Re-engineering MIT

With promises of a more efficient and economical Institute, will re-engineering be worth the human cost in the end?
Taking a step back and a look ahead

By Eva Moy

In the rat race of everyday life, every once in a while we need to take a step back to examine what we're doing and why. Re-engineering is this process of self-analysis, and the changes are often more than just cosmetic or organizational. Companies and universities alike are re-thinking not just individual processes, but the structure and interaction between entire processes.

One theme this year has been change in the face of money troubles. With cut in federal funding, individual researchers have had to spend more time scrambling for money. This belt-tightening was felt institute-wide, from the Lowell Institute School's departure and the Undergraduate Research Opportunities Program's uncertain future to student publications' struggle against financial collapse and employee layoffs' inevitability.

Still, not all the news was bad. The Institute celebrated its newest Nobel Laureate, Mario Molina and Paul J. Crutzen, and toasted the achievements of the Media Laboratory's first ten years. The year saw both the opening of the Tang Center and renovation of the old chemistry buildings. MIT bid farewell to many senior administrators and welcomed a new provost and many new deans.

The year saw metal detectors put in place outside some parties. After-hours building access was limited to holders of the MIT Card. Threats from the Unabomber and the radiation poisoning of a researcher served as further reminders that personal safety is always at risk.

Safety was also at the forefront of events in 1995. One theme this year has been change in the face of money troubles. With cut in federal funding, individual researchers have had to spend more time scrambling for money. This belt-tightening was felt institute-wide, from the Lowell Institute School's departure and the Undergraduate Research Opportunities Program's uncertain future to student publications' struggle against financial collapse and employee layoffs' inevitability.

It will be hard for the Institute to measure the degree of success of re-engineering. What is the tradeoff between its effect on the individuals and the benefit to the entire system? Is the MIT Card's utility worth its risk to privacy? Is the layoff of loyal employees worth the benefits of working in stronger teams?

One day, the re-engineering teams at MIT will submit their final reports and make their final recommendations. But the process of self-evaluation continues after the official process ends, and we will not know whether we have succeeded until we take a step back again and look at what we have done. In the meantime, enjoy this 11th annual Year in Review, and welcome to the 116th volume of The Tech.
Task force looks at conflict in ROTC Institute policy

By Stacey E. Blau

The ROTC task force, formed in October to review ROTC policy, has already heard from a number of people involved in ROTC, including students, faculty, administrators, and alumni. The task force is currently switching from gathering information to soliciting community input.

"Individual task force members are going to hear different things and react in different ways," said Gallop, "but information gathering will play a vital role in the decision process, Graves said.

The task force has invested in gathering input, but the group's work is not yet complete. The task force will meet with members of ROTC divisionary next month to discuss the task force's work and solicit input from the community. The task force is planning to present a final report and recommend a course of action at the March faculty meeting. The faculty will discuss the report and recommend and likely vote on the options at its April meeting. The faculty's recommendation will be voted on subsequently by the Corporation.

The task force at this point has no intention of making a decision. The task force, formed in 1990, was created to determine the status of ROTC policy. The task force is currently switching from gathering information to soliciting community input. The task force is planning to present a final report and recommend a course of action at the March faculty meeting. The faculty will discuss the report and recommend and likely vote on the options at its April meeting. The faculty's recommendation will be voted on subsequently by the Corporation.

The task force is planning to present a final report and recommend a course of action at the March faculty meeting. The faculty will discuss the report and recommend and likely vote on the options at its April meeting. The faculty's recommendation will be voted on subsequently by the Corporation.
The Re-engineering of MIT: Long-term effort aims to reduce deficit and to streamline processes

By Shang-Lin Chang and Dan McGuire

U nless we change the rules, we are merely rearranging the deck chairs on the Titanic. We cannot achieve break-throughs in performance by cutting fat or automating existing processes," said Michael M. Hammer '68 about re-engineering in an article in the Harvard Business Review. MIT, burdened by a budget shortfall, brought in Hammer for a re-engineering workshop in November 1993 that kicked off the Institute's cost-cutting re-engineering effort.

The gap between income and expenditures — measured last year at $9.17 million — is cause for worry, and people, said Senior Vice-President William R. Dixon '66 in a letter written to the community, Vest announced in late 1993 that 400 people, or about 8% of the faculty, will be reduced through attrition made, he said.

"We're not naive enough to think that we'll be able to do this without laying somebody off, but I want to minimize that as much as possible." Vest said.

Teams to take the task

An initial core team, sponsored by Dickson and led by Vice President for Information Systems James D. Bruce ScD '84, and composed of interdepartmental personnel, split up into two groups — assessment and redesign. The assessment team is responsible for identifying faulty processes that can be changed while the redesign team creates models and structures for the new re-engineering effort.

Early initiatives include OLS, mail, and custodial services, was charged to reorganize the systems like OLS, mail, and custodial services, was charged to reorganize the systems.

Devin attributed some problems to communication issues, noting that usage of the new system was much higher than initially forecasted.

The Institute seems to be saving money through the arrangement. Clark said that initial estimates of savings are around 13 percent on laboratory supplies, although that number does not reflect any increased issues like space, personnel costs, and infrastructure changes.

The mail team, which was already deep into the planning stage when the re-engineering effort kicked off, was also incorporated into the project. The new team, the manager of mail services, was charged to reorganize the systems like OLS, mail, and custodial services, was charged to reorganize the systems.

The new mail centers are "the first stage of the redesign and probably the most controversial," said the general manager of mail services.

The mail center provoked complaints from students who asked "why are we paying such a high price for something that we used to hang around the table quickly," said a MIT student who has hustled mail to the offices. Now what happens is everyone must go to the mail room to get his or her mail, said Professor of Electrical Engineering and Computer Science James L. Kirtley Jr '67 in the MIT Faculty Newsletter.

"It's a big change," Devlin said. "We knew this was going to be very difficult, and it was." Devlin said.

Devin

Devlin

"The Trumpet of Conscience: Dr. Martin Luther King's Contract with America" is the theme of the re-engineering effort. The featured speaker in the event is Reverend Martin Luther King Jr., a leader of the civil rights movement and Nobel Peace Prize laureate. The event is sponsored by the President's Office, the Office of the Dean of Undergraduate Education, and the Office of Student Affairs.

A House of Representatives committee on budget cuts undergraduate scholarships, a quarter in 1993. The measure will affect nearly 2,000 current and new students, and most of the cuts will come in the form of reduction in the maximum amount of aid that students can receive. The measure will have a "severe impact" on the Institute, said Professor of Chemistry M. Golub '79, who headed the team that designed the re-engineering effort.

The teams are working well, said Operations Supervisor for Building Services
Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Re-engineering work teams. Shifts of mail workers were put in teams and, companies have begun similar re-engineering efforts as they see the need, Schmidt said. They currently have projects in a number of things. "[Yale's] core mission is teaching and research with service to the community," said Rosalind H. Williams, dean for undergraduate education and a member of the re-engineering steering committee. While the present status of re-engineering efforts remains somewhat hazy. Some teams, like the Institute's technology infrastructure team, are aimed at renovating outof date systems and consolidating many student services under one roof. The current goals of the team are aimed at renovating out of date systems and consolidating many student services under one roof.

The information technology infrastructure team and the mail team are still implementing their projects. Some teams, like the Institute's technology infrastructure team and the mail team are still implementing their projects. Some teams, like the Institute's technology infrastructure team and the mail team are still implementing their projects.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.

Across the board, the first item on everyone's lists seems to be replacing outdated computer systems.
Continued from previous page

evaluate the cost of some items. The thor-
ough implementation of something as far-
reaching as re-engineering has made it even more difficult. Evaluating savings not only requires a quantification of savings in labor and space, but also an intensive look at how institute dollars are being spent. The more complex the facts that some of the original es-
timates of re-engineering savings did not pan out for a variety of reasons. A 1993 estimate that the Institute would have a budget sur-
plus of $2.7 million dollars per year after a string of years with deficits — did not occur.

"We shall most likely have another deficit next year," said Provost Joel Moed POS'77. "One reason why the projection in 1993 was too optimistic is the continuing downturn pressure on what the government auditors have allowed us to charge in vari-
ous overhead categories," he said. 

"It is too early in the process for me to throw out specific numbers or even estimates ... there is sufficient evidence that many of the redesigns, in principle, are going to end up saving MIT money, and there is no question from my analysis that the redesign processes are certainly going to save MIT money," Clark said.

Making a cheaper breakeur for his department, for example, "that is just a saving to MIT customer," Clark said.

In buying a cheaper breakeur for his department, for example, "that is just a saving to the MIT customer," Clark said.

is just looking at the one element of price; that is not encompassing everything," he said.

"There is still an infrastructure that MIT has to support. There were some people who were being supported by the prices. OLS was charging," he said. Those individuals have been placed on the administrative bud-
get. "Issues of fixed up space have not been quantified," Clark said. 

While the cost of the space that OLS occupied was not charged to MIT, through the prices of products, there was still a cost for maintaining the OLS facility.

The fact that this space was no longer being used for other uses showed that we needed to establish a clear methodology for recognizing the value of space, Clark said.

"I don't think we'll ever be able to put our arms around all of the issues involved," Clark said. "We are establishing some templates so at any point in the future we will be able to take a snapshot of the universe and measure the effective-
ness, savings, and quality of service of the redesign," Clark said.

"Even though some of the numbers are not yet totally clear, I am encouraged that some of the changes that might appear radial are very positive steps," Clark said.

"Doing business in the old ways is not going to cut it if MIT is going to stay in the fore-
clear methodology for recognizing the value of space, Clark said.

To cut it if MIT is going to stay in the forefront of education, research, and technology."

Re-engineering projects elsewhere

Yale began its re-engineering efforts a year-and-a-half ago by examining its student services, with a standing goal of fully inte-
grating admission and financial services, Schmidt said. They later began re-engineering of its student services, but not in that of administrative systems, Plummer said. At Stanford, which has only recently begun to address student services, students have not really been involved yet.

CMU first looked at acquisitions, pur-
chases, and accounts payable, then began facilities design and renovation processes, Schmidt said. They later began re-engine-
ering effort to change their student ser-
vice.

Student involvement in the re-engineer-
ning process at other schools has been mini-
mal so far. Yale sought student input in the re-engineering of its services, but not in that of administrative systems, Plummer said. At Stanford, which has only recently begun to address student services, students have not really been involved yet.

