial errors that landed them in the same type of crushing defeat they experienced in 1946, 1967, and 1975.

MIT students, as always, followed the events on the other side of the Charles with excitement, but also with the typical MIT penchant for accuracy. At the beginning of the series, hackers spelled out "SOX" in Green-speak (a.k.a. lighted windows on the Green Building). Not to be outdone by a bunch of college kids, the Prudential responded by displaying the number one in the lights of the building's windows.

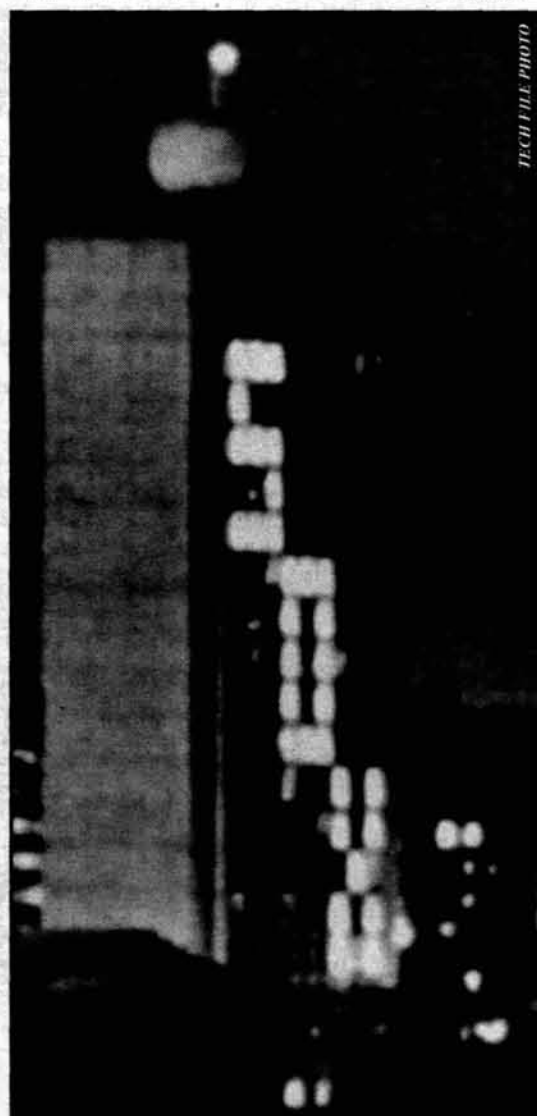
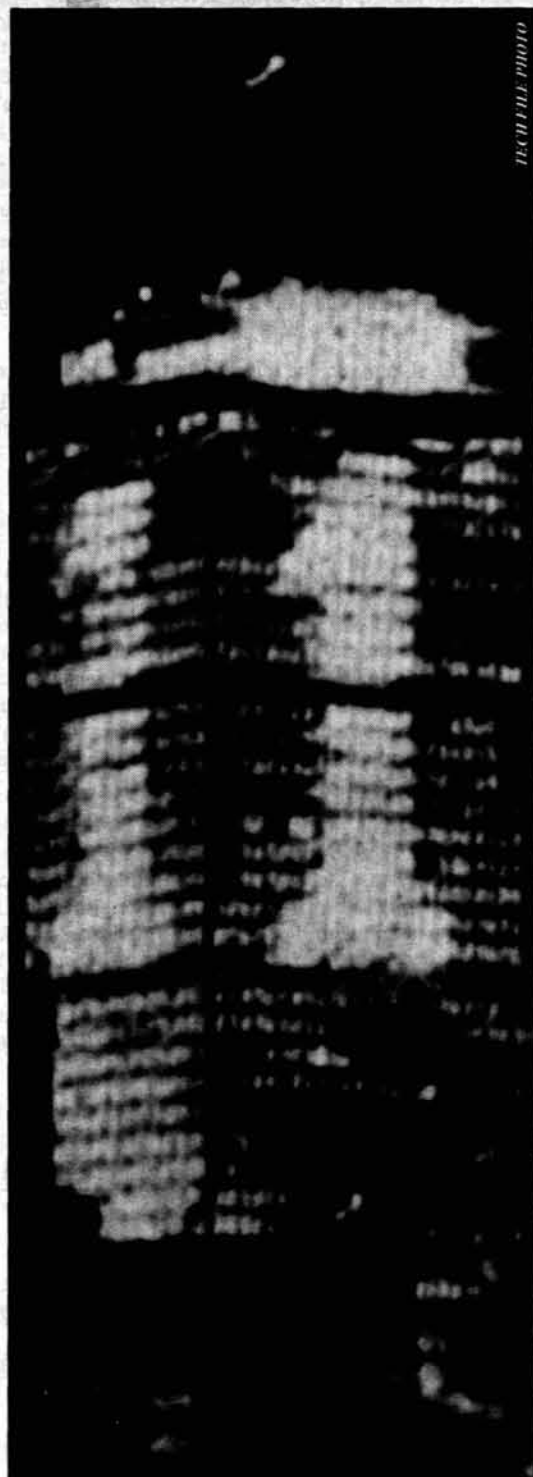
However, after the Sox were defeated in game seven, MIT hackers concerned with accuracy corrected the Prudential display by creating a large '2,' the real ranking of the defeated Sox, in the lights of the Green Building.

The Sox relived the '86 series this fall, facing the other New York team in their quest for a World Series win and again fell short, losing in five games. This time however Prudential tenants were less optimistic, and merely lit up their building with the phrase "GO SOX."

MIT hackers and Prudential tenants show their team spirit during the Sox bid to capture an elusive world series title in 1986. They went on to lose the series in seven games.

Left: Green Building

Leftmost: Prudential Center



Lerman Discusses the Role of Faculty

Continued from previous page

complaints, and grievances. Instead, we really did it ourselves. It was through the spectacular work of the committee and then the dean of science in this case, did a fantastic job at responding effectively to the issues that were raised. It was very a good example of doing things inside, before they become worse. That's really what happened. So I was excited about that. We will continue to make that part of what the faculty does.

The Tech: What sort of concrete changes where made?

Lerman: The issues that got unearthed by a committee of senior faculty were space allocation — who had what space — where women faculty not getting their fair share of laboratory space. Space is a very important resource at MIT and at every university. And lab space in particular with science turn out to be a big issue because that is where you do your research. Salary issues got addressed as well. Also recruiting and hiring: are we doing the best job we can at attracting and obtaining women faculty?

Space was identified and it turned out that there was some evidence that, not consciously, but through a series of decisions, women faculty members had less lab space made available to them for their research than reasonably comparable peers. And the dean changed that and made some salary changes, internally to the school. He worked with his department heads to more effectively recruit and the number of women faculty have, in fact, grown in the school of science. And it seems like that everybody recognizes that this was a good thing to have done.

And it was very exciting. The report was made available publicly, on the web. It got national attention and a fair amount of praise from peer institutions. We felt that we had done a very good job at dealing with internal issues in a way that was more productive than people battling it out in court. So I was very enthusiastic about that.

The Tech: A hot topic for many students is the RSSC and other housing proposals. What do you envision for the future? How do you see faculty involvement?

Lerman: The RSSC was presented to the faculty, but it didn't engender as much discussion as I anticipated. But faculty need to continue to be involved. Clearly, there will be a change; we are building a new dorm. I have encouraged faculty to become involved with the RSSC process and many have. I know this is one of those issues where students have very diverse views, and so do the faculty. We have faculty who are very traditional.

I think some of the changes, if they work well, will be positive and exciting. I have to be honest, I think our current system did not evolve out of any conscious design but just happened. And such systems sometimes work very well, but sometimes they have dysfunctional elements that exist because they happened, not because anyone thinks they are a good idea. Here, I think we can do better. Some of the ideas from RSSC and some of the ideas that are coming out of the unified response, when merged, can produce a better residential system.

Some of the students feel that this is an attempt to make the FSILG system go away and I certainly don't feel that. The FSILG system is a wonderful system when it works right. It is not clear that the best way to make that happen is to orientation week rush. I personally think it is too early to do it during orientation. I remember as a freshman,

feeling that time as an awkward and confusing period... whatever comes out of this, my personal view is that we need to preserve the best features of the FSILGs. Maybe what could even emerge is a healthier FSILG system.

That's going to take work. The initial effect will pose a threat to the FSILGs because they need to recruit out of three years of classes the same population as of four. And we need to help them. I am very supportive of the idea of transitional support for the FSILGs. How this will settle out? I'm not sure. It will take a period of adjustment and after which I think we can have a better system.

The Tech: Industrial partnerships are a very important part of MIT funding and research. What is your take on the future of such programs?

Steven Lerman: I think there is a need to look at these at these industrial partnerships with an eye towards being very comfortable that as we accumulate them, we continue to be consistent with the mission and spirit of

MIT. I don't personally believe that we have had a problem with that. But I think that the more we have, the more possibilities exist for conflicts within them. We need to have some way of discussing and reviewing them before we commit the Institution to these.

The Tech: Is there a formal committee for such matters?

Lerman: That's part of the discussion. There well may become one. There are questions as where that committee might live in the current structure. Do we need another committee or can that become the charter of an existing committee? We need something, in my view, that makes us all comfortable that these things are being organized in a way that serves both student and faculties interest. And that I think the current ones do, to be honest. But clearly these are becoming an important feature of the MIT landscape. And as such, we need to look at them as we would look at anything else.

The Tech: It seems like a conflict of interest might arise in some cases. Do you have examples where we went wrong by working with a particular company? Or are most projects success stories?

Lerman: I think there are mostly success stories. What we've done right is to insist that the principles of open research be retained. And that is a lot harder to do with companies than it has been with the government. Our government funding is typically provided through the Natural Science Foundation, the Department of Energy, the National Institute of Health and they do so with the intent of encouraging the widespread dissemination of the knowledge that gets created.

With industry, it takes longer to convince them that's in everybody's interest, and that we at MIT can't do work that is confidential and proprietary to a particular company. It is not in our mission; we're a nonprofit institution chartered for the public good. And that we are not here to do research for any particular company and that is then owned by that particular company.

So we have insisted persistently that the intellectual property ideas can be published and widely spread the way we would do any other type of research, that students can be involved without restricting their future employment

options, that the intellectual property, the ideas, the patentable and copyrightable thing that we create are retained at MIT — it is not exclusively available to the company, and we've managed to do that consistently. It takes time and these are complicated negotiations.

The Tech: Do any specific examples come to mind?

Lerman: Project Athena is certainly a good example. It was what I was involved in — I directed it. Everything we created was done publicly. We published books, papers and there was no restriction on that. And ultimately, we chose to make publicly available things like the X Windows system and Kerberos authentication system. We controlled that destiny. We could have licensed it to companies. We could have given it away. We could have done anything that we thought was in the best interest of dissemination of knowledge. We chose, in those cases, to simply give it away.

And it had tremendous effect, particularly in the 1980s, in the way in which computer systems evolved. And now, interestingly enough, Kerberos will be part of Windows 2000. The authentication method within Windows 2000 will be Kerberos. The X Windows system is a huge industry now. Essentially, all Unix systems rely on the X Windows system for their graphical display.

So it was a very successful partnership with the Digital Equipment Corporation (now part of Compaq) and IBM.

Another that I am aware of is the Ford partnership. They are, again, working in the spirit of open research

on new ways of designing products, new ways of organizing engineering teams and virtual engineering. There is a research program now that is looking at redesigning the automobile to change the voltage for the electrical system.

Partnerships provide funding, particularly in this era where governmental funding of research is pretty much flat. The question is

Partnerships provide funding, particularly in this era where governmental funding of research is pretty much flat.

'how do we take on whole new initiatives?' Strategic partnerships are an important mechanism today for keeping this place going and keeping us on the cutting edge and providing the funding to do that. But we have to make sure that we retain consistency with the historic style and mission of research here. And there will constantly be pressures to change that from the industry partners. Again, it is a process of educating them and making them understand how it is we work, why that is true, and what the benefits have been historically. It is not an easy sell.

The Tech: How do these research grants come about? Does the researcher take the initiative and approach the corporation and tell the corporation what they want to do, or is it the corporation that approaches the researcher?

Lerman: [To begin Project Athena] we went to them. There was a task force that was assembled under the leadership of Dean Gerald Wilson who was the Dean of Engineering at the time. He assembled a working group to develop a conception of what a university wide academic computing system might look like. And it became very clear that we didn't have the money inside to do that. We needed partners. Then we went out to a variety of companies to seek partners.

Under his leadership and Mike Dertouzos and Joel Moses we identified IBM and Digital as the best partners to work with. They then committed money, people, hardware — they

gave us a tremendous amount of equipment, and support. And that enabled us to build what we think of as now the Athena system, essentially from scratch.

The Tech: Are the beginnings of most industry sponsored research projects similar to Athena's case?

Lerman: In most cases, they are. Some of them have interesting beginnings. It is not a secret that the Microsoft relationship began when Bill Gates and Chuck Vest shared a ride to the airport.

The Tech: Many students who are not aware of the specific details of the Microsoft agreement are weary of the partnership. Do you have anything to say to them?

Lerman: Well, because I've been directly involved, yes. We had several key principles — one of which is that MIT is a heterogeneous computing environment and that we didn't envision that changing. And so Microsoft would understand that everything we do here will not be Windows based. Certainly we have a lot of Windows systems and we will continue to have them and we will continue to work with them, but not to the exclusion of other computing platforms. That is explicitly in what we agreed to.

[Other key principles in the agreement are] the tradition of working openly, that we would have unlimited publication rights and that we

would work in the way that we currently do research — which is teams of faculty, students and researchers work together and do so in a non-confidential way.

I think another thing that people need to realize is that we are

working with the Microsoft researching group — not their product groups. We will certainly talk with the product groups as we do our research, but the researchers really come from the research community. The people that we are working with have experience in academia and they are as interested in advancing the state of knowledge as we are.

I am pretty comfortable with the way this is configured. We had the same questions arise when we worked with digital and IBM. At that time, remember, Digital and IBM dominated the computing markets — they were number one and two. So the same questions arose, and the same sort of institutional arrangements got created in order to protect MIT from, in effect, being co-opted. There is not exclusivity with this relationship.

The Tech: What sort of developments and benefits do you see coming from this partnership?

Lerman: The thing that excites me the most is having the funding to innovate in the curriculum — that we can experiment with new ways of teaching and new ways of learning that use technologies.

It is very hard for a university, on its own funding, to invest large amounts of money relatively high risk experiments. We can do incremental things, and we do. Spending millions of dollars for ideas that, while they seem promising, are highly uncertain isn't something we can do with our own money — students' tuition money, endowment money. It is somewhat imprudent to do that. But that is just what research is about. And this will let us do that.

I think we will focus intensively on the undergraduate curriculum. There are lots of interesting ideas on how to innovate in physics and chemistry, collaborative engineering and the humanities. And this is going to enable us to perform a whole round of experiments that we haven't been able to do since Athena. This is an opportunity to take what we have learned [from project Athena] and really experiment.

Do You Spider?



MySpider.com

Search, save, and share your web research

Attention:

Sharon, formerly of Technicuts, is now at:

Kendall Hair Company
36 Hampshire Street
Cambridge

Call for an appointment: 617-861-4774

EARN UP TO \$1000

This Semester

By Posting Your
Lecture Notes Online
Register on-line now:

@ www.Study24-7.com

(888) 728-7247

FREE CLASS NOTES!

Knuth Speaks about 'God and Computers'

Knuth, continued from page 1

of people who are well-selected. MIT also has lots of computer people who share my peculiarities. My method of teaching isn't going to appeal to just any random person off the street. The people at MIT are a bit different than average people on the street. There aren't that many people that they can talk to that might be able to give them the same kind of insight that I might be able to give.

The Tech: What is your connection with MIT?

Knuth: I'm a visiting professor for three months. I'm pretty much a hermit, so I usually don't leave Stanford. The last time I gave a lecture at MIT was in 1975. Of course I have lots of friends at MIT, but everybody comes to Stanford too, so why should I travel?

The Tech: So how did MIT finally convince you to come then?

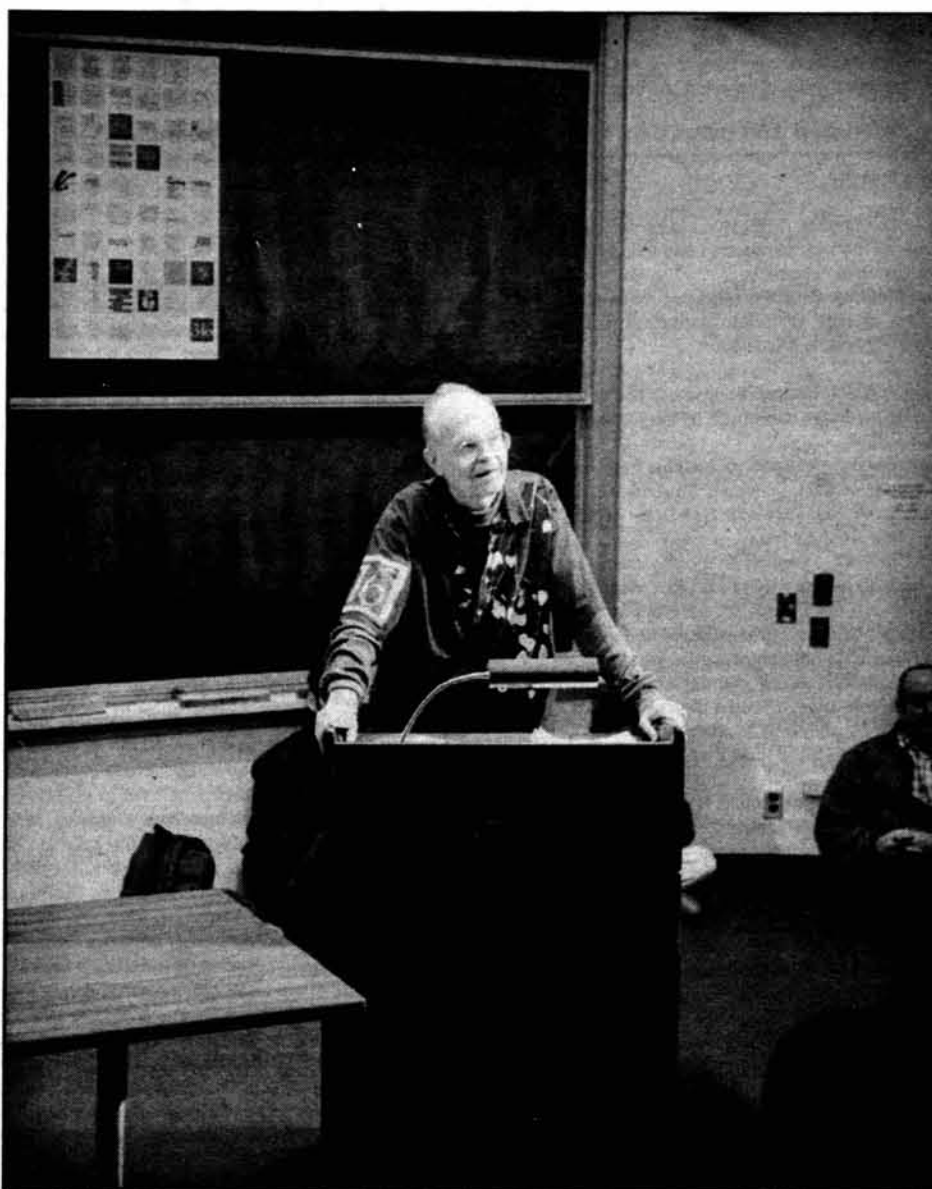
Knuth: Anne (Foerst) wrote a letter saying she thought it would be good for me to give talks about how a scientist has another part of his life that's not science. I turn down offers to give talks on computers three times a week, but this was a different kind of talk that I was being asked to give. It's something that I decided would be better to do once in a lifetime than never. I doubt I'll do it again though, because I can do other things better. I thought it would be neat to have a chance to teach more than just computer science for a change.

The Tech: What do you hope to get out of these lectures?

Knuth: A teacher likes to teach, and all my life I wanted to be a teacher, so what I get out of it is seeing people's eyes opening and saying "Oh, wow, that was cool." Also, if this turns out well, I could get a book out of it. And if it's a good book, then I won't ever have to do this again.

The Tech: Briefly describe your computer science background.

Knuth: Well, there was no such thing as computer science when I started, so I was a physics major, then a math major. During freshman year at Case Institute (now Case Western Reserve University), a computer arrived shortly after I did. By the end of my freshman year, I had learned how to program it. I got a summer job, where I was able to write programs for Case. Later, I went to Caltech to get a Ph.D. in math. While I was a graduate student at Caltech, [students] also had me as a professor. In 1962, I was approached to write a book on computer compilers. I thought "Hey, that sounds like fun," so I started writing it. When the first volume of *The Art of Computer Programming* came out in 1968, it was amazingly success-



Donald Knuth lectures in 34-101 as part of his series on God and Computers

ful. By the time I was 28, I had offers to become full professors at Harvard, Stanford, U.C. Berkeley, and Caltech. I chose to teach at Stanford, where I stayed until I retired.

The Tech: What is your religious background like? Are you knowledgeable on all religions?

Knuth: I grew up in a warm friendly environment and my family always always went to Church. My father was a teacher for a Lutheran School. I'm Protestant, and I've studied most branches of Christianity. I don't know that much about other religions, however. I just know enough to know there are many connections. I also have a great deal of respect towards other religions.

The Tech: I understand that you learned a lot about the Bible during the 3:16 project. Tell

me about the project.

Knuth: I decided to do the 3:16 project about ten years after I became a professor at Stanford. I'd go to Church on Sunday mornings, but the rest of the time, I'd do computers. One day it occurred to me that it would be interesting to use the methods of studying computing to study the Bible. Why should I have two different methods for studying these matters? Why couldn't I use the same method to study both computers and the Bible? I decided to approach studying the Bible by using random sampling. I thought it would be interesting if instead of somebody telling me what verses to look at, I could just look at random parts of the Bible. I knew from experience that even if I didn't find anything interesting, that would be interesting. I began a

project to study chapter 3 verse 16 of each book in the Bible. I got the idea of using 3:16 because I was going to study this with friends at church, and I knew my friends would remember 3:16 because of John 3:16. In books other than John, we would get a random sample of Bible passages.

The Tech: So what did you think about the first lecture that you gave?

Knuth: I was amazed that so many people showed up. I can get psyched by having a good audience. Professors have another life too. I was amazed by how many professors and people from Route 128 came. Also, several hundred people downloaded it, which means that some people are passing the word. I don't know whether they liked it or thought it was funny or what, but that's good. I don't feel pressure except if there are that many people, because I don't want to disappoint them. If I feel that I have something interesting to say, then I love to give a lecture on it.

The Tech: Do you plan to continue the question and answer sessions at the end of each lecture?

Knuth: The question and answer sessions are the best because I can't really anticipate what people want to hear, unless people tell me. I think students learn more from how a professor responds to them than just from the lecture. Interaction is better than a canned presentation.

The Tech: So how do you plan to divide the lecture time?

Knuth: It should be about 45 minutes of me talking, and 45 minutes of question and answers. I'm retired though, and the first thing that goes is your sense of timing.

Knuth has given four of the six lectures in his series. However, as Knuth emphasizes, "Every lecture is independent. It's not like you need lectures two and three to go to lecture four."

Lectures are given Wednesday afternoons from 4:30 pm to 6:00 pm in room 34-101. The official title of the lecture series is "Things a computer scientist rarely talks about - a series of public lectures about interactions between faith and computer science." The next lecture will be given on October 27.

The topics of the remaining lectures are "Language Translation" (lecture three), "Aesthetics" (lecture four), "Glimpses of God" (lecture five), and "God and Computer Science" (lecture six). There will also be a panel discussion on November 17.

Knuth's lectures in this series are also available for download from <<http://technetcast.ddj.com>>

major chords - Byzantine art - diphthongs - eugenics - drawing

Teach for Splash!

personal annuity savings plans - Bohr - roller coasters - fondue
Rosetta Stone - sodium hydroxide - color blindness - DSL

Teach high school students on November 20-21.
No experience necessary!
Choose whatever you want to teach!

~~Deadline October 6.~~ You can still turn in your class descriptions!
Classes are held on campus. Please contact edsp@mit.edu.

TechCalendar

TechCalendar appears in each issue of *The Tech* and features events for members of the MIT community. *The Tech* makes no guarantees as to the accuracy of this information, and *The Tech* shall not be held liable for any losses, including, but not limited to, damages resulting from attendance of an event. Contact information for all events is available from the TechCalendar web page.

Visit and add events to TechCalendar online at <http://tech-calendar.mit.edu>

Tuesday's Events

7:30 - 9:00 p.m. - **Chi Alpha Campus Meeting.** Chi Alpha Christian Fellowship will be sponsoring a series on the book of Revelation at our weekly meeting. There will be time for worship and fellowship as we study the Bible. PDR 3, Student Center. Sponsor: Chi Alpha Christian Fellowship.

9:00 p.m. - **UA Committee on Housing & Orientation Meeting.** Save the residence system. Design the new dorm. Improve Orientation. All this is little more than an hour. Come join one of the Institute's most influential student committees. W20-401. Sponsor: Undergraduate Association.

Wednesday's Events

12:00 p.m. - **MIT Chapel Concert.** Artist TBA. Admission 0. MIT Chapel. Sponsor: Office of the Arts.

8:00 p.m. - **The Messenger.** Contemporary short film by Jay Dunn, introduced by the filmmaker himself. Admission 0. Rm 4-237. Sponsor: Office of the Arts.

12:00 pm - **Baird Associates, 1937-1954, and the Philosophy of Spectrochemical Instrumentation** - David Baird, University of South Carolina. Dibner Institute Lunchtime Colloquia. Rm E56-100. Please call if you plan to attend: 253-6989 OR Send an email: dibner@mit.edu. More info: Call Trudy Kontoff at 253-6989. Email kontoff@mit.edu

Making Financial Ends Meet - Sharon Rich, Ed.D., WOMONEY, a fee-only financial planning service. Sponsored by Family Resource Center. 12:30 pm (1 hour 30 minutes), Rm 16-151. More info: Call Family Resource Center at 253-1592. Email frc@mit.edu. <http://web.mit.edu/personnel/www/frc/>.

Liquid Trains in a Tube - David Quere, College de France. Sponsored by Physical Mathematics Seminar with Department of Mathematics. 2:30 pm (1 hour), Rm 4-163. Refreshments will be served at 3:30 PM in Room 2-349. More info: Call Professor John Bush at 253-4387. Email bush@math.mit.edu.

Low Voltage and High Performance Organic Thin Film Transistors - Christos Dimitrakopoulos, IBM Research. Sponsored by MTL VLSI Seminar. 4:00 pm (1 hour), Rm 34-101. Refreshments in Room 34-101 at 3:30 p.m. More info: Call Debroah Hodges-Pabon at 253-5264. Email debb@mtl.mit.edu. <http://www.mtl.mit.edu/>.

Emerging Trends in Aircraft Engine Maintenance and Services - Dr. Robert N. Gamache, Pratt & Whitney. Gas Turbine Fall Seminar Series. 4:15 pm, Rm 31-161. Refreshments 4:15p.m. Lecture 4:30p.m. More info: Call Lori Martinez at 253-2481. Email dragonl@mit.edu.

Saudi Arabia: Domestic Stability and the World Oil Market - Prof. F. Gregory Gause III, Department of Political Science, University of Vermont. Sponsored by Center for International Studies. 4:30 pm, Rm E51-095. This is a presentation of the Emile Bustani Middle East Seminar. More info: Call Julianne Stilwell at 253-8961. Email stilwell@mit.edu.

Who's Israel? The Transnational Battle for Jewish Identity - Yossi Shain, Georgetown University. Sponsored by Center for International Studies. 4:30 pm, Rm E38-714. Inter-University Seminar on International Migration. More info: Call Jessica Wattman at 253-1288. Email jwattman@mit.edu.

Wednesday's Events

Tunable Optical Components for the Telecom Industry - Daryoosh Vakhshoori, Coretek. EECS / RLE - Optics & Quantum Electronics Seminar Series. 11:00 am (1 hour), Rm 34-Grier Room B. On November 3, on this Date only, Lecture will be held in 36-428 (RLE Conference Room). More info: Call Erich Ippen at 253-8504. Email ippen@mit.edu.

Corralling the Trojan Horse: The Challenge of Future Military Urban Operations - Dr. Russell Glenn, RAND Corporation. Security Studies Program Seminar Series. 12:00 pm (1 hour 30 minutes), Rm E38-615. Bag lunch, refreshments will be provided. More info: Call Lynne Levine at 253-0133. Email llevine@mit.edu. <http://web.mit.edu/ssp/>

Results from a WOCE section at 66W in the North Atlantic - Terry Joyce, WHOI. Physical Oceanography Sack Lunch Seminars. 12:10 pm (1 hour), Rm 54-915. More info: Call Markus Jochum at 3-3-2322. Email markus@ocean.mit.edu. <http://www.mit.edu/~mjochum/sack.html>.