CMU first looked at acquisitions, pur-
chases, and accounts payable, then began facilities design and renovation processes, Schmidt said. They later began re-engine-
ering effort to change their student ser-
vice.

Student involvement in the re-engineer-
ning process at other schools has been mini-
mal so far. Yale sought student input in the re-engineering of its services, but not in that of administrative systems, Plummer said. At Stanford, which has only recently begun to address student services, students have not really been involved yet.

CMU first looked at acquisitions, pur-
chases, and accounts payable, then began facilities design and renovation processes, Schmidt said. They later began re-engine-
ering effort to change their student ser-
vice.

Student involvement in the re-engineer-
ning process at other schools has been mini-
mal so far. Yale sought student input in the re-engineering of its services, but not in that of administrative systems, Plummer said. At Stanford, which has only recently begun to address student services, students have not really been involved yet.

CMU first looked at acquisitions, pur-
chases, and accounts payable, then began facilities design and renovation processes, Schmidt said. They later began re-engine-
ering effort to change their student ser-
vice.

Student involvement in the re-engineer-
ning process at other schools has been mini-
mal so far. Yale sought student input in the re-engineering of its services, but not in that of administrative systems, Plummer said. At Stanford, which has only recently begun to address student services, students have not really been involved yet.

CMU first looked at acquisitions, pur-
chases, and accounts payable, then began facilities design and renovation processes, Schmidt said. They later began re-engine-
ering effort to change their student ser-
vice.
Aramark faces scrutiny as contract is up for renewal

By A. Arif Husain

Food service is a touchy subject on campus — a balance between providing nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritious, nutritiou

Libraries improve computer system, exchange with Harvard

By Angela Liao

In response to the various student needs and budget cuts, the MIT Libraries have gone through several changes this year in both personnel and services. The year started with shorter hours, and an exchange program with the library of the University of Chicago.

Director of Libraries Jay K. Lücker retired in August after 20 years of service. Ann B. Wolpert, executive director of libraries and information services at the Harvard Business School since 1995, was appointed and assumed her duties in early January.

A major challenge facing all research libraries now is managing the transition to a world where more-and-more information is available with less and less constraints. Returning to campus is also expecting to move into a new house late this fall.

$360,000 system is the result of a joint effort between MIT and GEAC, will be used to provide computer system, exchange, and planning services and develop new electronic services for students.

The new system is more powerful, has more sophisticated indexing, searching, and processing capabilities, and has a structure superior to the old GdEC 1000 system, Anderson said.

The changeover will culminate in the development of a client/server system for MIT Libraries. That part of the new system, also a joint effort between students and staff, will be in place by next summer, Anderson said.

Hayden hours, subscriptions cut

Because of financial cuts, the Charles H. Hayden Memorial Library's hours were cut down from the traditional 24-hour a day schedule. The library now closes promptly at 9:00 p.m.
Federal funding cuts
Institute predicts difficult but bearable times ahead
By Orli G. Bahcall

Half a decade after the collapse of the Soviet Union, the budgetary fallout of the end of the Cold War continues to force research universities to tighten their belts. Once plentiful federal dollars have become scarcer; a changing economy has made schools rethink their educational missions.

The intensity of past year's budget-balancing debate has spilled continuing uncertainty for the Institute, which receives upwards of $270 million in direct federal funding each year. "This has been a very unusual year," said MIT Washington Office Director John C. Crowley. "It's impossible to predict how this budget [debate] will conclude."

But after the chaos of 1995, administrators predict MIT's formidable research reputation will help avoid drastic cuts. Still, they say, the Institute will not only have to adapt to dwindling funds, especially for graduate training, but continue to adapt its educational program around the shifting needs of the country.

Amidst uncertainty, hope
Overall, the budget appropriations battles in the capital left MIT relatively unscathed. Most of Institute's primary donor agencies, including the Department of Energy and the National Institutes of Health, have been funded through to the end of this year. However, a few are still subject to the budget process — including the National Science Foundation, the Environmental Protection Agency, and NASA.

These agencies may now have to "bar the award of new funds for proposals that have been prepared for the next round," Crowley said. "This will disrupt support for graduate research, and faculty trying to establish their research. Those programs interrupted will have no funds to pursue their research."

But amidst this uncertainty and turbulence lies a glimmer of hope. "Relative to everything else within discretionary spending, Republican majorities have identified university research as a priority," Crowley said. "They have attempted to accord it special treatment, while trying to squeeze other things."

Despite the enormously difficult political pressures, there seems to be a recognition in Washington of the long-term value of university research and the need for stability in the budget funding system.

Federal Budget Cuts Slow Research Funding
While thousands of furloughed government workers followed news of federal budget bickering with apprehension, the Institute was only minimally affected by the second of two federal government shutdowns in December.

No MIT employee was furloughed or laid off as a result of the shutdown, although some contracts were put on hold because contacts at federal agencies could not be reached, according to Director of the Office of Sponsored Programs Julie T. Norris. A OSP study found that the 17-day shutdown did cost the Institute $11.6 million in research funding. The office based the assessment on the awards that were expected to have come in during the shutdown. Assuming that expenses have remained unchanged, MIT also has spent about one million dollars in the month since the shutdown, Norris said. But the shutdown did not prompt much faculty reaction, largely because many projects enjoy a three-month funding leeway. That means faculty members with grants from federal agencies who have not yet received their 1996 funding can continue to spend until about March under a pre-funding allowance, which gives the research funding system a grace period. If one thing is certain, though, it is that "MIT will have to work a lot harder to keep its funding level where it is," said Office of Sponsored Programs Director Julie T. Norris.

MIT's funding may depend on its record
MIT is one of many institutions trying to project what will happen if the Republican seven-year balanced budget plan goes through. When the American Association of Universities projected the effects of the proposed budget cuts on research programs, the feeling was that research programs overall would be cut about 32 percent in the budget-balancing process. This would be about an $81 million cut for MIT, said Norris. But Norris does not believe that the loss will be this drastic, because, when considering what is cut to federal research, MIT is anything but an average institution. The cuts will not be distributed equally among all places of research, she said.

As always, funding is given first to those places doing the best work. The quality of MIT will keep it above water, even if it means more suffering for others, Norris said. And recent history bears that out: The past few years, MIT research expenditures have indeed been maintained above those of other leading research institutions if the Institute were to lose $81 million MIT would be a different kind of institution, Norris said. The Institute would see "less research, [which] translates to fewer students. The equipment faculty use probably wouldn't be replaced with new state of the art equipment."

"The dissent, in looking at savings, tends to look less at reduction of costs [and more at] the transfer of those costs to the rest of the world," she said. As a result, MIT is now asking for fewer guarantees from the agencies, simply because during the shutdown there was nobody researchers could call for information or guarantees about the funding process. If one thing is certain, though, it is that "MIT will have to work a lot harder to keep its funding level where it is," said Office of Sponsored Programs Director Julie T. Norris. "If we can't get the information, we assume that we have to take on the risk," she said.

Fortunately, the shutdown came at a time that is not particularly crucial to research funding, Norris said. The end of December is a "low time for starting research projects," Norris said. "The number of new awards and new starts are at their peak," she said. The traditional time for starting new projects and receiving research grants is October, the start of the fiscal year, she said.

Numbers of awards are also high during February, the start of the fiscal year, she said. Numbers of awards are also high during February, the standard start date for a frequent sponsor of MIT research, the National Institutes of Health. MIT can absorb the impact of the delayed funding better than smaller schools, Norris said. "I have talked to some in the past couple of weeks, and they are more worried. They have to consider laying off students employees because they literally do not have the cash." the risk of pre-funding, Norris said. But MIT will not lay off anyone, she said.

"We do support people. Of course, if we do not get the payments, we will have a real problem, but every big institution is doing the same thing," Norris said. Unlike federal budget relations become "catastrophic, we are just running the risk more than usual."

Orli G. Bahcall

Federal Budget Cuts Slow Research Funding

While thousands of furloughed government workers followed news of federal budget bickering with apprehension, the Institute was only minimally affected by the second of two federal government shutdowns in December. No MIT employee was furloughed or laid off as a result of the shutdown, although some contracts were put on hold because contacts at federal agencies could not be reached, according to Director of the Office of Sponsored Programs Julie T. Norris. A OSP study found that the 17-day shutdown did cost the Institute $11.6 million in research funding. The office based the assessment on the awards that were expected to come in during the shutdown. Assuming that expenses have remained unchanged, MIT also has spent about one million dollars in the month since the shutdown, Norris said. But the shutdown did not prompt much faculty reaction, largely because many projects enjoy a three-month funding leeway. That means faculty members with grants from federal agencies who have not yet received their 1996 funding can continue to spend until about March under a pre-funding allowance, which gives the research funding system a grace period.

If one thing is certain, though, it is that "MIT will have to work a lot harder to keep its funding level where it is," said Office of Sponsored Programs Director Julie T. Norris. "If we can't get the information, we assume that we have to take on the risk," she said.

Fortunately, the shutdown came at a time that is not particularly crucial to research funding, Norris said. The end of December is a "low time for starting research projects," Norris said. "The number of new awards and new starts are at their peak," she said. The traditional time for starting new projects and receiving research grants is October, the start of the fiscal year, she said. Numbers of awards are also high during February, the standard start date for a frequent sponsor of MIT research, the National Institutes of Health. MIT can absorb the impact of the delayed funding better than smaller schools, Norris said. "I have talked to some in the past couple of weeks, and they are more worried. They have to consider laying off students employees because they literally do not have the cash." the risk of pre-funding, Norris said. But MIT will not lay off anyone, she said.

"We do support people. Of course, if we do not get the payments, we will have a real problem, but every big institution is doing the same thing," Norris said. Unlike federal budget relations become "catastrophic, we are just running the risk more than usual."

Orli G. Bahcall
Cost cutting forces Lowell to move

By Yaron Koren

Last year's decision to move the Lowell Institute from Lowell to Northeastern University effectively closed the Lowell Institute as one of MIT's major research institutions of the next century.

"It is clear that the budget cuts will have a major impact on the Lowell Institute," said Graduate School Dean J. David Litster. "We are not going to be a disaster, as the most pessimistic people would tell you, but they are going to be difficult. We can adjust as long as they don't happen too rapidly. If things happen slowly enough, we can figure out ways around them."