Scaled Boolean Algebras - Michael Hardy, Department of Mathematics - MIT. Sponsored by Combinatorics Seminar with Department of Mathematics. 4:15 pm (1 hour), Rm 2-338. Refreshments will be served at 3:30 PM in Room 2-349. More info: Call Sara Billely at 253-6544. Email sara@math.mit.edu. <http://www-math.mit.edu/~combin>.

Smooth discrimination analysis - Professor Alexandre Tsybakov, Universite Paris VI. Sponsored by Statistics Seminar with Department of Mathematics. 5:15 pm (1 hour), Rm 2-105. Refreshments will be served at 4:45 PM in Room 2-349. More info: Call Marc Genton at 253-4390. Email

genton@math.mit.edu

Thursday's Events

12:00 - 1:00 p.m. - **Mbira Masters' Lecture-Demonstration.** The Zimbabwe Leaders/Mbira Ensemble demonstrates the mbira, an ancient instrument in Zimbabwe, with deep roots in the culture of the Shona people, the majority group in the country. Admission 0. Wong Aud (Tang Ctr). Sponsor: Office of the Arts.

12:00 p.m. - **Chapel Concert.** Patricia McCarty, viola. Admission 0. MIT Chapel. Sponsor: Office of the Arts.

5:30 p.m. - **authors@mit: The Architecture of Science.** Peter Galison & Emily Thompson speak on issues raised by historians of science, architecture & art, architectural theorists & others in their edited collection *The Architecture of Science* (MIT Press). Admission 0. Humanities Library. Sponsor: Office of the Arts.

5:30 p.m. - **Silent Spring: Then and Now, Film and Discussion.** 1963 CBS broadcast: "The Silent Spring of Rachel Carson" & discussion with Dianne Dumanoski, journalist; Ted Schettler, The Science & Environmental Health Network; & Sheldon Krinsky, Tufts University. 56-114. Sponsor: MIT Sea Grant.

7:00 - 9:00 p.m. - **Close Encounters Across Cultures Film Series: Song of Exile.** This 1990 Ann Hui drama explores a cross cultural relationship between mother and daughter. Prof. Peter Perdue will give an introduction, and discussion and refreshments will follow. 4-237. Sponsor: Center for Bilingual/Bicultural Studies.

7:00 p.m. - **"Sons of Border Crisis" and "Border Brujo".** Films shown in conjunction with residency by Abramowitz Memorial Lecturer Guillermo Gómez-Peña and Roberto Sifuentes. Admission 0. Rm 2-105. Sponsor: Office of the Arts.

7:00 - 9:00 p.m. - **Close Encounters Across Cultures Film Series: "Song of Exile".** This 1990 Ann Hui drama explores a cross cultural relationship between mother and daughter. Prof. Peter Perdue will give an introduction and discussion and refreshments will follow. Admission 0. Rm 4-237. Sponsor: Office of the Arts.

7:00 - 9:00 p.m. - **Case Interview Workshop.** Mock and Case interview Workshop with Representatives from A.T. Kearney, Cambridge Marriott. Sponsor: Sloan Undergraduate Management Association.

7:00 p.m. - **poetry@mit: John Hildebidle.** The MIT professor of literature reads in this series sponsored by the Program in Writing and Humanistic Studies and Literature faculty. Admission 0. Rm 14E-304. Sponsor: Office of the Arts.

IT2: An Information Technology Initiative for the Twenty-first Century - Dr. Ruzena Bajcsy, National Science Foundation. Distinguished Lecture Series. 3:00 pm (1 hour 30 minutes), Rm 34-101. Please note that there are occasionally room changes. Please double check room prior to talk. More info: Call Allegra Valberg at 352-0145. Email avalberg@hq.lcs.mit.edu. <http://www.lcs.mit.edu>.

Modelling boundary layer ozone at Mace Head: A Lagrangian approach - Mathew Evans, MIT. Sponsored by MIT Atmospheric Science Seminars. 4:00 pm, Rm 54-915. More info: Call at 253-0136. Email ddlucas@mit.edu. <http://www-paoc.mit.edu/MASseries.html>.

Genetic Algorithms and Schedule Optimization - Gil Syswerda, Strategic Technology and Business Advisor, i2 Technologies. Sponsored by Operations Research Center. 4:00 pm (1 hour), Rm E40-298. Refreshments to follow in Room E40-106. More info: Call Andy Armacost at 253-7412. Email armacost@mit.edu. <http://web.mit.edu/orc/www>.

The Fifth Annual T. Francis Ogilvie Young Investigator Lectureship in Ocean Engineering - Professor David A. Mindell, Science, Technology, and Society, MIT. Sponsored by Ocean Engineering. 4:00 pm (2 hours), Student Center, W20-491. **Technology, Archaeology, and the Deep Sea: Current Research and Future Directions** Reception immediately following the lecture in Room W20-491. More info: Call H. Sharon Trohon at 253-4330. Email stahon@mit.edu.

Friday's Events

7:00 p.m. - 12:30 a.m. - **MIT Anime Club Showing.** 7:00 Slayers Next 12 - 14 (subtitled); 8:45 TBA; Yu Yu Hakusho 8 - 9 (subtitled). Free! Stop by anytime and bring your friends. E51-335. Sponsor: Anime Club, MIT.

8:00 p.m. - **Guest Artist Concert: The Miro String Quartet.** Schubert's Quartet in E-flat Major, Op. 125, No. 1; Shostakovich's Quartet No. 14 in F-sharp Major, Op. 142; Mendelssohn's Quartet in F Minor, Op. 80. Admission 0. Kresge Auditorium. Sponsor: Office of the Arts.

Spotlight of the Week

UTEACH

By Katie Jeffreys

FEATURES EDITOR

A new program organized by Benjamin M. Davis '99, allows MIT undergraduates to step outside their roles as students and participate in the community as teachers. UTEACH was organized by several groups, including alternative freshman programs, the Office of Minority Education, and the Public Service Center. The program acts as the coordinator of these groups' efforts to provide students the opportunity to pursue their interest in instructing.

Undergraduates are encouraged to create new classes in any topic which interests them or which will complement the current MIT curriculum. The program will help students plan IAP courses by offering resources such as location, funding, and staff. According to Davis, one of the goals of UTEACH is to make "IAP 2000 the most diverse and densely-packed group of learning opportunities ever." These classes can also range from seminars to for-credit classes.

The informal setting of IAP allows undergraduates to become acquainted with teaching through training and experience. "To this end, UTEACH, along with the Teaching and Learning Laboratory and the Teacher Education Program, will be offering teaching workshops for undergraduates

interested in teaching during IAP, and will offer videotaping of students teaching during IAP activities for later review by the students," said Davis.

UTEACH hopes that the experience will be educational for the undergraduate teachers as well as their students. "Teaching is learning," said Davis, "It ties all your experiences back to the fundamentals."

The group is also planning to create residence-based hands-on seminars which will be held in living groups rather than classrooms, and project-based subjects for the freshman year which will supplement GIR's. An example of these UTEACH goals is already in progress. The Experimental Study Group is offering a version of physics, 8.01 'D' which incorporates engineering design into the traditional curriculum.

Finally, UTEACH plans to assess the role of informal teaching in the education of MIT undergraduates. They do not wish to examine Institute sponsored tutoring programs, but rather the teaching done by upperclassmen or students' classmates in their residences. Many undergraduates attribute this form of learning to their success at MIT.

Students interested in participating in UTEACH should visit the group's web page at <http://mit.edu/uteach/>.

Viewpoint

Which one thing is MIT's campus most in need of?



School spirit!
Heather R. Crooks '00



Better dorms.
Tuyet-Trinh T. Phan '00

More sunlight.
Ian K. Ferguson '00



More benches in the hallways and more-garbage cans.
Gerda R. Nolan '00



Sleep.
Lucy Fang '00

More restaurants and bike racks.
Charatpong Chotigavanich G



For me what is required is a greater cohesiveness not only between dormitories but between faculty and students - even if it is just an awareness of cohesiveness. So maybe a better support network or better awareness of what is available out there.

Oluwamuyiwa O. Olubuyide '00

Sports facilities that don't hurt the athletes. For example the indoor track gives the runners shin splints. We have to have some fun without pain.

Natalie T. Smith '00



Compiled by Katie Jeffreys



Have a Viewpoint question to suggest?

Have an idea for an interview?

Let us know.


Or...

Write Features for *The Tech*!

E-mail features@the-tech.mit.edu.

Features Department

Get your theories a job.



D. E. Shaw & Co., L.P. is a securities and investment firm. It started in 1988 with seven employees, an initial investment of \$28 million, and a plan for applying quantitative and computational techniques to the securities business. Today, the D. E. Shaw group encompasses about a dozen closely related entities with approximately \$1 billion in aggregate capital. But the core of our business remains the same: sophisticated algorithms that move hundreds of billions of dollars a year.

Understandably, we put a premium on mathematical and analytical skills. But we also want creative, pragmatic, articulate people who aren't afraid to implement—and manage—what they invent. (In fact, our firm is largely run by the people who designed our strategies and systems.) Our staff includes tenured professors, Putnam Prize-winners, and Math Olympiad champions, and we compensate exceptional people exceptionally well.

D. E. Shaw & Co. will be holding an information session on Tuesday, October 19 at 7 pm in 4-153.

Broker-dealer activity of D. E. Shaw & Co., L.P. is conducted in the United States through D. E. Shaw Securities, L.P., D. E. Shaw Investments, L.P., or D. E. Shaw Valence, L.P., which are registered as broker-dealers with the United States Securities and Exchange Commission and are members of the National Association of Securities Dealers, Inc.

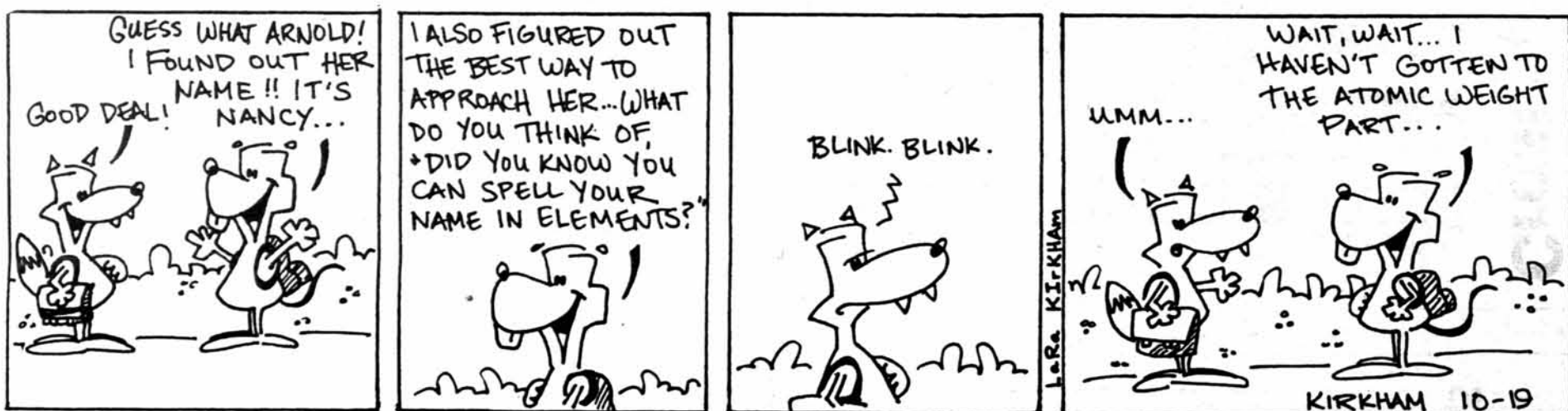
D. E. Shaw & Co., L.P. does not discriminate, in matters of hiring or promotion, on the basis of race, color, religion, gender, national origin, age, military service eligibility, veteran status, sexual orientation, marital status, or disability.

Down with Science

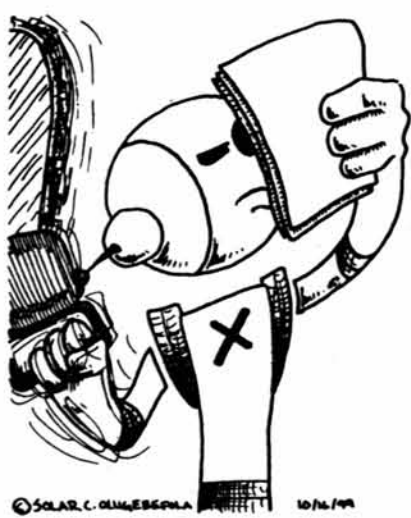
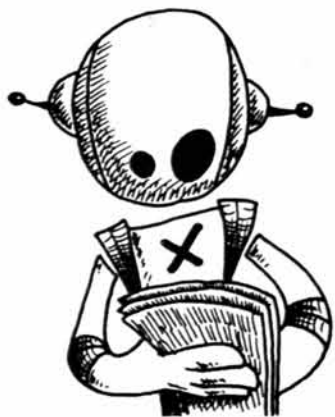
by Jennifer DiMase



the crass rat



XP's COURSEPAD



Tired SOLES David?

PRESENTING... THE HORRORS OF MIT!! #19

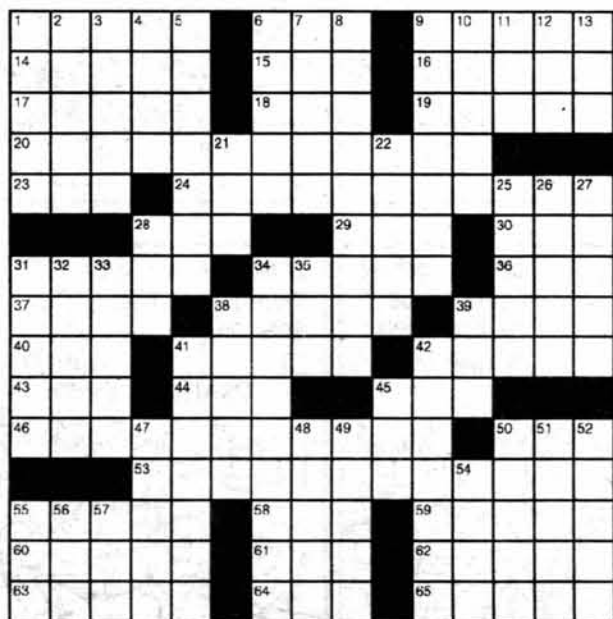


fairytale @ MIT

by jocelyn lin



Crossword Puzzle



1999 Tribune Media Services, Inc. All rights reserved.

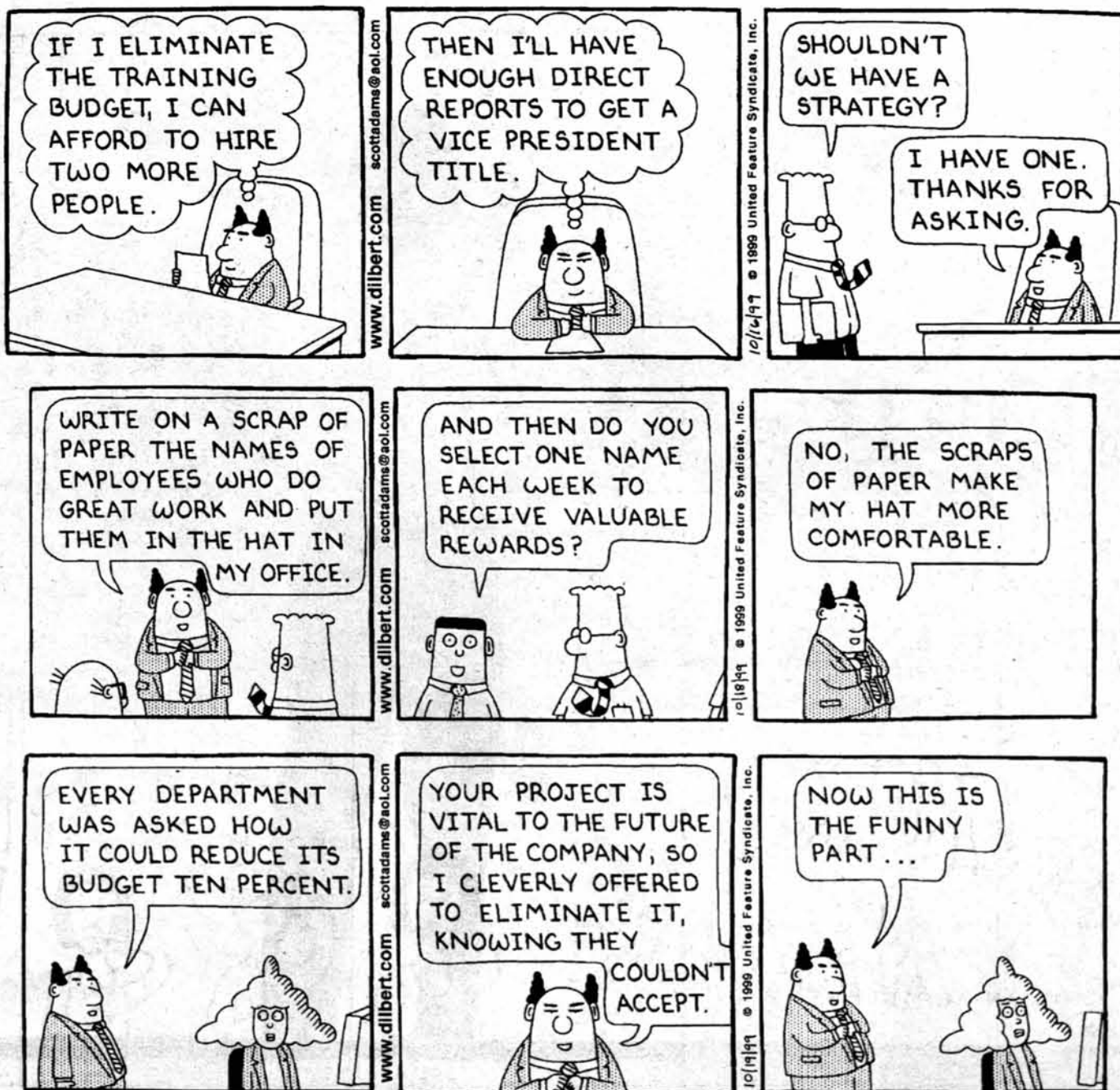
- ACROSS
- 1 Abrupt inhalations
 - 6 Stitch
 - 9 Put off
 - 14 Meat jelly
 - 15 Triumphant exclamation
 - 16 Overact
 - 17 Post-crucifixion depiction
 - 18 GI entertainers
 - 19 Creepers
 - 20 Atomic-bomb developer
 - 23 ___ Moines, IA
 - 24 College in Troy, NY
 - 28 Ran in front
 - 29 Port. saint
 - 30 Flower-to-be
 - 31 Burns film
 - 34 Flooded bottomland
 - 36 Floral garland
 - 37 Bombard
 - 38 Eucalyptus eater
 - 39 Head of the class
 - 40 Draw
 - 41 Occupied
 - 42 Terra firma
 - 43 Harris and Wynn
 - 44 Fellows
 - 45 In addition
 - 46 Insubordinate
 - 50 Large shoe size
 - 53 Uses connections?
 - 55 Actress Marisa
 - 58 Golfer Ernie
 - 59 Cancel
 - 60 Embellish
 - 61 Black or Red
 - 62 Martinique volcano
 - 63 Mark sale prices
 - 64 Pen on a farm
 - 65 Situation
 - 6 Closes
 - 7 Soothes
 - 8 Indiscriminate
 - 9 Bring to fulfillment
 - 10 Kuwaiti rulers
 - 11 Actor Chaney
 - 12 Consumed
 - 13 Affirmative
 - 21 Lead balloon
 - 22 Andes animal
 - 25 More fit
 - 26 Invitee
 - 27 Mrs. Archie Bunker
 - 28 Straw drawn
 - 31 Chose
 - 32 Spyn heroine
 - 33 Sharon of "Cagney & Lacey"
 - 34 Silent
 - 35 Existed once
 - 38 Prepare to propose
 - 39 Naughty
 - 41 Permeating
 - 42 Lures to danger
 - 45 Porch raider
 - 47 Word with soap or horse
 - 48 Ait
 - 49 Test composition
 - 50 WW II plane, "___ Gay"
 - 51 Wading bird
 - 52 Cosmetician Lauder
 - 54 Yeah, sure!
 - 55 Pipe buildup
 - 56 Poetic offering
 - 57 Witticism

Today's Solution



by Scott Adams

Dilbert®



by Bill Amend

Panel 1: YOU DON'T UNDERSTAND, EILEEN - I'D SELL MY SOUL FOR THAT CARD AND YOU'RE WAVING IT AROUND LIKE IT'S NOTHING!

Panel 2: THAT'S NOT TRUE. I KNOW EXACTLY HOW MUCH YOU WANT IT.

Panel 3: WHICH IS WHY I'M SUGGESTING A LITTLE TRADE.

Panel 4: PSST PSSSSST PSSSSST PSSSSST

Panel 5: TRADE?

Panel 6: YOU WOULDN'T RATHER HAVE MY SOUL?

Panel 7: SEE YOU ON MONDAY.

Panel 8: SCIENCE MUSEUM, HERE WE COME!

Panel 9: I CAN'T BELIEVE I AGREED TO BE YOUR PARTNER ON THIS FIELD TRIP!

Panel 10: WHAT WAS I THINKING?! WHAT SYNAPTIC MALFUNCTION LED TO THIS?!

Panel 11: I'M GOING TO SPEND AN ENTIRE DAY WITH A GIRL! I'LL BE SCARRED FOR LIFE! ALL FOR A SINGLE HARD-TO-FIND POKÉMON CARD!

Panel 12: KEEP IT UP, PAL, AND IT'S GOING TO BE IMPOSSIBLE TO FIND.

Panel 13: NO! NO! NOT OUT THE WINDOW! I'LL SUFFER IN SILENCE, I PROMISE!

Panel 14: ALL RIGHT, CLASS, I WANT EVERYONE TO STAY CLOSE TO THEIR PARTNERS TODAY. THE MUSEUM IS A BIG PLACE.

Panel 15: JASON, YOU HAVE A QUESTION?

Panel 16: COULD YOU DEFINE WHAT YOU MEAN BY "CLOSE"?

Panel 17: DO YOU MEAN REALLY CLOSE? SORTA CLOSE? KINDA CLOSE?

Panel 18: LEAVE THE WALKIE-TALKIES ON THE BUS, JASON.

Panel 19: DRAT.

Panel 20: TOLD YA.

FoxTrot

more vision
more depth
more success
more diversity
more clout
more innovation
more knowledge
more down to earth
more technical savvy
more worldwide locations

more
@
Merrill Lynch

MIT Undergraduates
 A career @ Merrill Lynch means more for you.
 We invite you to a presentation on:
Tuesday
October 19, 1999
at 7:00 pm
Room 4-163
 Investment Banking
 Debt Markets
 Equity Markets
 Merrill Lynch is an Equal Opportunity Employer.

HUMAN ACHIEVEMENT

Merrill Lynch

ILTFP Contributed To Info in Pamphlet

Parents, from Page 1

were suggested by members of ILTFP, an MIT student advocacy group.

"My eventual goal is to be able to come back to MIT and take my kids to Steer Roast," Tibbetts said, naming just one of the things which he finds special about MIT.

The pamphlet also urges parents to join two mailing lists created by Christopher D. Beland '00, which allow parents to discuss the present issues.

"Parents don't get much info [about MIT], maybe just one phone call or e-mail a week. These lists would allow parents to communicate with other parents, and would provide a forum for feedback to the administration," said Beland, who also played an instrumental role in the production of the brochure.

Pamphlet from ILTFP discussion

Last Tuesday, the idea first arose of a pamphlet "to take things that students are concerned about and make parents concerned about them," said Beland.

Tibbetts announced his ideas to the ILTFP mailing list. ILTFP members then proposed the content which eventually became the pamphlet.

The brochure was allegedly written up in final form and published by Arun A. Tharuvai '01 and Anna K. Benefiel '00 according to Tibbetts. Tharuvai denied involvement in the publishing aspect, but said that he indirectly contributed to some of the positive aspects of MIT listed in the brochure by posting mail messages to the *ilftp* mailing list, a public forum.

Benefiel said in a statement that she hopes that the pamphlet "sparks some thought and discussion in the MIT community."

Although the producers of the pamphlet are not sure that it received adequate attention, they do hope that it will provoke thought

and discussion on many fronts. Benefiel hopes that the pamphlet will provoke some sort of response by the administration at some point in the near future.

Both Tibbetts and Beland believe that most MIT students are either too lazy or too busy to protest administrative policies which they don't agree with. "Students are unaware of the amount that they can contribute with only a little time," Tibbetts said.

THE MOST FUN YOU'LL GET OUT OF THE DMV.

MOTORCYCLE OPERATOR LICENSE

Howard G. Nichols
8381 Center Ave.
Hometown 27670

H. Nichols
ANY STATE, USA



A motorcycle operator license is more important than you think. The fact is, unlicensed riders are over-represented in fatal crashes. So get your license. While an afternoon at the DMV isn't much fun, having a license is something you can live with. **MOTORCYCLE SAFETY FOUNDATION**



This space donated by *The Tech*

Fiber Optics, Satellites, the Internet and Global Multicasting

KenCast, Inc. has job openings for Software Development Engineers.

The next generation of broadcast media – satellites and fiber optics chiefly – are encircling the globe. They are the new backbone of the Internet and organizational Intranets. They will carry a great variety of very high-resolution, high-fidelity movies/music, and myriad other content. These new media must accomplish this feat flawlessly (forward error correction), securely (encryption), and efficiently (compression) at broadband speeds. KenCast is a leader in this area.

The President of KenCast will be on the MIT campus, to give a presentation Tuesday November 2 (5:30-7:30 p.m., Room 4-153) and to interview all day on the MIT campus on Friday November 12 (8:30-5:15, Room 12-170).

Contact Information: Send cover letter and your resume by fax/e-mail/mail to:
Susan Young, Vice President of Operations
KenCast, Inc., 500 Summer Street, Suite 503, Stamford, CT 06901
e-mail fazzt@kencast.com fax 203-359-2173
[See: www.kencast.com]



THIS PLACE
COULD USE

THE PILL.

When women in developing nations have no access to birth control, it's not just their families who suffer. Sadly, the world's forests are being cut down to create cropland to feed a fast-growing population. In fact, every 20 minutes the world gains 3,500 people and loses one more plant or animal species. Find out what you can do to help by attending "6 Billion and Beyond," a one-hour documentary and panel discussion on sex, youth, and the health of our planet, October 20th at 7:00 p.m. in Room 26-100. Please come. Because when the forests are gone, can we be far behind?

NOT YOUR DADDY'S CHAT ROOM.



hear.me.com

FREE VOICE CHAT WITH THE PURCHASE OF NOTHING.
DOWNLOAD IN 2 MINUTES. START THE PARTY IN 3.

Snowberg Advocates Affordable Housing

Snowberg, from Page 1

licensing board to govern those who rent and give tenants a forum to air disputes. He is in favor of an affordable housing trust fund partially supported by a tax on commercial developments. He would also like to require that a percentage of the units in newly constructed developments be affordable. Finally, Snowberg would work towards a just-cause eviction law.

On development, this election year's other hot issue, Snowberg encourages the city council to "articulate a plan for the future of Cambridge."

"Development is out of control," he said, at the same time admitting that it was a reality that the city would "have to partner with," because it provides such a large percentage of Cambridge's tax base.

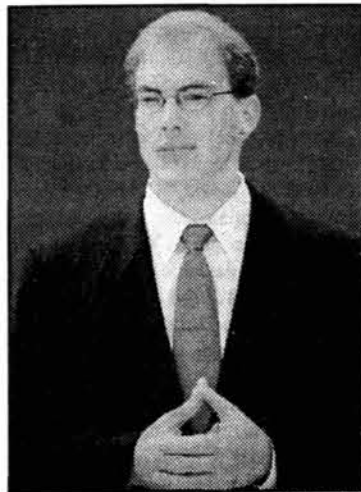
He sees some commercial retailers such as the oft-debated Gap doing business in the city alongside "community businesses." To aid such merchants, Snowberg proposed a "community directory" to provide new residents with the names of small businesses in their neighborhood.

A moratorium on large developments is not a politically realistic response to development, he said.

Transportation also a plank

Improved late night transportation is another of the planks in the Snowberg campaign. Although the T will soon begin to run until 2:00 a.m. on weekends, he proposes working with the state to expand hours during the weekdays. Cambridge might also provide a shuttle to major areas of the city if the state is unwilling to run trains later at night, he said.

Alongside late-night transportation, Snowberg advocates increased



TECH FILE PHOTO

Erik C. Snowberg '99

support for bicyclists in Cambridge. While the city "supports bikes on paper," more can be done. Snowberg, who said that bicycling is his main form of transportation, said that Cambridge streets are "just not safe" for bikes. Existing bike lanes are "really just double parking lanes," he said, and he proposes elevating bike lanes or otherwise separating them from automobile traffic. Bikes might also be diverted off thoroughfares to sidestreets where large lanes would be reserved for them.