Litster said that the future of the Lowell Institute is uncertain, the impact of the funding cuts on MIT's Graduate School and the possibility that both Grad School and Lowell Graduate School can already be assessed. "One thing will clearly happen, there will be a big impact on our TA's," Litster said. MIT will "probably no longer be able to take the initiative we charge as a fringe benefit." That would raise the cost of the graduate research assistant contract substantially. "The Lowell Institute shoulders most of our core missions," Wrighton said; "I have ssured the city council, through the MIT provost, that we will make every possible effort to [reach] Cambridge residents and to institutionalize the idea of elitism to an educational facility.[...]

Litster said that the budget cuts will have a major impact on the Lowell Institute. "We are not going to be a disaster, as the most pessimistic people would tell you, but they are going to be difficult. We can adjust as long as they don't happen too rapidly. If things happen slowly enough, we can figure out ways around them."

Litster said that the future of the Lowell Institute is uncertain, the impact of the funding cuts on MIT's Graduate School and the possibility that both Grad School and Lowell Graduate School can already be assessed. "One thing will clearly happen, there will be a big impact on our TA's," Litster said. MIT will "probably no longer be able to take the initiative we charge as a fringe benefit." That would raise the cost of the graduate research assistant contract substantially.

Future lies in multidisciplinary programs

All the economic and political changes that are taking place need MIT to find new sources of funding. Traditionally research looks toward agencies like the National Science Foundation and the Department of Defense for funding, Norris said. The Institute now needs to expand this horizon, to find new sources of funding. In addition, there remains a need to look at new basic research funding, at government support perhaps at foundations.

Putting all these elsewhe enduring interest in education will eventually drive the MIT's educational mission to fit national views. To this, and to the end, Dean of the School of Engineering Robert A. Brown added that MIT believes the proliferation of more professional programs is just what MIT needs. "Degree programs like the technical program in System Design and Management have been very successful at many institutions and are geared more toward people going into industry."

"The Lowell Institute is in a great position to do this," Brown said.

"Network administrators are enthusiastic about the acquisition. Baer said that he expected the majority of the Lowell School's current students to stay with the program after the move. The director of Northeastern's School of Engineering Technology, Charles W. Finn PhD '71, said the move is "a fantastic syner-
gy." With his own program, Finn added that many LIS instructors are also professors at Northeastern during the day.

Lowell himself called the move to Northeastern a "wonderful opportunity." But the moving of the Lowell School came as a shock and a disappointment to many members of the Lowell Institute.

"I have yet to talk to anyone at MIT, faculty or hourly employee, who thinks the closing was a good idea," Wedlock said. "It will probably not be the same thing." He added that "the well-equipped ECS labs are another example of an exceptional environment that NU doesn't duplicate."

Some disagree over perceptions

Many disgruntled residents have questioned the decision to eliminate the Lowell School from MIT. Wrighton cited cost-cutting as part of the effort to eliminate non-essential services during a time of tight budget. "We are not going to be a disaster, as the most pessimistic people would tell you, but they are going to be difficult. We can adjust as long as they don't happen too rapidly. If things happen slowly enough, we can figure out ways around them."

Litster said that the future of the Lowell Institute is uncertain, the impact of the funding cuts on MIT's Graduate School and the possibility that both Grad School and Lowell Graduate School can already be assessed. "One thing will clearly happen, there will be a big impact on our TA's," Litster said. MIT will "probably no longer be able to take the initiative we charge as a fringe benefit." That would raise the cost of the graduate research assistant contract substantially.

Future lies in multidisciplinary programs

All the economic and political changes that are taking place need MIT to find new sources of funding. Traditionally research looks toward agencies like the National Science Foundation and the Department of Defense for funding, Norris said. The Institute now needs to expand this horizon, to find new sources of funding. In addition, there remains a need to look at new basic research funding, at government support perhaps at foundations.

Putting all these elsewhe enduring interest in education will eventually drive the MIT's educational mission to fit national views. To this, and to the end, Dean of the School of Engineering Robert A. Brown added that MIT believes the proliferation of more professional programs is just what MIT needs. "Degree programs like the technical program in System Design and Management have been very successful at many institutions and are geared more toward people going into industry."

"The Lowell Institute is in a great position to do this," Brown said.

"Network administrators are enthusiastic about the acquisition. Baer said that he expected the majority of the Lowell School's current students to stay with the program after the move. The director of Northeastern's School of Engineering Technology, Charles W. Finn PhD '71, said the move is "a fantastic syner-
gy." With his own program, Finn added that many LIS instructors are also professors at Northeastern during the day.

Lowell himself called the move to Northeastern a "wonderful opportunity." But the moving of the Lowell School came as a shock and a disappointment to many members of the Lowell Institute.

"I have yet to talk to anyone at MIT, faculty or hourly employee, who thinks the closing was a good idea," Wedlock said. "It will probably not be the same thing." He added that "the well-equipped ECS labs are another example of an exceptional environment that NU doesn't duplicate."

Some disagree over perceptions

Many disgruntled residents have questioned the decision to eliminate the Lowell School from MIT. Wrighton cited cost-cutting as part of the effort to eliminate non-essential services during a time of tight budget. "We are not going to be a disaster, as the most pessimistic people would tell you, but they are going to be difficult. We can adjust as long as they don't happen too rapidly. If things happen slowly enough, we can figure out ways around them."

Litster said that the future of the Lowell Institute is uncertain, the impact of the funding cuts on MIT's Graduate School and the possibility that both Grad School and Lowell Graduate School can already be assessed. "One thing will clearly happen, there will be a big impact on our TA's," Litster said. MIT will "probably no longer be able to take the initiative we charge as a fringe benefit." That would raise the cost of the graduate research assistant contract substantially.

Future lies in multidisciplinary programs

All the economic and political changes that are taking place need MIT to find new sources of funding. Traditionally research looks toward agencies like the National Science Foundation and the Department of Defense for funding, Norris said. The Institute now needs to expand this horizon, to find new sources of funding. In addition, there remains a need to look at new basic research funding, at government support perhaps at foundations.

Putting all these elsewhe enduring interest in education will eventually drive the MIT's educational mission to fit national views. To this, and to the end, Dean of the School of Engineering Robert A. Brown added that MIT believes the proliferation of more professional programs is just what MIT needs. "Degree programs like the technical program in System Design and Management have been very successful at many institutions and are geared more toward people going into industry."

"The Lowell Institute is in a great position to do this," Brown said.

"Network administrators are enthusiastic about the acquisition. Baer said that he expected the majority of the Lowell School's current students to stay with the program after the move. The director of Northeastern's School of Engineering Technology, Charles W. Finn PhD '71, said the move is "a fantastic syner-
gy." With his own program, Finn added that many LIS instructors are also professors at Northeastern during the day.

Lowell himself called the move to Northeastern a "wonderful opportunity." But the moving of the Lowell School came as a shock and a disappointment to many members of the Lowell Institute.

"I have yet to talk to anyone at MIT, faculty or hourly employee, who thinks the closing was a good idea," Wedlock said. "It will probably not be the same thing." He added that "the well-equipped ECS labs are another example of an exceptional environment that NU doesn't duplicate."

Some disagree over perceptions

Many disgruntled residents have questioned the decision to eliminate the Lowell School from MIT. Wrighton cited cost-cutting as part of the effort to eliminate non-essential services during a time of tight budget. "We are not going to be a disaster, as the most pessimistic people would tell you, but they are going to be difficult. We can adjust as long as they don't happen too rapidly. If things happen slowly enough, we can figure out ways around them."

Litster said that the future of the Lowell Institute is uncertain, the impact of the funding cuts on MIT's Graduate School and the possibility that both Grad School and Lowell Graduate School can already be assessed. "One thing will clearly happen, there will be a big impact on our TA's," Litster said. MIT will "probably no longer be able to take the initiative we charge as a fringe benefit." That would raise the cost of the graduate research assistant contract substantially.
We're more a journal than a newspaper, so it's quality that's more important.

Outgoing Counter-point Editor in Chief Han Y. Huang

"We will ask the deans for donations," said Co-Editor in Chief Nathan C. Dykes, "but we likely will not get that money. The problem is last semester's guide is not finished," because some reviews of classes remain unsubmitted, and the deans are consequently unwilling to shell out more money, she said. "We hopefully should get some, but it may be less than in previous years," Norton said. "Money is a definite problem right now."

While a few hundred copies of the spring and fall 1996 issues will be printed to distribute to living groups and other major organizations to ensure hard-copy access, the guide will stay a primarily online publication.

Improvements will be made in the near future, however. The spring 1996 guide so that students can sort information by course, a specific professor or teaching assistant, or as it relates to a certain degree, advanced degree or major. The guide is beta-tested until next month, before the fall 1996 edition.

"We have a lot of writers. We're doing well," said Williams. "We'll get it out on time," she said.

After hiatus, Rune back on track

Although "Rune does not have any dire problems at this point," according to Literary Editor John M. Dykes '96, "we are currently behind schedule in putting out a new issue. This is probably our most pressing problem."

One reason for the delay has been lack of seasonal staff members in layout. "The layout people of previous years have moved on, leaving a novicelayout assistant, or as it relates to a certain degree, assistant, or as it relates to a certain degree, student," Williams said. "They stay the same chance to interact with professors, basic, or as it relates to a certain degree, student," Williams said. "They stay the same chance to interact with professors, basic, or as it relates to a certain degree, student," Williams said. "They stay the same chance to interact with professors, basic, or as it relates to a certain degree, student," Williams said. "They stay the same chance to interact with professors, basic, or as it relates to a certain degree, student," Williams said. "They stay the same chance to interact with professors, basic, or as it relates to a certain degree, student."
UROP Revisited

A year after the worst crisis in its history, the embattled program isn't doing too badly - yet

By Ramy A. Arnaout

Last year at this time the Undergraduate Research Opportunities Program was still reeling from that financially disastrous summer of its 26-year history. Starting July 1, 1994, unexpected changes in federal funding guidelines had effectively doubled hiring costs, threatening the jobs of hundreds of students across campus.

UROP's plight was the cover story of last year's Year in Review; but since then, news of the embattled program has been surprisingly quiet. It turns out that while UROP is not out of the woods yet, it hasn't been done nearly as badly as it had feared.

The UROP office said overall involvement is down only about 20 percent, short of the 40 or 50 percent it had predicted last summer. That decrease is "considerably less than we thought," said UROP Director Norma G. McGavern. Summer participation declined just 13 percent as hundreds of students sidestepped the funding issue entirely by taking projects for credit instead of for pay, she said.