Snowberg is also campaigning for environmental issues. He serves as the president of Share a Vital Earth, an MIT environmental student group. Snowberg supports bringing more open spaces to the city, especially East Cambridge, by "creating space through down-zoning." He also supports requiring new developments to be constructed of energy efficient materials.

Finally, Snowberg hopes to use technology, including the world wide web, to improve citizens' access to government.

MORGAN STANLEY DEAN WITTER

Cordially invites all Seniors interested in career opportunities in our Investment Banking Division in Europe to send a completed application form with résumé no later than 29 October to:

Caroline Walker
Morgan Stanley Dean Witter
12th Floor
25 Cabot Square
London E14 4QA
United Kingdom
Telephone: +44 171 425 4584
E-mail: binghamc@ms.com

Authorisation to work in the European Union is a requirement

Application forms can be obtained from www.msdcw.com/career/recruiting/europe



Niko Matsakis '01 and Matt Beck '03 of Dave Pooley and the Vectors perform "The MIT Blues" during the Songwriters' Club Open Mike Night on Thursday.

KRZYSZTOF GAJOS—THE TECH

CLASSIFIED ADVERTISING

nFor Sale

Pontiac Sunbird 89. Model SLE. 115k mi. 4-doors, tape/radio, automatic, gray. Good shape. I must sell it because I am moving. Clobo@mit.edu. (617)4413177. US\$ 1,500.00 or B.O.

nHelp Wanted

EGG DONORS NEEDED! All races. Ages 21-30. Compensation \$5,000. OPTIONS National Fertility Registry (800) 886-9373 www.fertilityoptions.com

FREE TRIPS AND CASH !!! Spring Break 2000 StudentCity.com is looking for Highly Motivated Students to promote Spring Break 2000! Organize a small group and travel FREE!! Top campus reps can earn Free Trips & over \$10,000! Choose Cancun, Jamaica or Nassau! Book Trips Online Log In and Win FREE Stuff. Sign Up Now On Line! www.StudentCity.com or 800/293-1443

nInformation

RAJA YOGA MEDITATION On-going classes offered as a free service to the community. Learn to empower yourself to reduce stress and clear a path towards easier studying. Learn to tap into your inner power to change unwanted habits and improve relationships. Offered by BK Raja Yoga Center of Boston. Free of Charge. (617) 734-1464 www.bkwsu-boston.com

Super Low International + US Long Distance Rates: 5 cents US, 6 cents Canada, 7 cents UK, China 23 cents, Hong Kong 7 cents, Taiwan 15 cents, India 49 cents, Japan 11 cents and others. No monthly Fees. Phone cards avail. With even lower rates India 26 cents, China 15 cents, Taiwan 8 cents, UK 3 cents www.worldxchange.com/agent/210155 1(800) 941-2709

Spring Break 2000 Free Trips, Free Meals & Drinks Jamaica Cancun, Florida, Barbados, Bahamas Boos now for FREE Meals & 2 Free Trips Book Before DeC 17 FOR LOWER PRICES !! 1-800-426-7710 www.sun-splashtours.com

nTravel

*****ACT NOW! CALL FOR THE BEST SPRING BREAK PRICES!** SOUTH PADRE, CANCUN, JAMAICA, BAHAMAS, ACAPULCO, FLORIDA & MARDI GRAS. REPS NEEDED...TRAVEL FRESS, EARN \$\$\$ DISCOUNTS FOR 6+. 800-838-8203/WWW.LEISURETOURS.COM

Spring Break 2000 The Millennium. A new decade begins in Travel. Free trips, Free Drinks, Free Meals. Jamaica, Cancun, Florida, Barbados, Bahamas. Book before Nov. 5 for Free Meals & 2 Free Trips! 1-800-426-7710 / www.sun-splashtours.com

1 SPRINGBREAK Operator ! Check our website for the best deals ! www.vagabondtours.com Cancun, Bahamas, Jamaica & Florida. Group organizers EARN FREE TRIPS & CASH ... Call today! 800-700-0790

Tekkware

Computer Technology Solutions for the 21st Century

WWW.TEKKWARE.COM

College Students Register to Win at the Website!

Win a
Notebook
Computer



*See Website for Prize Details

TEKKWARE VALUE: \$1349.99

Providing College Students Affordable, Name Brand Technology

Notebook Computers

Desktop Computers

Monitors

Printers

Digital Assistants (PDA's)

Digital Cameras

Speakers

Modems

Memory

Scanners

No purchase necessary. You must be a legal part-time or full-time college student enrolled at a two or four year college or university to be eligible for this Sweepstakes. See website for full details on the Sweepstakes. To enter, complete the official entry form that is located at <http://www.tekkware.com>. You will be asked to provide your first and last name, address, college or university name, year in college, major and school email address. The Sweepstakes begins at 12:01AM ET on September 20, 1999 and ends when 50,000 eligible college students have registered for the Sweepstakes via the Internet. All entries must be submitted online. LIMIT ONE ENTRY PER STUDENT AND ONLY THE FIRST ENTRY WILL COUNT.

Copyright©1999 Tekkware, Inc. All rights reserved.

**PLEASE HELP
SPECIAL EGG
DONOR NEEDED
\$10,000 COMPENSATION**

Infertile couple is seeking a special woman for anonymous egg donation. The ideal candidate is a healthy caucasian, average or above average height, age 20 to 29. Confidential screening, minor outpatient procedure required. Compensation for time and effort.

Please call
1-888-617-2953

CAREER
OPPORTUNITIES FOR ENGINEERS
AT BOSE

**At Bose the challenges
don't always involve
stereo systems.**

**How would you tackle
this one?**

No matter what your discipline, life at Bose[®] is full of challenges. Consider the one below. If you're interested in thinking this problem through, we want to know how you'd solve it.

The concept:

A noise canceling aviation headset using a speaker and microphone in the earcup to eliminate ambient cockpit noise so pilots can hear crucial control tower information clearly.

The problem, part 1:

When the earcup is clamped tightly against the head, the speaker is driving into a highly resonant structure. (The earcup is small compared to low-frequency wavelengths, yet large compared to high-frequency wavelengths. So the impedance vs. frequency seen by the driver varies substantially in magnitude and phase.) The control system must compensate for these high Q resonances – a difficult problem in itself.

The problem, part 2:

In practice, there's always a leak between the person's head and the earcup, which changes the acoustic transfer function. The size of the leak varies with the clamping force and the shape of the wearer's head.

The challenge:

Design a high-bandwidth, high-gain control loop that's stable even when the high Q resonances vary wildly in frequency.

If this is the kind of challenge that interests you, let's talk. Share your thinking with us at these on-campus events:

TechTalk with a Bose Senior Engineer

Monday, November 1 at 6 P.M.

Room 4-149

On-Campus Interviews:

Tuesday, November 2

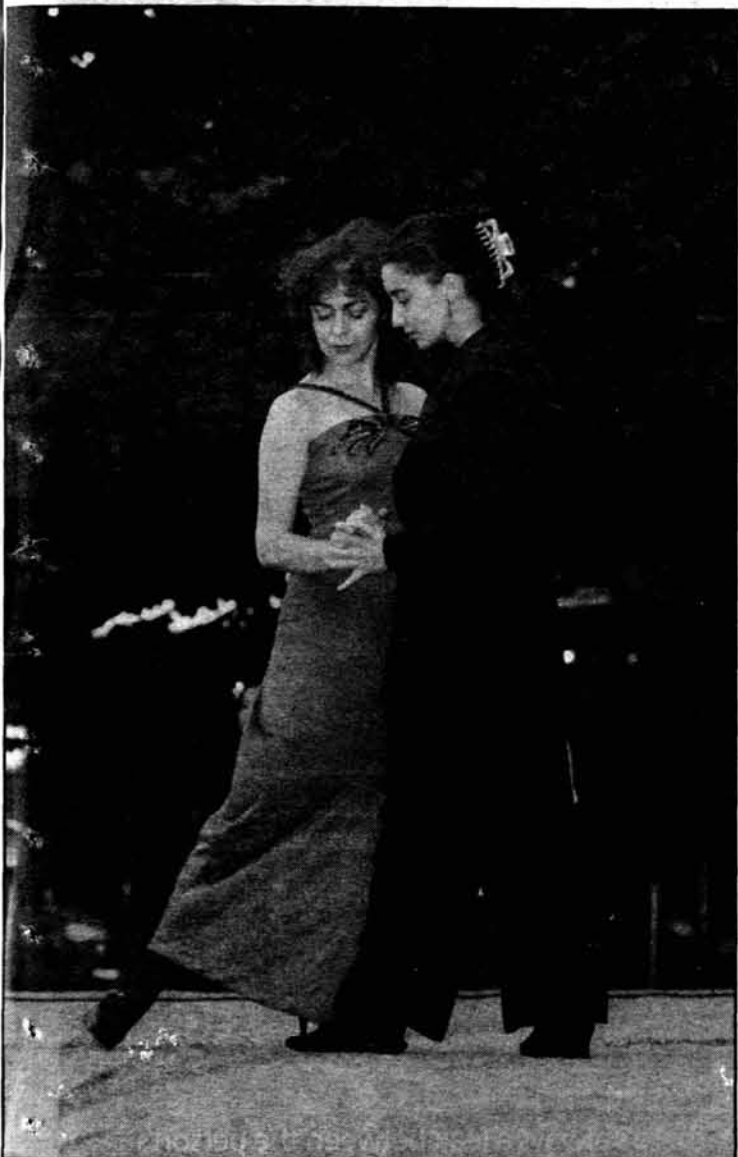
Career Development Center

Register at www.jobtrak.com

BOSE[®]
Better sound through research[®]

Send us your resume:

• FAX: 508-766-7031 • E-Mail Lyn_Van_Huben@Bose.com • Snail-Mail: Bose Corporation, The Mountain, Framingham, MA 01701 •



KRZYSZTOF GAJOS—THE TECH

Sharna Fabiano from the Boston Tango School (leading) and Claudia, a private Tango teacher, perform the Argentinean Tango as part of Friday's Mini-International Fair in front of the Stratton Student Center.



ROBERT SUMNER—THE TECH

"Sexpert" Susie Bright spoke Friday in the Wong Auditorium as part of the authors@mit lecture series. After reading passages from her new book *Full Exposure: Opening Up to Sexual Creativity and Erotic Expression*, she answered questions ranging from her relationship with her daughter to the morality of sex with animals.

The S.P.I.C.E. Fund
Students Promoting an Improved Campus Experience
Class of 1997 Student Life Fund

Funding is available for EVENTS which are open and accessible to the entire undergraduate community.

Pick up guidelines from Dean Robert M. Randolph in room 7-206. Applications should be returned to Dean Katie O'Dair W20-549.

Barclays Capital's
Sales, Trading, Research and Investment Banking Divisions

This time next year....

You will be paid for your work

Please Join Our Recruitment Competition

MIT Graduate Students

Thursday, October 21st

6:00pm - 8:30pm

Test Center: Cambridge Center Marriott

Salons 1&2

BARCLAYS

www.barcap.com/graduatecareers

Thinking about grad school?

Talk isn't cheap...

it's free.

Saturday, October 30
Boston
Radisson Hotel Boston

- Meet one-on-one with over 100 Graduate School Representatives
- Learn how to prepare for the GRE tests
- Attend workshops and discussion of various graduate disciplines
- Obtain catalogs, applications, and financial aid information

Registration begins at 8:00 a.m. - Workshops begin at 8:30 a.m.
Graduate school exhibits open from 10:00 a.m. - 3:30 p.m.
Admission \$5.00 or bring this ad and get in FREE!



For more information, call 1-609-771-7670 or check out our Web site at www.gre.org



Individuals who are hearing impaired and wish to request an interpreter must contact ETS at least four weeks prior to The Forum.

Sponsored by the GRE Board and the Council of Graduate Schools. EDUCATIONAL TESTING SERVICE, ETS, GRADUATE RECORD EXAMINATIONS and GRE are registered trademarks of Educational Testing Service. The modernized ETS logo is a trademark of Educational Testing Service.



"You can prevent colon cancer, even beat it."

• HILLARY RODHAM CLINTON •

MAKE THE TIME TO GET A TEST THAT COULD SAVE YOUR LIFE.

Colon cancer is the second leading cancer killer and everyone aged 50 and older is at risk. More than 50,000 Americans will die from colon cancer and 131,600 new cases will be diagnosed this year.

Colon cancer is an equal opportunity disease that affects both women and men. This silent killer frequently begins without symptoms and those with a family history are at even greater risk.

Colon cancer is preventable—even curable when detected early. In fact, if cancer is found early enough, the patient has more than a 90 percent chance of survival.

Colon cancer screenings are safe and effective and are now covered by Medicare and an increasing number of other health providers. There's even a test that can be used in the privacy of your own home.

Talk to your doctor about getting tested.



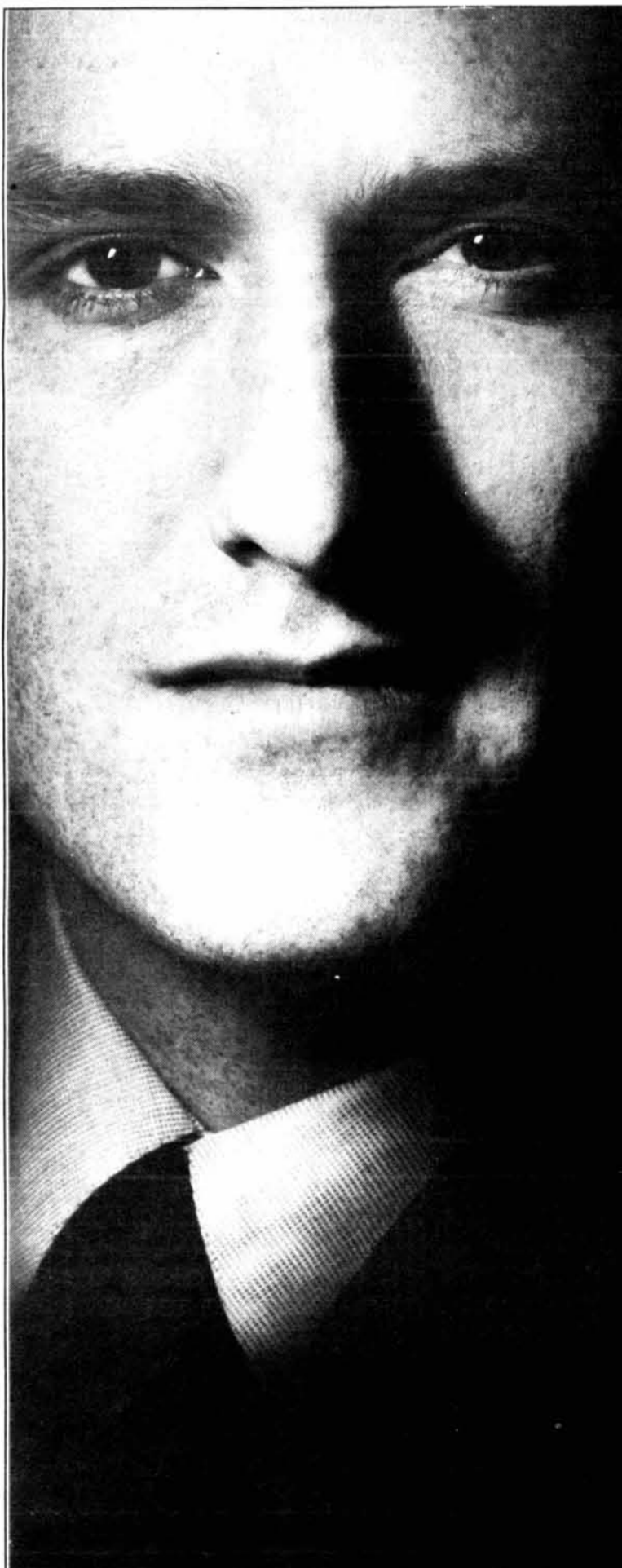
SPONSORED BY THE NATIONAL COLORECTAL CANCER ROUNDTABLE
FOR MORE INFORMATION, CALL THE AMERICAN CANCER SOCIETY
AT 1-800-ACS-2345

This space donated by *The Tech*



CHRISTOPHER MCENIRY—THE TECH

The MIT/Wellesley Toons sing their comedic rendition of the Super Mario World theme song during the Greater Boston Invitational Songfest Saturday evening in La Sala de Puerto Rico.



I don't believe in following a career path.
I believe in building my own.

I work for J.P. Morgan.

Interviews
for MIT seniors will be held on

November 17 for positions in

- Internal Consulting Services
- Investment Banking
- Investment Management/Private Banking
- Markets

Please submit cover letter and résumé by November 3 through your online system.

www.jpmorgan.com/careers

J.P. Morgan is an equal opportunity employer.

JPMorgan

How Do You Measure the Growth of A Child?

Unfortunately for children living in some of the poorest countries in the world, it takes more than fading marks on a wall.

Childreach, one of the oldest and largest child sponsorship organizations, measures growth by the number of hospitals, wells for clean water, and self-help programs we build in partnership with the proud families and communities where our sponsored children live.

So when you become a Childreach sponsor and receive pictures and letters that speak of hope, you'll know that you have helped to make a *real* difference in the lives of a needy child, family, and community overseas.

For more information about Childreach sponsorship, please call **1-800-752-3400** or send in the coupon below.

Samuel A. Worthington,
National Executive Director,
Childreach with a sponsored
child in Tarija, Bolivia.



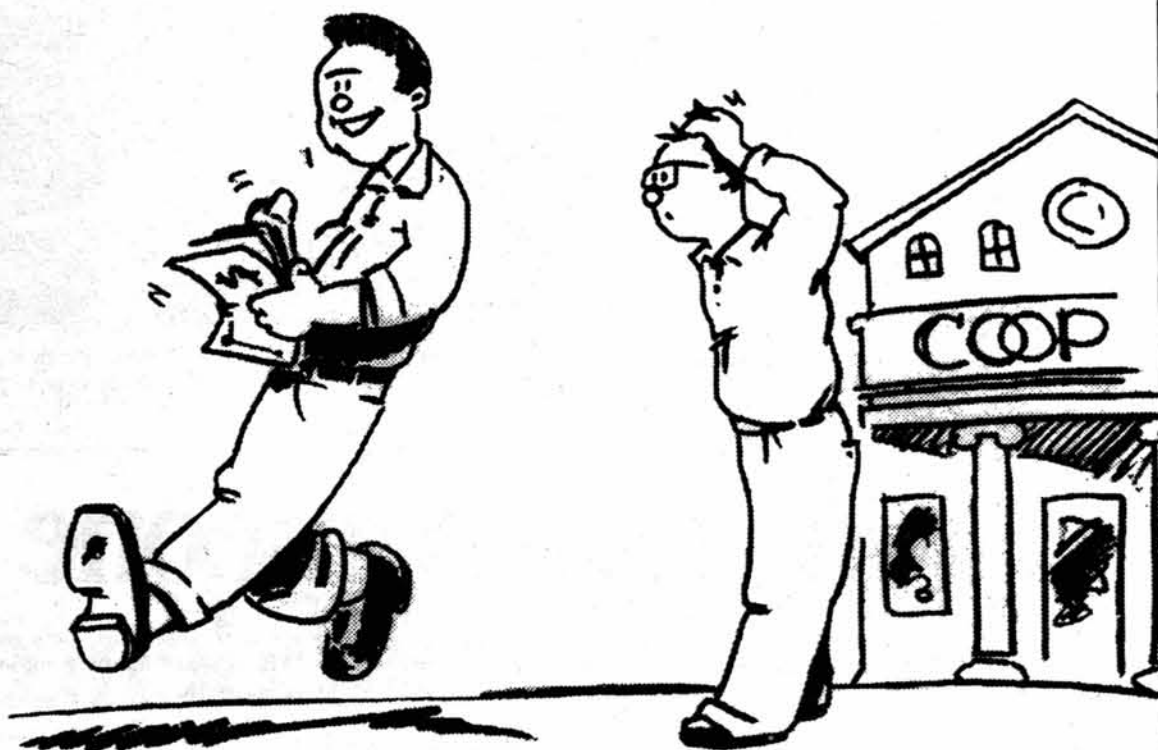
Yes! I want to know more about Childreach.

Name _____
Address _____
City _____
State _____ Zip _____
Area Code Phone _____ V303

Please send to:
childreach, 155 Plan Way,
Warwick, RI 02886-1099

This space donated by *The Tech*

THE COOP ANNOUNCES A 5% REBATE!*



IT PAYS TO BE A COOP MEMBER.

JOIN THE COOP OR RENEW YOUR MEMBERSHIP TODAY!

IF YOU WERE SMART ENOUGH
TO BE A COOP MEMBER,
REBATE CHECKS ARE
AVAILABLE FOR PICK-UP

**OCTOBER 20 THRU
NOVEMBER 6, 1999**

AT THE M.I.T. COOP AT KENDALL
1ST FLOOR, SERVICE DESK.
MON - SAT. 10:00 - 6:00



*5% paid on member pur-
chases for fiscal year ending
July 3, 1999.

I am trying here to prevent anyone saying the really foolish thing that people often say about Him:

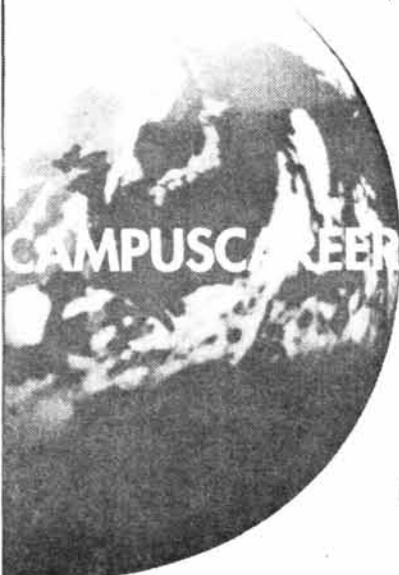
"I'm ready to accept Jesus as a great moral teacher,
but I don't accept his claim to be God."

That is the one thing we must not say. A man who was merely a man and said the sort of things Jesus said would not be a great moral teacher. He would either be a lunatic--on a level with the man who says he is a poached egg--or else he would be the Devil of Hell. You must make your choice. Either this man was, and is, the Son of God; or else a mad-man or something worse. **You can shut Him up for a fool, you can spit at Him and kill Him as a demon, or you can fall at His feet and call Him Lord and God.** But let us not come away with any patronizing nonsense about His being a great human teacher. He has not left that open to us. He did not intend to.

C.S. Lewis, *Mere Christianity*


Questions?? email mit-xa-request@mit.edu

ATTENTION
 UNDERGRADUATE
 AND GRADUATE
STUDENTS
 WORLDWIDE

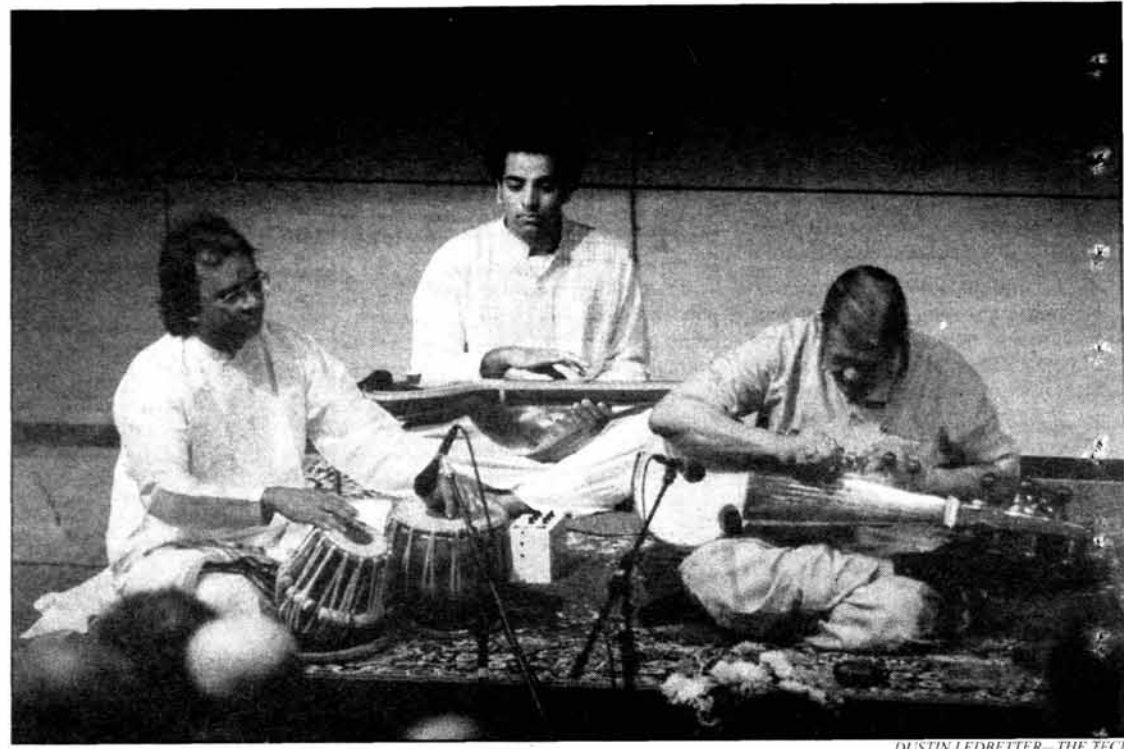


CAMPUSCAREERCENTER.COM

PURSUE JOB
 AND INTERNSHIP
 OPPORTUNITIES
**THAT SPAN
 THE GLOBE**




Campus Career Center.com
 The world's largest campus job fair



DUSTIN LEDBETTER - THE TECH
 Nayan Ghosh, tabla, Alok Mehta, tanpura, and Buddhadev DasGupta, sarod, perform South Asian music on traditional instruments Sunday evening in the Wong Auditorium. The concert was organized by MITHAS.

Schlumberger

**stands alone at
 the top** of the
 technology world.



CHALLENGING TECHNOLOGY MINUTE TO MINUTE

SCHLUMBERGER gives you the finest technology, training and support in the world. Then gives you the autonomy to prove your mettle. Accept the challenge. Push your limits. The view is great at the top.

MIT Interviews

Information Meeting:
 October 21, 1999 • 7:00pm-9:00pm
 Room 4-103

Interviewing:
 October 22, 1999

www.slb.com

Schlumberger
 An equal opportunity employer.

**We need someone
 with the confidence
 of a surgeon,
 the dedication of
 a marathoner
 and
 the courage of
 an explorer.**




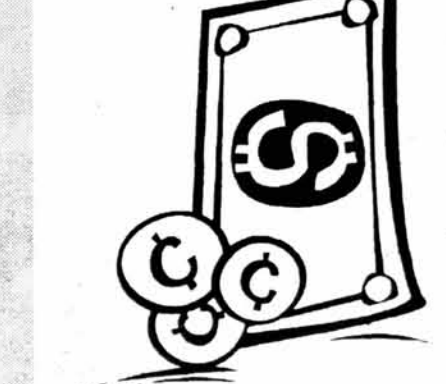
We have a unique opportunity for someone very special. A chance to spend two years in another country. To live and work in another culture. To learn a new language and acquire new skills. The person we're looking for might be a farmer, a for-ester, or a retired nurse. Or maybe a teacher, a mechanic, or a recent college graduate. We need someone to join over 5,000 people already working in 60 developing countries around the world. To help people live better lives. We need someone special. And we ask a lot. But only because so much is needed. If this sounds interesting to you, maybe you're the person we're looking for. A Peace Corps volunteer. Find out. Call us at (Collect) 617-565-5555 x598

Peace Corps.
 The toughest job you'll ever love.



This space donated by The Tech

For MIT Students Only

<p>FREE TICKETS</p>  <p>... to the Boston Symphony Orchestra ... to attend other great concerts, plays, exhibitions</p>	<p>FREE ADMISSION</p>  <p>... to Boston's Museum of Fine Arts</p>	<p>FREE ART</p>  <p>... for your dorm room or lab</p>	<p>FREE MONEY!</p>  <p>... for your own art projects</p>
--	--	---	--

Through programs sponsored by the Council for the Arts at MIT and the List Visual Arts Center. For more information on these freebies and other opportunities in the arts for MIT students, see <http://web.mit.edu/arts/students.html> or stop by the Office of the Arts(E15-205)

Flexibility Is the Goal In SAC Housing Plan

SAC, from Page 1

\$273.5 million is within the range of housing improvements made at peer institutions, including the University of Pennsylvania, Cornell University, and Dartmouth College.

The SAC also recommended the installation of a Student Life Council to ensure quality of life at MIT, as well as providing bonuses of up to 15 percent for administrators who improve student life at MIT.

Housing selection modified

The SAC's residence selection plan increases flexibility and allows students to switch living groups. Freshmen would first select a dorm during the summer, then move directly there during Orientation. After Orientation, freshmen could choose either to stay in their choice or enter another lottery.