Summer participation was also better than expected, down about 20 percent to 700, "which is not too terribly dramatic," McGavern said. "That's fair; the figures are available in July. That decrease is about 20 percent over the previous fall, 1993. An 11 percent improvement over last year is fairly healthy, since there was no increase in faculty money will compensate for the predicted disaster, although donations - maybe it's not so bad like the class gift of the Class of 1995 - also played an important part. "The amount of money we have been growing nicely this year," she said.

It is too soon to tell whether continued increase in faculty money will compensate for last year's crisis, statistics from the fall semester will not be available until the end of the fiscal year in July.

But there is a hint that things might not be as rosy as they seem. While faculty spending on UROP students has been increasing steadily in the past few years - from $2.8 million in FY 1986 up steadily to an all-time high of $4.5 million in 1994 - it dropped in 1995 to $4.3 million, McGavern said. That financial year included the summer and fall of 1994, which was the first funding period under the new cuts.

It is unclear whether the drop was caused by new federal guidelines or the general tightening of governmental purse strings, she said.

And FY 1995 might not have been a good yardstick anyway, McGavern said. A summer infusion of $1 million from MIT's endowed fund to UROP largely offset the effects of the federal rules changes in 1994; the past year has seen no such gift. "A 22-year trend of increase of stoppex dropped," McGavern said. "Is it going to drop again? Is it going to stabi-

The overall budget," she said, although he acknowledged that a few of his fellow researchers disagree.

However, the federal rule changes - meant to correct what the General Accounting Office called 'tax oversights and practices' - bit harshly into most depart-

ments as supervisors tried to stretch research dollars further than they could go.

"The program is alive," McGavern said. "But are we doing great? No." A full 80 percent of UROP's funding proposal was rejected by the Department of Material Science and Engineering has remained fairly constant, with the pay/credit split of $2.8 million in FY 1986 up steadily to $4.5 million in 1994.

Numbers for the fall term this year, so far, look fairly healthy, since there was no increase in faculty money will compensate for the predicted disaster, although donations - maybe it's not so bad like the class gift of the Class of 1995 - also played an important part. "The amount of money we have been growing nicely this year," she said.

The situation could have been worse, McGavern said. She credits faculty members' monetary generosity for helping avert the predicted disaster, although donations - like the class gift of the Class of 1995 - also played an important part. "The amount of money we have been growing nicely this year," she said.

The Year in Review

Grads now have access to Harvard libraries

Continued from page 7

at midnight and opens at 8 a.m. week-
days and Saturdays and at noon on
Sundays.

The shortening of hours is a result of
long-term cuts. "For the past three years MIT and Harvard University now have free limited access to their univer-
sities' libraries as of the beginning of
September. Under-graduates from MIT and Harvard are not entitled to
the new exchange borrowing privi-

"We are very excited about this agree-
ment," Ferriero said. The Institute has been working toward having such an exchange for the past 130 years and has been seriously negotiating an agreement for the last 20 years.

Qualifying members of the MIT community must go to an MIT Libraries reference desk for approval for privileges at Harvard libraries. Once approved, applicants will receive Harvard borrowing cards. Literature describing the details of the exchange process are available at the Hayden Library's circulation desk.

The borrowing privileges extend to Harvard's 12 undergraduate libraries and MIT's 12 libraries. Cross-registered students, including undergraduates on leave of absence, are not eligible for privileges at Harvard libraries.

Undergraduate students are excluded from this exchange pro-
am. "That's the way Harvard wants it," Ferriero said. "We are working towards setting up an undergraduate exchange in the future, he said.

The current exchange program is up for evaluation at the end of its first year.

23

Issues of the MIT-Wellesley
publication Countpoint are
stolen from the Infinite
Corridor auditorium center
around midnight. Editor Han Y.
Hsiang Gu suspects the culprit is
a "disgruntled fraternity" that
was not pleased by its descrip-
tion in an article in last week's
"Wherever You May Roam: A Frank Guide
to Els at MIT."

24

President Charles M. Vest, incoming
Dean for Undergraduate Education and
Student Affairs Rosalind H.
funding and development.
Association President Carrie R. Muh '96 welcome the fresh-

men to MIT at the annual fresh-
man convocation. Professor of
language, selected by the passing
grade on the exam.

25

For the first time, a student, Catherine D. Conley '96, delivers the Killian Kick-Off keynote speech.

26

The computerized housing lot-
y is delayed an hour, caus-
ing much frustration among freshmen who had looked to the Athena clusters to enter their dormitory preferences.

27

Graduate student residence and
orientation kicks off with events
aimed at new students. A 1000
newcomers into MIT life. A Red Sox game and a cruise of Boston
Harbor are among the main
events of graduate KIO.

28

Catherine D. Conley '96

29

Students choose physical education
and humanities distribution classes in sep-
ate Athena and Athena librar-
ies. Also, for the first time, the
library is used to regu-
late enrollment in select-
eds "oversubscribed sci-
cence and humanities classes.

30

A Ford minivan carrying
members of the Tau Epilson Phi collides with a
Chrysler station wagon on the
Amherst Road by-pass.
Neither the drivers nor the
passengers are hurt.
A number of new services were added to the MIT Card's repertoire this past year. The card, which also serves as the main form of identification for students, allows holders to charge purchases to meal and auxiliary accounts, check out material from campus libraries, open doors to dormitories and other campus buildings, and access campus parking lots.

In an effort to control the number of security concerns, many of which have yet to be resolved.

Students, faculty, and staff gained access to more financial services than ever in 1995 when this year's card took effect on Sept. 28. The two-year-old card — which previously covered just dining services and Domino's Pizza purchases — now allows holders to charge new transactions to its expanded Multiplan combined meal and auxiliary declining balance account.

Such new charges include use of laundry machines in dormitories fitted with card readers, payment for photocopies made at Graphic Arts, and purchases from the 24-Hour coffeehouse and from campus vending machines, said Card Card Office Manager Lucy A. Barrera.

In addition to simplifying these financial transactions, the MIT Card also began see as a key for buildings other than just students' dormitories this year, operating a new security system of card readers on doors around campus.

This card system stilled out on campus as part of a pilot program to test ways of increasing general campus security. The program began late last spring, when people working on the pilot project build-

ings approached the Campus Police about increasing security in those buildings, lead-

ing to discussions with the Campus Police and Physical Plant.

The east campus program, which was for simplifying the system at the end of last semes-
ter, mandated the installation of card readers on Buildings E23, E25, and 66 and on the Medical Center. Only cardholders were allowed access to the high-traffic doors in those buildings when the doors were locked in the evening.

This kind of card access "is a very commonly used system at universities," said Chief of Police Anne P. Glavin, because it "maintains convenience and ease of access but limits access for people who don't belong there."

Card security sparks concerns

The consolidation of a such a large amount of information in a single system has sparked student concern over the potential for fraud. Specific questions about

Institute offices monitoring card transactions have sparked student concern over the potential for security breaches. The Card security system of card readers on doors around campus.

The key-card system stilled out on campus as part of a pilot program to test ways of increasing general campus security. The program began late last spring, when people working on the pilot project build-

ings approached the Campus Police about increasing security in those buildings, lead-

ing to discussions with the Campus Police and Physical Plant.

The east campus program, which was for simplifying the system at the end of last semes-
ter, mandated the installation of card readers on Buildings E23, E25, and 66 and on the Medical Center. Only cardholders were allowed access to the high-traffic doors in those buildings when the doors were locked in the evening.

This kind of card access "is a very commonly used system at universities," said Chief of Police Anne P. Glavin, because it "maintains convenience and ease of access but limits access for people who don't belong there."

Card security sparks concerns

The consolidation of a such a large amount of information in a single system has sparked student concern over the potential for fraud. Specific questions about

Institute offices monitoring card transactions have sparked student concern over the potential for security breaches. The Card security system of card readers on doors around campus.

The key-card system stilled out on campus as part of a pilot program to test ways of increasing general campus security. The program began late last spring, when people working on the pilot project build-

ings approached the Campus Police about increasing security in those buildings, lead-

ing to discussions with the Campus Police and Physical Plant.

The east campus program, which was for simplifying the system at the end of last semes-
ter, mandated the installation of card readers on Buildings E23, E25, and 66 and on the Medical Center. Only cardholders were allowed access to the high-traffic doors in those buildings when the doors were locked in the evening.

This kind of card access "is a very commonly used system at universities," said Chief of Police Anne P. Glavin, because it "maintains convenience and ease of access but limits access for people who don't belong there."

Card security sparks concerns

The consolidation of a such a large amount of information in a single system has sparked student concern over the potential for fraud. Specific questions about

Institute offices monitoring card transactions have sparked student concern over the potential for security breaches. The Card security system of card readers on doors around campus.

The key-card system stilled out on campus as part of a pilot program to test ways of increasing general campus security. The program began late last spring, when people working on the pilot project build-

ings approached the Campus Police about increasing security in those buildings, lead-

ing to discussions with the Campus Police and Physical Plant.

The east campus program, which was for simplifying the system at the end of last semes-
ter, mandated the installation of card readers on Buildings E23, E25, and 66 and on the Medical Center. Only cardholders were allowed access to the high-traffic doors in those buildings when the doors were locked in the evening.

This kind of card access "is a very commonly used system at universities," said Chief of Police Anne P. Glavin, because it "maintains convenience and ease of access but limits access for people who don't belong there."

Card security sparks concerns

The consolidation of a such a large amount of information in a single system has sparked student concern over the potential for fraud. Specific questions about

Institute offices monitoring card transactions have sparked student concern over the potential for security breaches. The Card security system of card readers on doors around campus.

The key-card system stilled out on campus as part of a pilot program to test ways of increasing general campus security. The program began late last spring, when people working on the pilot project build-

ings approached the Campus Police about increasing security in those buildings, lead-

ing to discussions with the Campus Police and Physical Plant.

The east campus program, which was for simplifying the system at the end of last semes-
ter, mandated the installation of card readers on Buildings E23, E25, and 66 and on the Medical Center. Only cardholders were allowed access to the high-traffic doors in those buildings when the doors were locked in the evening.

This kind of card access "is a very commonly used system at universities," said Chief of Police Anne P. Glavin, because it "maintains convenience and ease of access but limits access for people who don't belong there."

Card security sparks concerns

The consolidation of a such a large amount of information in a single system has sparked student concern over the potential for fraud. Specific questions about

Institute offices monitoring card transactions have sparked student concern over the potential for security breaches. The Card security system of card readers on doors around campus.

The key-card system stilled out on campus as part of a pilot program to test ways of increasing general campus security. The program began late last spring, when people working on the pilot project build-

ings approached the Campus Police about increasing security in those buildings, lead-

ing to discussions with the Campus Police and Physical Plant.

The east campus program, which was for simplifying the system at the end of last semes-
ter, mandated the installation of card readers on Buildings E23, E25, and 66 and on the Medical Center. Only cardholders were allowed access to the high-traffic doors in those buildings when the doors were locked in the evening.

This kind of card access "is a very commonly used system at universities," said Chief of Police Anne P. Glavin, because it "maintains convenience and ease of access but limits access for people who don't belong there."

Card security sparks concerns

The consolidation of a such a large amount of information in a single system has sparked student concern over the potential for fraud. Specific questions about

Institute offices monitoring card transactions have sparked student concern over the potential for security breaches. The Card security system of card readers on doors around campus.
Metal detectors may not prove a cure-all to crime at MIT parties

By Shang-Lin Chuang

A string of violent incidents at MIT parties over the past few years has left crime high on the minds of students, Campus Police, and administrators. The latest development in the search for an answer came last August, when campus parties started to look like airport security with the introduction of metal detectors.

The CPs hope that the detectors — required for certain large on-campus events — will prevent a repeat of tragedies like the murder of a Northeastern University student at a Student Center party in 1987, a shooting in 1989, Student Center stabbings in 1991, and a stabbing at Delta Kappa Epsilon in 1992, said Chief of Campus Police Anne P. Glavin.

But both students and the police admit the detectors cannot prevent a crime for violent crime on their own. The 1989 shooting happened not at a party but after one in a parking lot. And when a NU student was shot in the leg on the steps outside an Alpha Phi Alpha party at Walter Memorial two months ago, metal detectors had been in place at the doors.

"We did everything we could to prevent security," APA member Craig Robinson '97 said of that recent event. "The shooting was just beyond our control... The problems are mostly outside the parties. That's where we need to focus on making our policies.

Glavin agrees that the main problem involves introducing large events — not the parties themselves.

Problems with several other parties during the fall have also prompted concerns about alcohol consumption by minors, crowd control problems, and the presence of non-college students at MIT events, according to James M. Wahl, chair of the Campus Activities Complex and the CPs decided to cancel all large, late-night parties until at least early spring. While students are mindful of the problem, the response has still met with some criticism.

"I don't know if it was necessary to make some sort of drastic move to quiet this agitation," Robinson said. "It's really easy to say, 'Let's just have no more parties.' The administration should take a second look at the positive aspects of events,' like community fundraising, he said.

The vague terms "large" and "late-night" were never explicitly spelled out, but parties are instead evaluated on a case-by-case basis by the CPs, RCA, and the office of Residence and Campus activities. In general, fraternity, sorority, and independent living group parties will probably not be affected, Jablonski said.

The only group to have had a party canceled so far — Gays, Lesbians, Bisexuals, Transgenders, and Friends at MIT — feels that the cancellation is unfair and may have some deterrent effects on OAMT, said Sarah L. Yeats '98, an organizer of the event.

The uncertain fact remains that MIT has on average seen one major party-related crime every two years for the past decade, and Gays, Lesbians, Bisexuals, Transgenders, and Friends at MIT — only time will tell whether the use of metal detectors by residence policies help will curb that trend in 1996.

Radiation poisoning case highlights security concerns

By James M. Wahl

It seemed like a freak accident — a researcher exposed to a small amount of the radioactive tracer phosphorus-32 — until investigators from the Nuclear Regulatory Commission determined it was a deliberate act.

On Aug. 14 postdoctoral researcher Yuqiu Li, working at MIT's Center for Cancer Research, was investigating a radiation poisoning. The Institute confirmed that Li's intake was no more than 579 microcuries of radioactive material, which is within the 600 microcurie acceptable limit for single-event and annual exposure.

Since the amount was under the limit, it was not enough immediate physical discomfort. As a result, it wasn't until five days later, in a routine self-examination using a Geiger counter, that Li determined he had been exposed to radiation.

Li was subsequently examined by the Medical Department and Environmental Medicine, according to the News Office.

The poisoning triggered an immediate inquiry by the Institute's Radiation Protection Office, the Campus Police, and investigators from the U.S. Nuclear Regulatory Commission. In mid-October the Institute confirmed that the NRC was investigating a radiation poisoning.

The Boston Globe, Washington Post, and National Public Radio, among others, reported on the incident — in part because of the poisoning's similarity to a case that continues on next page.

The Kendall Square Cinema, located at One Kendall Square, opens today.

MIT and Massachusetts General Hospital are named as defendants in a lawsuit by relatives of irradiated patients. The suit is filed on behalf of patients who underwent experimental treatment administered at MIT's Nuclear Reactor Laboratory, MGH, and the Brookhaven National Laboratory in New York. Five of the patients died from complications associated with the treatment.
Legal action is slow in coming to radiation case

October 1

The Institute is charged with a lawsuit by members of the Polar Soybean Experiment. The court ruled in favor of the Institute, which stated that the lawsuit was groundless and that the evidence did not support the claim.

A $100,000 per month penalty is imposed by MIT to an affected person for not cooperating with the investigation. The fine was levied after a $42 million settlement was reached over the four years it would take MIT to conclude its investigation.

MIT, but the case remains under investiga-

tion. Among the suspects are the two persons responsible for the crime who could face federal charges.

Molina, the Nobel Prize winner, was responsible for the 1972 Antiballistic Missile Treaty of 1963, an agreement to ban atmospheric nuclear testing.

Another Pugwash member, Professor Emeritus of Electrical Engineering and Computer Science Jack Ruhe, is considered responsible for the 1972 Antih abroad Missile Treaty.

Professor Emeritus of Physics Bernard T. F. Fed was Pugwash secretary general from 1970 to 1975. Fed was a very important member and a very early participant of the movement, Tsipis said.

They "showed how sensitive the ozone layer is to the influence of anthropogenic emissions of certain compounds," according to the citation. "By explaining the chemical mechanisms that affect the thickness of the ozone layer, they have explained and decomposed through chemical processes in the atmosphere," according to the Nobel Committee's citation.

The chemical mechanisms that affect the thickness of the ozone layer, the three researchers have contributed to our salvation from a global environmental problem that could have catastrophic consequences. "Many members of faculty are active with Pugwash," said Kosta Tsipis, director of the program in science and technology for international security and Pugwash member since 1968.

Through informal discussions in Pugwash, MIT's 13th president Jerome Wiesner helped to establish the Partial Test Ban Treaty of 1963, an agreement to ban atmospheric nuclear testing.

Another Pugwash member, Professor Emeritus of Physics Bernard T. Fed was Pugwash secretary general from 1970 to 1975. Fed was a very important member and a very early participant of the movement, Tsipis said.

They "showed how sensitive the ozone layer is to the influence of anthropogenic emissions of certain compounds," according to the citation. "By explaining the chemical mechanisms that affect the thickness of the ozone layer, they have explained and decomposed through chemical processes in the atmosphere," according to the Nobel Committee's citation.

The chemical mechanisms that affect the thickness of the ozone layer, the three researchers have contributed to our salvation from a global environmental problem that could have catastrophic consequences. "Many members of faculty are active with Pugwash," said Kosta Tsipis, director of the program in science and technology for international security and Pugwash member since 1968.

Legal action is slow in coming to radiation case

October 1

The Institute is charged with a lawsuit by members of the Polar Soybean Experiment. The court ruled in favor of the Institute, which stated that the lawsuit was groundless and that the evidence did not support the claim.

A $100,000 per month penalty is imposed by MIT to an affected person for not cooperating with the investigation. The fine was levied after a $42 million settlement was reached over the four years it would take MIT to conclude its investigation.

MIT, but the case remains under investiga-

tion. Among the suspects are the two persons responsible for the crime who could face federal charges.

Molina, the Nobel Prize winner, was responsible for the 1972 Antiballistic Missile Treaty of 1963, an agreement to ban atmospheric nuclear testing.

Another Pugwash member, Professor Emeritus of Electrical Engineering and Computer Science Jack Ruhe, is considered responsible for the 1972 Antih abroad Missile Treaty.

Professor Emeritus of Physics Bernard T. Fed was Pugwash secretary general from 1970 to 1975. Fed was a very important member and a very early participant of the movement, Tsipis said.

They "showed how sensitive the ozone layer is to the influence of anthropogenic emissions of certain compounds," according to the citation. "By explaining the chemical mechanisms that affect the thickness of the ozone layer, they have explained and decomposed through chemical processes in the atmosphere," according to the Nobel Committee's citation.

The chemical mechanisms that affect the thickness of the ozone layer, the three researchers have contributed to our salvation from a global environmental problem that could have catastrophic consequences. "Many members of faculty are active with Pugwash," said Kosta Tsipis, director of the program in science and technology for international security and Pugwash member since 1968.

Through informal discussions in Pugwash, MIT's 13th president Jerome Wiesner helped to establish the Partial Test Ban Treaty of 1963, an agreement to ban atmospheric nuclear testing.

Another Pugwash member, Professor Emeritus of Physics Bernard T. Fed was Pugwash secretary general from 1970 to 1975. Fed was a very important member and a very early participant of the movement, Tsipis said.

They "showed how sensitive the ozone layer is to the influence of anthropogenic emissions of certain compounds," according to the citation. "By explaining the chemical mechanisms that affect the thickness of the ozone layer, they have explained and decomposed through chemical processes in the atmosphere," according to the Nobel Committee's citation.

The chemical mechanisms that affect the thickness of the ozone layer, the three researchers have contributed to our salvation from a global environmental problem that could have catastrophic consequences. "Many members of faculty are active with Pugwash," said Kosta Tsipis, director of the program in science and technology for international security and Pugwash member since 1968.
On its tenth birthday, the lab celebrates its past and offers a glimpse into its future

By David D. Hsu

1995 has been a year when computers, the Internet, and all things digital were hyped by everyone from politicians to movie stars. It seemed that everybody, no matter what their technological credentials, jumped on the bandwagon.