In November and March, all dormitory residents would enter a new housing lottery, with residents who wished to stay in their halls guaranteed to keep their current housing.

In-house rush would remain largely the same. A group within a house would be allowed to request that a particular freshman live with

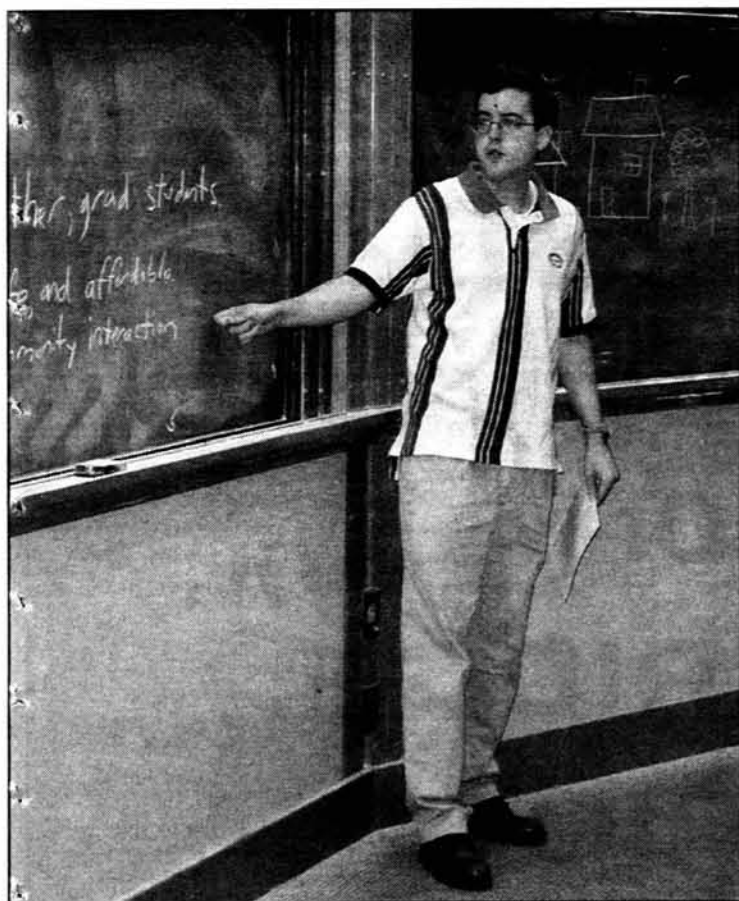
them, but could not prevent any freshman from living with them.

Fraternities, sororities, and independent living groups would receive compensation for up to 35 percent of total house capacity, with support decreasing to zero percent over six years. Any FSILG willing to admit non-affiliated members would receive support from MIT. MIT would also provide support to FSILGs wishing to relocate near campus.

Community outreach in effect

Community interaction forms are another cornerstone of the Unified Report. The SAC's recommendations for improving community interaction also include expanding the roll of graduate resident tutors, increasing leadership training at the Institute, and coordinating a campus-wide social calendar when a different living group would sponsor an activity every weekend night during the academic year.

The SAC's Unified Proposal is student-initiated and is non-binding. The SAC is working in conjunction with the Undergraduate Association, the Dormitory Council, and the Interfraternity Council.



GARRY R. MASKALY—THE TECH

During an open forum in 6-120 last night, John Hollywood G details the \$255 million in capital expenditures proposed by the SAC proposal.

WHERE DOES THE BEST INTERNET TALENT MEET?

On bowstreet.

"WHAT THE BROWSER DID FOR THE INTERNET, BOWSTREET'S WEB SERVICES WILL DO FOR E-COMMERCE."

Frank Moss
Former Chairman, Tivoli
Current Co-Chairman, Bowstreet

The buzz on bowstreet*

"WITH FIVE OF THE WORLD'S LARGEST TECHNOLOGY POWERHOUSES IN ITS CORNER (IBM, NOVELL, MICROSOFT, SUN-NETSCAPE ALLIANCE AND ORACLE), NEW COMER BOWSTREET SOFTWARE HOPES TO LAND A KNOCKOUT PUNCH WITH ITS NEW PROPOSAL FOR DSML..."

"BOWSTREET IS PUTTING OUT WEB SERVICES ARCHITECTURE AND HOPES YOU WILL ADOPT IT THE WAY YOU ADOPTED WINDOWS, SO THEY CAN BE OUR NEXT WEB BILLIONAIRES."

"WE ARE CONVINCED THAT BOWSTREET'S PRODUCTS WILL REVOLUTIONIZE THE WAY COMPANIES CONDUCT E-BUSINESS."

"IT'S NO WONDER BOWSTREET RAISED AS MUCH AS IT DID FROM SUCH TOP-NOTCH VCS. IT DEVELOPS SOFTWARE FOR THE ULTRA-HOT SPACE OF BUSINESS-TO-BUSINESS E-COMMERCE."

WELCOME TO THE WORLD OF WEB SERVICES.
(Oh yeah, and all that get-rich-have-fun stuff, too.)



SOFTWARE DEVELOPMENT • MARKETING • SALES • PROFESSIONAL SERVICES • IT • BUSINESS DEVELOPMENT • TRAINING • TECHNICAL SUPPORT • HUMAN RESOURCES • ADMINISTRATION

Career opportunities at www.bowstreet.com

E-mail: hr@bowstreet.com Fax: (603) 436-9115 An Equal Opportunity Employer

*Quotes are from well-known technical and business publications, industry analysts, a leading venture capital firm and the founder of a top ten technology company.

Reform?
Orthodox?
Conservative?
Reconstructionist?
Other?

Who are you as a Jew?
Who is that Jew next to you?

Forum on Pluralism

A discussion among Jewish college students about their religious identities

Sunday, October 24, 1999

11:00 am — 3:00 pm

MIT Student Center, third floor
84 Massachusetts Avenue
Cambridge, MA

- Meet Jewish students from all over New England
- Complimentary Brunch
- Free for students
- Forum registration on the web

For more information check out our website <http://web.mit.edu/hillel/pluralism/> or call MIT Hillel, 617-253-2982. Please register by October 20th.

Sponsored by: MIT Hillel and Synagogue Council of Massachusetts
Supported by: Student Initiatives Committee of Hillel's Irving and Sarah Pitt Campus Creativity Grants • Keshet/North American Federation of Temple Brotherhoods • Koach • Kedma • Jewish Student Projects of Greater Boston

STUDENT TRAVEL

Planning Trips
for Generations
X, Y, and Z.

- London.....\$354
- Paris.....\$372
- Amsterdam..\$397
- Los Angeles..\$310

576-4623
HARVARD SQUARE
85 Mt. Auburn Street

STA TRAVEL
We've Been There.

www.statravel.com

MITCHELL MADISON GROUP

A USWeb/CKS Company

- Boston
- Chicago
- Frankfurt
- Johannesburg
- London
- Los Angeles
- Madrid
- Melbourne
- Montreal
- Munich
- New York
- Paris
- San Francisco
- Sydney
- Toronto
- Zürich

Join us to learn about our new strategy:

WEDNESDAY

October 20, 1999

7:00PM

CAMBRIDGE

MARRIOTT

We welcome expressions of interest in positions in any of our North American offices.

Resume Deadline: January 5

First-Round Interviews: January 19

Please contact:

Trisha O'Connor
9 West 57th Street
New York, NY 10019

(212) 372-9100
Fax (212) 372-4408
www.mmgn.net
www.usweb.com

Global resources. Local presence.

Warburg Dillon Read invites
you to a very special event:

Women in Trading.

Sponsored by the Women in Trading
at Warburg Dillon Read

Find out first hand about a career on
the trading floor. Receptions will be
held in both New York and Boston:

New York:

Date: Monday, October 25th

Time: 6:30 pm

Location: UBS Tower

10 East 50th Street

New York, NY 10022

Boston:

Date: Wednesday, October 27th

Time: 6:30 pm

Location: Four Seasons Hotel

200 Boylston Street

Boston, MA 02116

RSVP preferred but not required.

Please reply by e-mail to

amy.deangelo@wdr.com. No telephone
inquiries please.

For more information about Warburg
Dillon Read, visit our website at
www.wdr.com.

We look forward to meeting you.



Warburg Dillon Read

An investment bank of global intelligence

Warburg Dillon Read is the brand name for the investment banking division of UBS AG and its investment banking subsidiaries worldwide. In the United States, Warburg Dillon Read LLC, a subsidiary of UBS AG, is a member of NYSE and SIPC. Warburg Dillon Read is an Equal Opportunity Employer.

Council *Travel*

SALE EXTRAVAGANZA

LONDON	\$85
PARIS	\$115
LISBON	\$120
AMSTERDAM	\$125
ROME	\$145

Each way based on RT purchase, taxes apply, travel dates: 1st Nov-31st March (some restrictions apply), non-refundable, subject to availability, student youth only, ISIC/IYTC required, age restriction may apply.

[Extended hours - retail shops and 24 Hr Rez center]

MIT Student Ctr W20-024
84 Massachusetts Ave
617-225-2555

Reservations & Payments must be made between Oct. 19 - Oct 22nd

1-800-2COUNCIL

www.counciltravel.com

Suit Filed 38 Years After Patients Died

Lawsuit, from Page 1

Campbell said the Institute is "pleased that the jury upheld MIT's position that it acted appropriately."

Roisman said he was "sorry that MIT got off the hook." However, he was pleased with the families' awards.

Roisman said he hoped that the verdict would send a message that "doctors can't take terminal patients and do anything." The jury's decision could lead to a class-action suit of patients who were also harmed by undergoing experimental treatments in the 1950s and '60s, he said.

Treatment experimental

MIT attorney Owen Gallagher said the Institute "had the best of intentions. They hoped for a medical breakthrough."

"There wasn't a reliable basis for any therapeutic value," Roisman said of the treatment. "There were

several warning signs for problems."

Gallagher commended MIT's openness with human experimentation and allowing the use of reactor facilities. He argues with the idea the treatments were done recklessly, he said.

"If it was a success, MIT wouldn't have gotten the credit, so they shouldn't get the blame."

The patients were treated with Boron Neutron Capture Therapy. A beam of neutrons produced by the reactor core was directed toward a patient's head. The neutrons are absorbed by Boron atoms inside a tumor. The tumor cells are then killed by the alpha particles generated by the neutron-Boron interaction. Unfortunately, the treatment also kills other, healthy brain cells.

MGH and Dr. Sweet are expected to appeal the verdict. Their attorney, Joseph L. Doherty, was unavailable for comment.

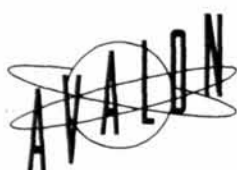
Tech News Hotline

253-1541

FUEL

EDU.COM PRESENTS FUEL WITH SPECIAL GUESTS. OCTOBER 29TH AT AVALON. GO TO WWW.EDU.COM AND ENTER TO WIN FREE TICKETS!

** V.I.P. PARTY BEFORE THE CONCERT FOR EDU.COM TICKET WINNERS ONLY!



Thanks to you, all sorts of everyday products are being made from the paper, plastic, metal and glass that you've been recycling. But to keep recycling working to help protect the environment, you need to buy those products.

BUY RECYCLED.



AND SAVE.

So look for products made from recycled materials, and buy them. It would mean the world to all of us.

For a free brochure, write Buy Recycled, Environmental Defense Fund, 257 Park Ave. South, New York, NY 10010, or call 1-800-CALL-EDF.



Come Raid the Vault!

For a limited time,
Vault.com's full length
insider company profiles
and industry profiles are
FREE online!*

Get the inside scoop on major industries and top companies, find out about corporate culture, hiring strategies and more at VAULT.com! If you like what you see, purchase the book through our website or your local bookstore.

- 50-70 page detailed insider information on thousands of companies including: Amex, McKinsey, Procter & Gamble, Oracle and many more!
- 150-750 page guides to major industries including: Consulting, High Tech, Media/Entertainment, Law, and more!

**Free Vault.com membership required*

VAULT.COM

THE WORKPLACE NETWORK™



Not getting your child all her shots is like leaving her out here alone.

At least 11 shots by two. How sure are you?
 Questions? Call 1-800-232-2522.
U.S. Department of Health and Human Services



Dante Anzolini conducts the MIT Symphony Orchestra on Saturday at the Family Weekend concert.

GABOR CSANYI—THE TECH

This space donated by *The Tech*



Fish tank.



Think tank.

Where would you rather work?

WALKER DIGITAL CORPORATION, an Intellectual Property research and development laboratory located in Stamford, CT, is a creative environment where entrepreneurs work to reinvent business through technology. With over 450 U.S. and international patents pending, you may have heard of our most recent success — Priceline.com, our "Name Your Own Price" patented commerce system on the Internet.

INVENTORS

Manage the invention process from idea to issue patent. Develop and coordinate new business and marketing ideas to be patented. Use your excellent writing and communication skills, problem-solving ability, strong interest in the Internet and technology, innovative thinking and strong sense of curiosity.

RESEARCHERS

Assist in the inception, analysis, development and marketing of inventions that benefit the business community. Use your computer skills (internet, Lexis-Nexis, Westlaw, Dialog) and knowledge of available research tools to analyze/evaluate information relevant to an invention disclosure and present results to staff Inventing & Legal teams.

To learn more about us, visit our website: www.walkerdigital.com. Walker Digital is an Equal Opportunity Employer.



WALKER[®]
Digital

www.priceline.com

www.walkerdigital.com

VISIT US AT OUR INFO SESSION • OCT 26
MIT INTERVIEWS • OCT 27
(Check Career Center for time and location)



Something to feel good about.

United Way

This space donated by *The Tech*

Wednesday Morning, October 27
MIT Medical Services Open at Noon
** Urgent Care Open as Usual **



So that all MIT Medical staff may attend a progress and planning meeting, there will be no regular appointments until noon on Wednesday, October 27. Urgent care and the inpatient unit will remain open as usual. All services resume normal operations at noon. Thank you for your patience.



HSB GROUP IS LOOKING FOR ENGINEERS

HSB GROUP, INC., an engineering management consulting firm with headquarters in Hartford, CT is looking for engineers for our college hire program. We will be interviewing at MIT in the **Office of Career Services** on **WEDNESDAY, OCTOBER 27** from 8:30 a.m. to 5:00 p.m. HSB's college hire program for engineers offers rotational projects, leadership development and senior management mentoring. If interested, please submit your resume on **InterviewTrak**, or contact Jody_Danielson@hsb.com. To learn more about HSB Group, check out our web site at www.hsb.com.



DASHA LYMAR
Wide receiver Jang Kim '01 makes an offensive play against Bridgewater State College Saturday. MIT lost 54-21.

Attention Entrepreneurs.

Call us if your start-up business needs help. Creative fee arrangements are available including reduced and deferred fees for clients with great ideas and not much else. We assist young entrepreneurs - including those still in school - with patent applications, business plans, private placements, venture capital, bridge loans and initial public offerings. There is no charge for the initial consultation.

BURTON WAISBREN

BUSINESS PLANS INTELLECTUAL PROPERTY SECURITIES LITIGATION

101 ARCH STREET • BOSTON, MASSACHUSETTS • (617) 345-0991

The Committee on Academic Performance now has a website!



- ✓ Committee Info
- ✓ Petition Forms
- ✓ Academic Advice

<http://web.mit.edu/acadinfo/cap>

Civil and Environmental Engineering CEE/Course 1's Freshman Info Session

The jobs are here...

Civil and Environmental Engineering is at least a \$750 billion dollar industry in the US alone. CEE encompasses innovative construction, IT, healthcare, all environmental areas, and problem solving on a large scale (for instance new transportation systems, earthquakes, etc.)

Freshman Info Session

Thursday
October 21, 1999
3:30-5:00 PM
Bush Room 10-105
Presentation: 3:30 PM
Refreshments to follow

For more information contact:
Cynthia Stewart 253-9723/stewart@mit.edu

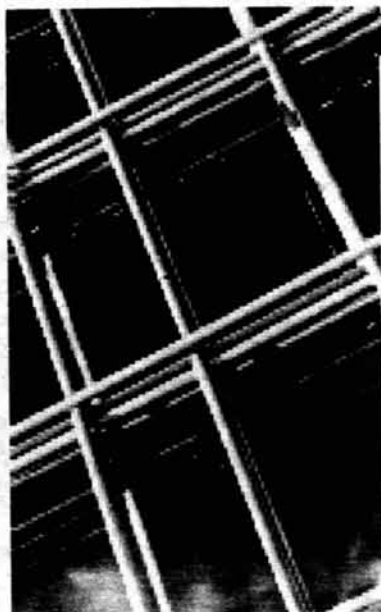
The education is here...

Design-oriented, hands-on courses in Civil and Environmental Engineering Science.

What CEE will do for you...

Course 1 is committed to providing students with the skills and the edge to excel in the workforce.

- ✱ **Design portfolio** of real life problem solving fully integrated into course work
- ✱ **Paid UROPs** working with professors leading their fields
- ✱ **Guaranteed Summer Internship** opportunities with world class CEE firms



POLICE LOG

The following incidents were reported to the MIT Campus Police between October 8-12. This summary contains most incidents reported to the Campus Police but does not include incidents such as: medical shuttles, ambulance transfers, false alarms, general service calls, etc.

Oct. 8: Bldg. E52 larceny \$8.00; Bldg 8 larceny of laptop, zip-drive and software \$4,300; Boston, Sigma Alpha Epsilon larceny of bike \$1,300.00; Bldg. 64 report of suspicious activity; Hayward Lot report of damage to motor vehicle; East Campus report of student problem; W20 larceny of flute; Bldg. 8 report of graffiti; W7 larceny of credit cards and \$80.00 cash.

Oct. 9: Boston, Fenway House larceny of credit cards; W61 report of student problem; W20 larceny of cell phone \$250.00; Boston Fenway House larceny of credit cards and report of past suspicious person.

Oct. 10: W7 report of student problem; W51 larceny of watch \$150.00; Six Club larceny of bike \$800.00; Six Club larceny of bike \$369.00; W7 report of malicious damage to elevator.

Oct. 11: W7 report of student problem; Bldg. 14 larceny of laptop and cell phone \$2575.00; Windsor Lot report of B7E into MV larceny of CD/Radio \$210.00; Bldg M6 report of suspicious person female alumnae checked ok.

Oct. 12: Boston Sigma Phi Epsilon larceny of TV \$250.00; W32 larceny of watch from locker room \$200.00; W4 report of harassing phone calls;

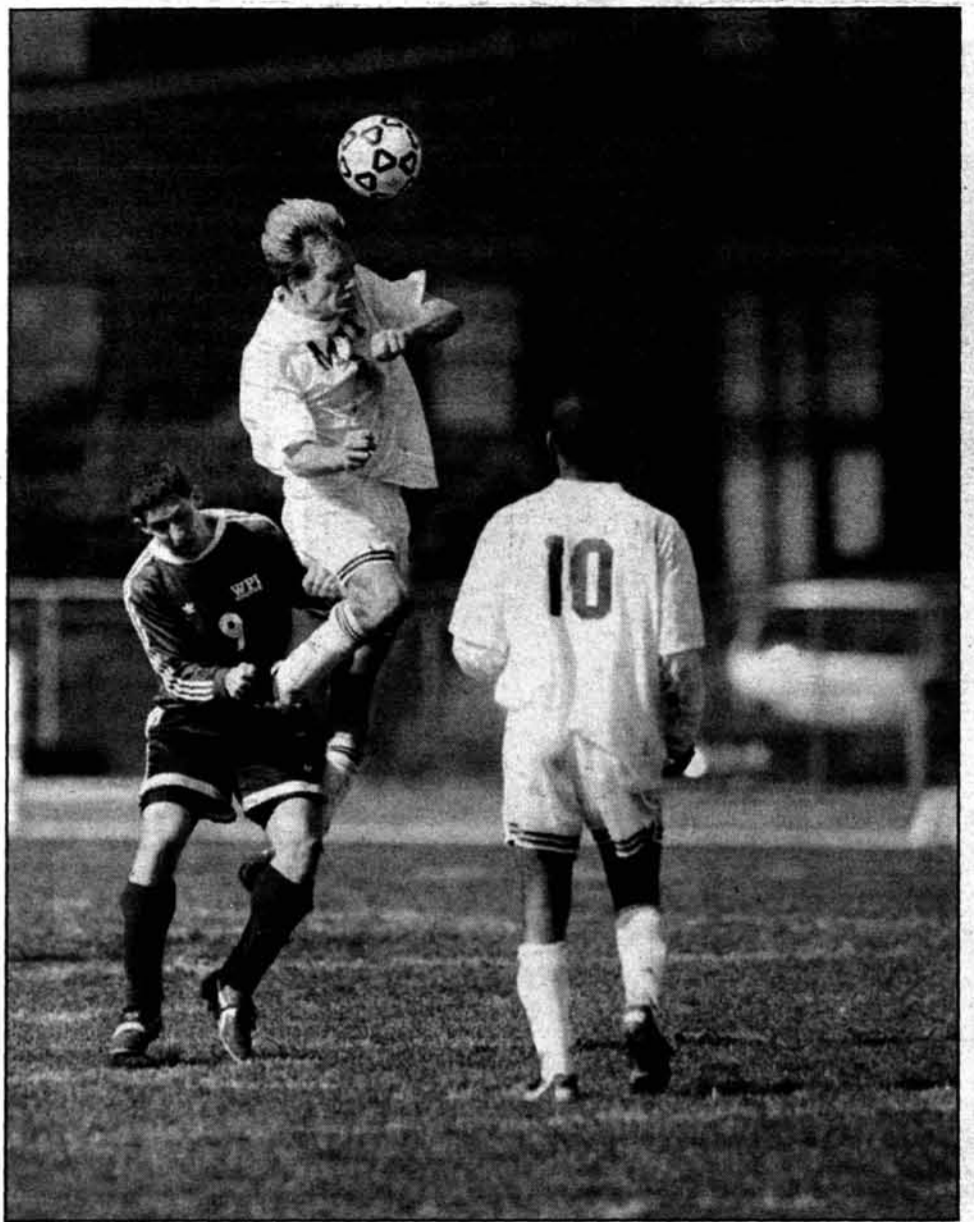
It's a connected world.
Do your share.

For 30 ways to help the environment, write Earth Share, 3400 International Drive, NW, Suite 2K (AD4), Washington, DC 20008.



Earth Share®

This space donated by *The Tech*



Bobby Reed '02 heads the ball as the Engineers struggle against WPI during Saturday's match. MIT lost 4-0.

Miodrag Cirkevich—THE TECH



Bring it.

Where it matters most.

As one of the world's leading diversified technology companies, we're breaking new ground in everything from **defense and commercial electronics, to aviation, to engineering and construction.** As a Raytheon employee, you'll contribute to the development of exciting, revolutionary technology designed to make life better, easier, and safer throughout the world. Such as our STARS air traffic control system. And our award-winning NightSight™ technology.

But it all starts with you. Your creativity. Your knowledge. And enthusiasm about the future. In return, we offer exceptional training and professional development opportunities. A supportive, down-to-earth work environment. And incredible benefits including flexible schedules designed to respect your quality of life.

So you can still show off all those great qualities of yours outside of work, too.

We have a lot to tell you about Raytheon and the exciting opportunities we have available. Plan on visiting our booth at your college career fair. If you are unable to attend the fair, please e-mail your resume to: resume@rayjobs.com (ASCII text only; no attachments), or mail to: **Raytheon Company, Attn: National Staffing Data Center, P.O. Box 660246, MS-201, Dallas, TX 75266.** U.S. citizenship may be required. We are an equal opportunity employer.

Opportunities are available for exceptional students with the following majors:

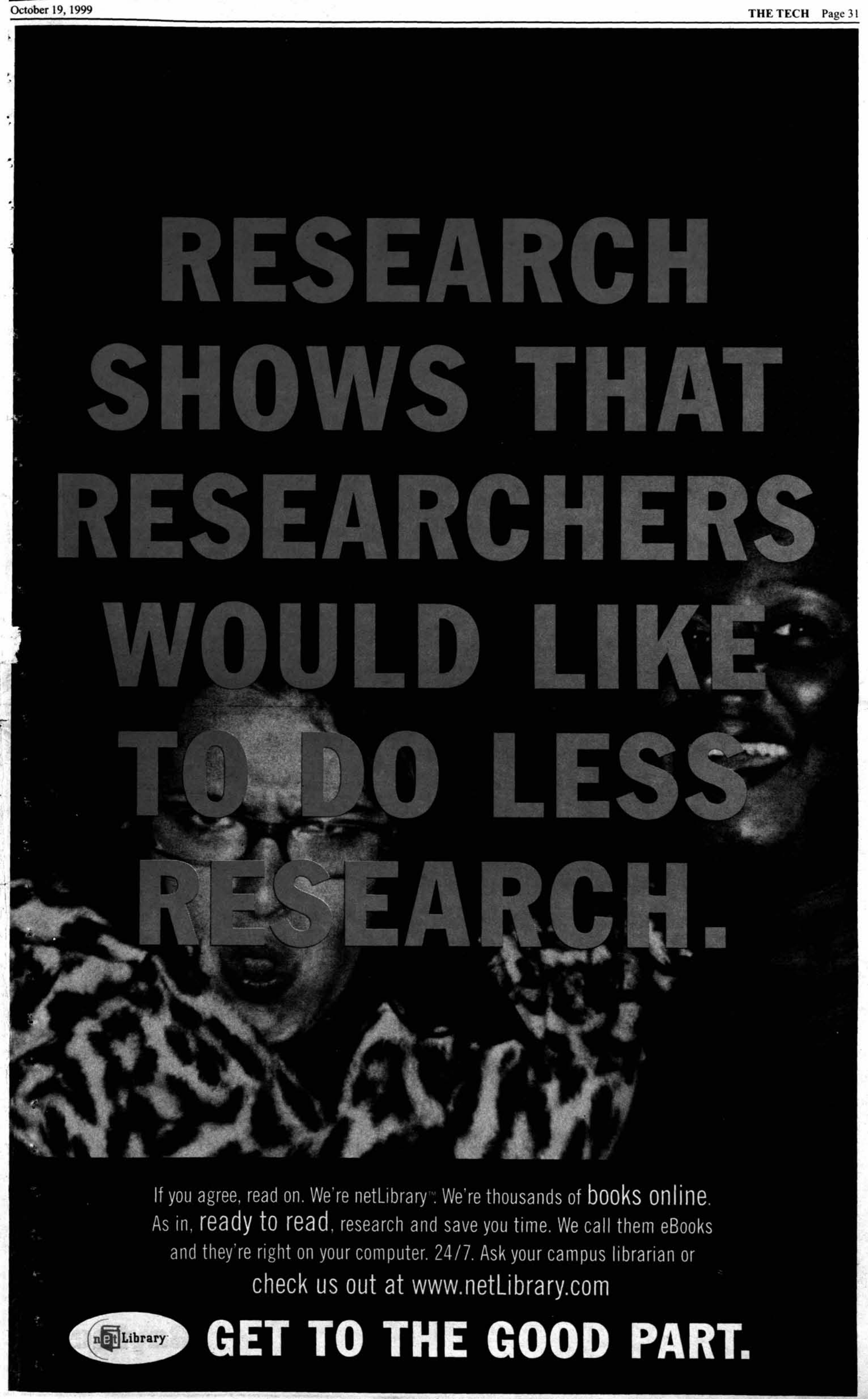
- Aeronautical Engineering
- Computer Science
- Management
- Chemical Engineering
- Electrical Engineering
- Marketing/Communications
- Civil Engineering and Construction Management
- Finance/Accounting
- Math
- Computer Engineering
- Human Resources
- Mechanical Engineering
- Industrial and Labor Relations
- Physics

Check out our Website at www.rayjobs.com/campus for further information including a calendar of recruiting events. At Raytheon, we strive to be the employer of choice for a diverse workforce by attracting, retaining, and recognizing the most talented, resourceful and creative people.



Bringing technology to the edge

Raytheon



**RESEARCH
SHOWS THAT
RESEARCHERS
WOULD LIKE
TO DO LESS
RESEARCH.**

If you agree, read on. We're netLibrary™. We're thousands of books online. As in, ready to read, research and save you time. We call them eBooks and they're right on your computer. 24/7. Ask your campus librarian or check us out at www.netLibrary.com



GET TO THE GOOD PART.

Opportunities created here



M&A



Technology



Broadview

Bring together today's hottest areas of convergence — technology and financial services. Add a work environment that combines industry knowledge in IT, communications and media with M&A transaction experience. You'll see something new beginning to take shape: career opportunities unlike those at other investment banks or consulting firms.

Investigate career opportunities in

M&A Investment Banking

Thursday, October 21, 1999 at 6:00 PM
Room 4-153

NEW YORK

SILICON VALLEY

BOSTON

LONDON

TOKYO

BROADVIEW

INFORMATION TECHNOLOGY

COMMUNICATIONS

MEDIA