Meanwhile, the place that embraced multimedia before it was popular, the Media Laboratory, celebrated its 10th anniversary on October 10 with a day-long symposium on its research, new technology, and perspectives on the digital future.

The Media Lab has been a large portion of the evolution of multimedia and information technology under the leadership of its director, Nicholas P. Negroponte '66.

The Lab spent its first 10 years exploring the union of text, graphics, and sound—nowadays "commonly called multimedia, which was more or less born here," Negroponte said.

This past year, Negroponte announced the completion of its multimedia mission. Now, with information technology becoming more mainstream, the Media Lab has launched its next step.

Technology gets a clue

The Media Lab's celebration was dubbed "10/10" both because of the date of the celebration and because it is the binary representation of the decimal number 10.

The event officially kicked off Things That Think, a new research consortium aimed at giving everyday objects from sneaker-tying paws to flying pans the ability to do useful things on their own, saving their human owners the trouble.

Media Arts and Sciences Professor Seymour A. Papert, who created the LOGO computer language, explained the concept with an anecdote.

"I was making sauce and the phone rang," Papert said. "I said, 'idiot'—meaning me. But if we imagine somebody going through the same sequence and saying 'idiot,' and [instead] of going the pan and the stove, or all the stuff in the kitchen, because all those things there ought to have known better than to let that happen," Papert said. "That's the prototype for Things That Think."

Negroponte gave two goals for Things That Think. "On the one hand it is to make that object perform better or to give it a personality such that it performs better," he said. "The second is to get it to do things that it might not have known how to do before, and when we say things, we really mean it."

There are many proposed uses for things that happen in the universe, including culinary disasters under control. MAS Assistant Professor Neil A. Gershenfeld demonstrated a wearable computing system whereby shaking hands with a student triggered a tiny device under his shoe to give the student an electronic copy of his business card.

Along with Things That Think, the Media Lab is working on Television of Tomorrow in the Future, both of which aim to bring common sense and usability to information dissemination.

Moving into the world of atoms

In his Wired magazine columns and his book, Being Digital, Negroponte makes a distinction between a world of atoms and a world of bits. The former depends on the tangible carriers of information: people worry about the size of their television screen that delivers the programs or the size of the characters in a book. In the latter, information will be in digital form, 1s and 0s, and not subject to physical constraints.

"If you were to characterize the next 10 years, people would come up and ask me, 'What is the effect of the coming of computers going to have on my business?'" said Douglas Adams, author of The Hitchhiker's Guide to the Galaxy, who emceed the event.

"The answer is, it's the wrong question," Adams said. "It's rather like the Amazons saying, 'well, we're heading toward the Atlantic Ocean. What effect is it [going to have] on your river?' The answer is, in the end, however strong the force of that river may be... river rules not longer apply," he said. "We media will be in the same digital ocean. That is the world we're going to have to learn to live in and navigate."

"If you were to characterize the next 10 years, it's clear that the common denominator will be sort of understanding the bits," Negroponte said. "In other words, you can think of the past decade as giving the bits a personality such that it performs better," he said.

"You're going to see machines that recognize your face pretty soon," said MAS Professor Alex P. Pentland PhD '82. "People aren't going to be able to steal your credit card, because your credit card is going to know who you are."

But despite the optimistic forecast, some obstacles still stand in the way of the digital future.

"You may defoliate forests, you may squeeze ink on dead trees, and you may even cause child labor to hurt these huge yellow books over the transom of the American front door," Negroponte said of delivering the photo book yellow pages.

"But if you so much as deliver a no-return, no-deposit, ecologically-sound 'bit' at the speed of light into the American home, you've violated the law," he said. "It's not that wild."

The Lab proves critics wrong

The Kresge Auditorium event drew nearly 1,000 people, including several dozen MIT students. The majority of the attendees were representatives of media and hi-tech companies, which as a group account for about 85 percent of the Lab's $23 million annual funding.

The Media Lab is sometimes criticized as being just a place for sleight-of-hand and parlor tricks— pampered students playing with Legos and Sony Playstations—but Negroponte dismisses the criticism.

"Well, first of all, there's an assumption... that rigor is a feature, [but] sometimes it's in fact a liability," Negroponte said. "It's very easy to criticize and say it's a lot of smoke and mirrors. On the other hand, the multimedia industry sunk into a trillion-dollar industry. So maybe it's smoke and mirrors in some people's eyes, but it's obviously a big deal."

"From a corporate point of view, I would like to think that we are the way that they can outsource their basic research," Negroponte said. "So our job—actually it should be MIT's job in general—is to do the research that industry cannot afford to do because it's too risky and too distant."

But with the Lab growing some years at 50 percent per year and employing the largest number of Undergraduate Research Opportunities Program students, Negroponte is having the last laugh.

On its tenth birthday, the lab celebrates its past and offers a glimpse into its future

By David D. Hsu

995 has been a year when computers, the Internet, and all things digital were hyped by everyone from politicians to movie stars. It seemed that everybody, no matter what their technological credentials, jumped on the bandwagon.

Meanwhile, the place that embraced multimedia before it was popular, the Media Laboratory, celebrated its 10th anniversary on October 10 with a day-long symposium on its research, new technology, and perspectives on the digital future.

The Media Lab has been a large portion of the evolution of multimedia and information technology under the leadership of its director, Nicholas P. Negroponte '66.

The Lab spent its first 10 years exploring the union of text, graphics, and sound—nowadays "commonly called multimedia, which was more or less born here," Negroponte said.

This past year, Negroponte announced the completion of its multimedia mission. Now, with information technology becoming more mainstream, the Media Lab has launched its next step.

Technology gets a clue

The Media Lab's celebration was dubbed "10/10" both because of the date of the celebration and because it is the binary representation of the decimal number 10.

The event officially kicked off Things That Think, a new research consortium aimed at giving everyday objects from sneaker-tying paws to flying pans the ability to do useful things on their own, saving their human owners the trouble.

Media Arts and Sciences Professor Seymour A. Papert, who created the LOGO computer language, explained the concept with an anecdote.

"I was making sauce and the phone rang," Papert said. "I said, 'idiot'—meaning me. But if we imagine somebody going through the same sequence and saying 'idiot,' and [instead] of going the pan and the stove, or all the stuff in the kitchen, because all those things there ought to have known better than to let that happen," Papert said. "That's the prototype for Things That Think."

Negroponte gave two goals for Things That Think. "On the one hand it is to make that object perform better or to give it a personality such that it performs better," he said. "The second is to get it to do things that it might not have known how to do before, and when we say things, we really mean it."

There are many proposed uses for things that happen in the universe, including culinary disasters under control. MAS Assistant Professor Neil A. Gershenfeld demonstrated a wearable computing system whereby shaking hands with a student triggered a tiny device under his shoe to give the student an electronic copy of his business card.

Along with Things That Think, the Media Lab is working on Television of Tomorrow in the Future, both of which aim to bring common sense and usability to information dissemination.

Moving into the world of atoms

In his Wired magazine columns and his book, Being Digital, Negroponte makes a distinction between a world of atoms and a world of bits. The former depends on the tangible carriers of information: people worry about the size of their television screen that delivers the programs or the size of the characters in a book. In the latter, information will be in digital form, 1s and 0s, and not subject to physical constraints.

"If you were to characterize the next 10 years, people would come up and ask me, 'What is the effect of the coming of computers going to have on my business?'" said Douglas Adams, author of The Hitchhiker's Guide to the Galaxy, who emceed the event.

"The answer is, it's the wrong question," Adams said. "It's rather like the Amazons saying, 'well, we're heading toward the Atlantic Ocean. What effect is it [going to have] on your river?' The answer is, in the end, however strong the force of that river may be... river rules not longer apply," he said. "We media will be in the same digital ocean. That is the world we're going to have to learn to live in and navigate."

"If you were to characterize the next 10 years, it's clear that the common denominator will be sort of understanding the bits," Negroponte said. "In other words, you can think of the past decade as giving the bits a personality such that it performs better," he said.

"You're going to see machines that recognize your face pretty soon," said MAS Professor Alex P. Pentland PhD '82. "People aren't going to be able to steal your credit card, because your credit card is going to know who you are."

But despite the optimistic forecast, some obstacles still stand in the way of the digital future.

"You may defoliate forests, you may squeeze ink on dead trees, and you may even cause child labor to hurt these huge yellow books over the transom of the American front door," Negroponte said of delivering the photo book yellow pages.

"But if you so much as deliver a no-return, no-deposit, ecologically-sound 'bit' at the speed of light into the American home, you've violated the law," he said. "It's not that wild."

The Lab proves critics wrong

The Kresge Auditorium event drew nearly 1,000 people, including several dozen MIT students. The majority of the attendees were representatives of media and hi-tech companies, which as a group account for about 85 percent of the Lab's $23 million annual funding.

The Media Lab is sometimes criticized as being just a place for sleight-of-hand and parlor tricks— pampered students playing with Legos and Sony Playstations—but Negroponte dismisses the criticism.

"Well, first of all, there's an assumption... that rigor is a feature, [but] sometimes it's in fact a liability," Negroponte said. "It's very easy to criticize and say it's a lot of smoke and mirrors. On the other hand, the multimedia industry sunk into a trillion-dollar industry. So maybe it's smoke and mirrors in some people's eyes, but it's obviously a big deal."

"From a corporate point of view, I would like to think that we are the way that they can outsource their basic research," Negroponte said. "So our job—actually it should be MIT's job in general—is to do the research that industry cannot afford to do because it's too risky and too distant."

But with the Lab growing some years at 50 percent per year and employing the largest number of Undergraduate Research Opportunities Program students, Negroponte is having the last laugh.
Institute adjusts to changes in six senior positions

By David D. Hsu

Promotions, resignations, and retirements have reshaped the Institute brass in disarray in 1994, as search committees started work toward filling six vacant senior positions. This past year, the results of those search committees, coupled with restructuring, brought seven new faces to the top ranks; one spot remains unfilled.

Of the six vacant positions—provost, dean for undergraduate education, dean of the school of engineering, dean of the graduate school, associate provost for the arts, and associate provost for the humanities department—a number will be filled in the near future. The provost, William A. Moses, replaces Mark S. Wrighton as provost in April; Provost Al Brody, who has held the post for six years, is stepping down. In May, the Academic Council will elect a replacement provost.

In searching for Wrighton's successor, Vest selected input from faculty and administration. Vest said in April that he planned to "consult broadly in person and by mail." Early candidates for the position included the deans of the individual schools and department heads.

In June, Dean of the School of Engineering Joel Moses PhD '97 selected Vest as the Institute's new provost. He brings a broad educational background and successful computer science and engineering career to the position. "For me, the magic lies in the endless opportunities to work with and to come to know individuals of the highest caliber across all the disciplines and ranks," Moses said.

Moses' "eclectic intellectual interests, respect for faculty culture, and thoughtful understanding of the current forces for change will make him an outstanding institutional leader of our times," Vest said.

Moses, who has a Bachelor of Arts degree from Yale, received his doctorate in the School of Science at MIT and spent a year at the Harvard University Graduate School of Business Administration. He has also most recently served as head of the Department of Electrical Engineering and Computer Science.

Williams replaces Smith as dean for UE

In June, Dean for Undergraduate Education Majithia Bell Williams PhD '77 replaced Smith as dean for UE. Smith resigned after five-year tenure. During that term he developed a strong reputation as a student advocate. Smith is also known for having consolidated two separate posts. He was both the dean of undergraduate education, and dean for student affairs, into one single office.

Robert A. Brown

"Art has brought a very insightful and effective advocacy on behalf of students to the Academic Council," Vest said. "He always forced us to see things through the students' eyes." The Academic Council, composed of the president, vice presidents, provost, vice provosts, deans of the schools, and other high-level administrators, is the highest policy-making body at the Institute.

In his opinion, Williams' most important qualification is "having taught writing here for 12 years. You get feedback into the undergraduate experience on a daily basis. I can't tell you how many essays I've read on the time crunch, drinking policies, or classroom experiences."

Since being appointed, Williams has formed two groups — the Task Force on Student Life and the Task Force on Student Learning — to help update the Institute's framework for the incoming Class of 2000, Williams said. The problem with MIT's now-dated framework is that it is applicable for courses with lower diversity and a lower need for practical education than today, she said.

Bates named as new dean for student life

The dean search committee also recommended that the position of IUESA should again be split and that a dean for student life be appointed. "The feeling of the committee was that we should have a dean of undergraduate education, and that dean would oversee student life aspects as well, but that it was too much for one " to chart the academic waters and the educational background and the social details as well," Hobbs said.

In October, Margaret B. Bates, an academic and financial planning officer at Harvard University and a former vice provost of Duke University, was named to the new position of dean for student life. Using the search committee's report as a guide, Williams worked with Hobbs, Vest, and Moses to select the new dean.

Majithia Bell Williams

Professor of Music Ellen T. Harris, who has held the post for six years, is stepping down to concentrate on completing the book about the classical composer

November

Cambridge residents meet with housing officials to address the recent evictions. They assert the dormitory has recently experienced, like the Oct. 29 evacuation resulting from a blocked chimney. Other recent concerns include the drainage of problems including sewer drain blockage and periodic lack of heat and hot water.

November

Random Hall residents are also without hot and hot water for the night.

November

A deliberately blocked chimney fills parts of Random Hall with smoke and forces the evacuation of the dormitory for several hours. Cambridge firefighters and the police are called to the aid of the dormitory.

November

A memorial service was held for Yitzak Rabin in Lobby 7.

November

Majithia Bell Williams

Margaret Bates

Moses named a search committee to make recommendations for dean. The 14-member committee, chaired by Professor of Aeronautics and Astronautics Jack L. Ketterclock, met weekly and consulted with faculty members; early candidates for the position included the heads of the engineering departments.

In January, President Robert A. Brown, who was the head of the department of Chemical Engineering, was appointed dean of the school of engineering. During his years on the MIT faculty, he had been honored with the Outstanding Faculty Award three times by students. He is also known for helping improve computing resources at the Institute as co-director of MIT's supercomputer facility.

From a survey intended to solicit student input on the dean search, the search committee found that students wanted the new dean to maintain funding for UROP. They also felt that classes should be improved to teach students team skills, and that there was not adequate interaction between students and faculty and that office hours should be encouraged to a greater extent.

"What the dean's office can do is create a broad set of guidelines or standards to measure teaching effectiveness," Brown said. "We want to make sure we have the student-faculty contact as much as possible." But in the end, the quality of teaching depends on the individual faculty members.
New majors emphasize more practical experience

By Jean K. Lee

Under growing pressure from industry for employees with more practical and advanced work in their fields, both undergraduate and graduate academic programs have responded with new majors, including several that are "hands-on" courses.

"We must teach our students to relate analysis and theory to the practical and the concrete," said President Charles M. Vest in his annual report. Such changes to the Institute are crucial as "true rapid revolution toward increased importance of professional masters degree programs ... and toward increased emphasis on design, synthesis, and process as analysis methods."

Two new Master of Engineering programs — in the Department of Aeronautics and Astronautics and the Department of Civil and Environmental Engineering — will be offered starting in the fall. The programs aim at training engineers with at least three years of work experience to be senior managers with a strong technical grounding in systems engineering architecture and the management of complex projects.

The program is planned to last 13 months, beginning during one Independent Activities Period until the end of the following IAP. "This new and more practically based program provides students with opportunities to achieve a professional degree and become leaders of engineering," said Professor of Aeronautics and Astronautics Edward F. Crawley '76.

Departments offer new specialities

The Department of Earth, Atmospheric, and Planetary Science added three new areas of study this year. The three new areas of concentration are geosciences, physics of atmospheres and oceans, and planetary science and planetary astronomy and will be offered in graduate and undergraduate academic programs.

Changes made in the undergraduate program in the Department of Mechanical Engineering have made curriculum more industry-oriented. Old classes like Mechanics of Solids (2.01) and Introduction to Design (2.70) are being phased out to give way to a series of two-part classes such as Mechanics of Materials I and II (2.001 and 2.002), according to Professor Peter Griffith ScD '56, undergraduate officer for the department.

An interdisciplinary minor program in biomolecular engineering, the Institute's first, also has been established. The minor is geared toward students who "end up going to medical school and want to use their engineering background for medical research," said Professor Linn W. Hobbs, chair of the committee on the undergraduate program. Between 20 and 30 students are expected to participate in the program starting next fall, and students will be able to match the minor with six to nine subjects, depending on each individual student's course of study.

Changes in the core curriculum

Freshmen were able to take a combined Calculus I (18.01) and Calculus II (18.02) for the first time. Recommended for students with advanced placement background, 18.01 quickly reviews 18.01 for six weeks and then covers 18.02 for eight weeks, said Joanne E. Jonas, academic advisor for the Department of Mathematics. The remainder of 18.02 can be taken during either the fall or spring.

Introduction to Solid-State Chemistry (3.091) has been revamped to include additional topics while maintaining a focus on solid state. Changes were made in order to give freshmen the freedom to choose a chemistry course without concerns about requirements for potential majors. The new areas covered include a unit on liquids and solutions and examples from environmentally related topics, said Professor of Materials Science and Engineering Donald R. Sadowy.

Compiled by Brett Altschul, Andes House, Joan K. Lee and Ilung Lu

In with the new

The Year in Review 17
Building constructions meet academic needs

By Brett Altschul

As technology changes over the years, the buildings which house them grow out of their function, and the Institute must keep up by renovating old buildings or raising new ones. Last year, the Jack C. Tang Center for Management Education and MIT's co-generation plant were completed, while renovations in Buildings 16 and 56 began.

"The MIT campus is designed to encourage communication between people from all parts of the academic community in order to stimulate the exchange of ideas," said Director of Planning O. Robert Simha MCP '57.

"MIT buildings are constantly being recycled to keep up with current research and academic needs," Simha said.

The completion of the biology building in 1994 has set the stage for the next phase of campus development of the main academic buildings, Simha said.

Tang Center opened in September

The Tang Center, a four-story addition to Building E51, opened for classes in September. The $12 million center was built in response to an increase in the size of the Sloan School of Management.

The center is the first Sloan School building devoted entirely to education. It includes a new 300-seat auditorium and horseshoe-shaped classrooms on the top floor, built to facilitate discussion-style teaching. The center "has been designed to support the highest-quality instruction and to provide the professional space in which students can best learn," said Building 20 Assistant Dean Jeffrey A. Barks.

Classrooms contain state-of-the-art audiovisual and technical equipment, including computer network connections at all seats, Barks said. Projection equipment displays computer images on classroom screens, which can be simultaneously used with blackboards.

"Most of the new rooms that I've entered have been a big improvement in terms of comfort, modern A/V facilities, and ability to handle larger classes and guest speakers well," said Gregory K. Scott G, a student at the Sloan school.

Co-generation plant brought controversies

MIT's controversial new $37 million co-generation plant also opened in September. The two-and-a-half year project was motivated by the effort to save money by generating power on campus.

In an unprecedented move, the Cambridge Department of Public Utilities levied a $100,000 per month penalty against MIT. The department argued that it had made a significant investment in equipment of campus development of the main academic buildings, Simha said.

The department further said that MIT should be liable for 75 percent of the additional costs it would have incurred without the co-generation plant.

MIT is appealing the ruling. Lawyers for the Institute argue that the ruling violated the 1978 Public Utilities Regulatory Policies Act and regulations of the Federal Energy Regulatory Commission which promote co-generation. The appeal is still in progress.

In addition to new buildings, the Institute began major renovations on Buildings 16 and 56, which were previously occupied by the biology department. They are scheduled to continue through December, 1996.

The completed buildings will provide space for the disciplines and services currently housed in Building 20, which is scheduled for demolition in 1997.

A new building will be constructed on the site of building 20 which will house the Artificial Intelligence Laboratory and the Laboratory for Computer Science if the Department of Electrical Engineering and Computer Science raises the necessary capital.

Most of the new rooms that I've entered have been a big improvement in terms of comfort, modern A/V facilities, and ability to handle larger classes and guest speakers well.

Gregory K. Scott
To cope with the pressures of overcrowding, the Institute will have to consider leasing or purchasing more space in the next two years. Margaret A. Jablonski

Remodeling Senior House, a large project expected to cost ten million dollars, will be done in three shifts over the coming summer, and hopefully will be completed by the fall semester, Jablonski said. Senior House fell behind on the cycle of building renovation, and is currently so run down that many students do not perceive it as a viable living option.

"The big challenges are ahead," said Henry Jenkins, house manager at Senior House. "Moving students out, rebuilding the dorm, and getting them back in this summer will include many logistical headaches, and we are all going to have to put up with some problems along the way. Yet I have the reassurances of the architects and of MIT that we will be able to make this work."

The Institute does not have the same commitment for Random Hall as for Senior House, Jablonski said, and so it will not invest much energy into refacing the old building. Instead, Random is scheduled to go "offline" in about ten to fifteen years; the land will be used for commercial purposes, she said.

"We are planning to continue regular maintenance and satisfactory conditions that will meet housing codes," Jablonski said. "But we are working to center housing [more locally] around campus," she said.

For that reason, Random will see no major renovations in the near future that resemble what will be done at Senior House. Random, which is about five minutes down Massachusetts Avenue from the Student Center, will likely not get a new roof or redesigned rooms, Jablonski said.

It is not clear that Random will be phased out. ... Still, it is important to realize that in the meantime, the 93 MIT students who make their home here should be guaranteed a certain standard of living," said Sameer S. Gandhi '97, Random Desk Captain.

Graduates also need more space

"There is a need to push for undergradua-
tie and graduate student housing," Graduate Student Council President Barbara J. Souter G said. "We need to look at both sides of the coin, and see that this is not an issue that deals with the two student bodies separately, but with both, and for it to be effective in improving housing, both groups need to work together."

Currently, only 30 percent of graduate students have housing. However, the future has a commitment to provide hous-
ing for 50 percent of the graduate populati-
on. "MIT owns land at Sydney & Pacific [streets in Cambridge], but because of many administration turnovers, we haven't made progress. We should see progress this spring," Jablonski said.

"MIT has shown that they want to pro-
vide housing but haven't been active enough in it. I think that the administration needs to work on short comings in housing," Souter said. "The GSC is ready and willing to work on planning new housing. We are waiting for the administration to take a step for-
ward."

Joe Bambenek G, former Housing and Community Affairs co-chair for the Graduate Student Council, notes that using the land at the Sydney Street site may not be effective as a new graduate student housing.

The property is significantly more expen-
sive than the current graduate student dorms, and further from campus. The building is also located in the second most dangerous neighborhood on campus, Bambenek said.

Ashdown House is especially needed to fulfill the housing needs of the graduate stu-
dent community. It runs a huge risk of being lost if turned over completely to undergradu-
ates, Bambenek said.

"The administration's desire to build housing could meet several requirements," Bambenek said. "The amount of housing needed for graduate students is uncertain for the future. There is a good chance that there may be fewer graduate students. Building a new building will have to accommodate not only graduate students but also post-docs and young professors."

Female, sorority housing needed

"Efforts to find permanent housing for sororities" have also been a priority, Dean for Undergraduate Education Rosalind H. Williams said.

The rising trend of female students has increased the demand for all-female housing areas. Housing the sororities, apart from fill-
ning the sororities needs, should help this growing demand. The Office of Residence and Campus Activities is looking into possi-
ble bids on houses for sororities. Sigma Kappa is the next sorority in line to receive a house, followed by Kappa Alpha Theta and Alpha Epsilon Phi, said Neil H. Dorow, assistant dean in the Residence and Campus Activities Office. We hope to find a house for Sigma Kappa by fall 1997, Jablonski said. By March, we hope to have several residences with 3 floors or 2 suites to be designated as women's housing, she said.

Moving Sigma Kappa into Ashdown has worked "out very well," Jablonski said. "All parties seem to be happy and Sigma Kappa seems to have integrated nicely with the graduate students," Jablonski said.

"The undergraduates have blended in pretty well with a number of them coming to Ashdown for social activities, being house officers and working at the front desk," Ashdown Chair Thomas H. Burbine G said.

Burbine also projected that MIT may keep random in Ashdown. "Since MIT appears not to be building any new undergraduate dorms in the foreseeable future, the easiest solution to alleviate over-
crowding would be to keep some undergradu-
ates in Ashdown," he said.

Owen W. Order '96 (left) and Morgan S. McGuire '96 (right) act as human advertisements in Lobby 7 — not for direct tape, but for a weekend party last April.

An MIT student teaches a child from Longfellow School during MIT's Citydays community service event last September.
Changes are anticipated for next year's orientation

By Carina Fung and Cristián González

Several changes with rush are expected to take place starting with next year's Residence and Orientation Week. The changes will include activities sponsored by the R/O Committee and dormitory participation in rush.

Rush was "very successful" this year, said Associate Dean for Residence and Campus Activities Margaret J. Jablonski. "We generally assume that 360-370 freshmen will end up living in Independent Living Groups," and this year was on par with previous years, Jablonski said.

For students who chose to live in a dormitory, over 90 percent of freshmen received one of their first five choices, Jablonski said.

"We did see an increase, though, in the number of women going for single-sex housing," prompting concerns about a shortage of single-sex housing, Jablonski said.

Undergraduate Academic Affairs Office Staff Assistants, Student Programs Coordinator Ida G. Faber held a series of meetings with R/O Week coordinators to get input about how successful rush was. Informal feedback from freshmen on rush was positive overall, she said.

"The entity of R/O is constantly evolving," Faber said. The results of some of the events of this year will affect rush events of next year. There was a positive response to the student speakers, Kilian Kick-Off, Catherine D. Conley '96, though no definitive decision has been made on whether or not to continue with student speakers, Faber said.

Thursday Night Dinners reviewed.

Thursday Night Dinners will also come under intense review, in large part because of the unruly crowd that marred its start this year, Faber said.

During this year's rush, an overzealous group of upperclassmen eagerly hurried to gather freshmen to take to dinner after the annual Project Move Off Your Assumptions activity. The mob rushed past R/O Week workers and interrupt- ed the finale of Project MOYA before Campus Police arrived to control the group.

The overzealousness of the upperclassmen to grab freshmen for their groups' dinner trips showed that "the interests of upperclassmen are for the welfare of their living groups and not for the freshmen," said Mark A. Herschberg '95, an R/O Committee member who helped organize Project MOYA.

Immediately after this incident, there was discussion of canceling Thursday Night Dinners in future years because of this year's problems, Herschberg said.

"We need to re-evaluate" the dinners, said former Interfraternity Council Judicial Committee chair Gregory J. Milliotis '96.

But the ultimate decision will be up to the R/O Committee, he said.

Dormcon drops Clearinghouse.

The Dormitory Council Judicial Committee decided in December to elimi- nate the use of Clearinghouse in dormitory during rush, according to the accepted draft of Dormcon's rules for next year's rush. Clearinghouse is the freshman tracking system used during R/O Week.

In late November, Dormcon decided to withdraw its mem- bers from the Medica- tion Committee and end their participation in Clearinghouse.

In the past, Medcomm, a joint committee of IFC and Dormcon, was responsible for pro- tecting the interests of incoming students during rush. Starting as an informal dis- cussion group, it has existed for over two decades.

Dormcon now feels that "the Medcomm rules have become a matter of concern only to Dormcon," as pointed out in a Nov. 16 memo to the Office of Residence and Campus Activities. In an effort to reinforce the rules it deems important, Dormcon trans- ferred the judicial authority previously granted to Medcomm to its own Judicial Committee.

Dormcon originally used Clearinghouse in 1967 to keep track of students housed in temporary dormitory assignments. The IFC joined the system soon after, but no changes were made to Clearinghouse until now.

"When we used Clearinghouse we were doing it for no purpose, and we got no advantage from it," said Dormcon Rush Chair Nicole L. Weymouth '96.

Dormcon's decisions have met with some opposition from the IFC and RCA. Jablonski said it would be desirable to see Clearinghouse function "in some capacity" in the dormitories and is willing to work with the IFC and Dormcon to come up with a compromise.

"Outgoing IFC President Brian D. Dye '96 said he is in favor of Clearinghouse because "it helps keep rush more or less organized."

Dormcon drafts new rush rules.

Dormcon has also tentatively adopted a new draft of "Rules of the Dormitory Council Judicial Committee" for the next R/O Week.

These changes illustrate their revised goals: "1) to protect the privacy and confidentiality of incoming students and dormitory resi- dents, 2) to promote fairness between living groups, and 3) to help incoming students make informed and uncoerced choices."

Dormcon will also try to improve security during rush by increas- ing the dormitory patrols and restricting access to incoming students. Under this sys- tem, each dormitory's desk would serve the function that the Clearinghouse desk did before. However, information as to a fresh- man's location would not be provided.

The rules governing postering during rush are also under scrutiny by Dormcon. Each dormitory would be able to set its own rules concerning postering, and excessive postering would be dealt with by Judcomm, according to its new regulations.

Dormcon will likely meet during the spring term to discuss the changes with RCA and the IFC.

These decisions, however, may not be final. "Both RCA and IFC hope Dormcon will participate in some sort of Clearinghouse," Jablonski said.

Dormcon, however, refuses to do so unless the new proposals will facilitate rush for freshmen and benefit the residents of the dormitories.

---

The interests of upperclassmen are for the welfare of their living groups and not for the freshmen. 
Mark A. Herschberg

---

Bomb reports up after Unabomber threat

By Sam Hartman

Tensions heightened on campus when it was reported that Nobel Laureate Phillip A. Sharp, professor and head of the Department of Biology, was a potential target of the Unabomber.

The Boston Globe reported on May 8 that the Unabomber sent letters to Sharp and Richard J. Roberts of New England Biolabs Inc., who shared the 1993 Nobel Prize in medicine.

This followed two weeks after Mr. Gilbert Murray, President of the California Forestry Association, was killed by an Unabomber package bomb. The Unabomber was responsible for 16 letter bombs in the last 17 years.

At MIT, the Unabomber threats were taken in a different light than at other universities. The Unabomber attributes society's problems to technological advances and existence of nuclear power. "We want anyone to think that we have any desire to hurt professors who study archaeology, history, literature, or harmless stuff like that."

Twelve bomb or suspicious package incidents were reported to Campus Police by mid-year, a significant increase over 1994.

While the Campus Police did not comment on the Unabomber threat, they discourage the MIT community to examine suspicious packages.

In the time when Unabomber publicity was highest, there were about 30 calls a month about suspicious pack- ages, said Captain of Campus Police John E. Driscoll.

This rise in calls about suspicious packages was largely the result of the Unabomber's threat, Chief of Campus Police Anne P. Glavin said. People were "more anxious and concerned."

The people PC is out to get are the scientists and engineers, especially in critical fields like computers and genetics.

---

Students gathered in the Infinite Corridor to witness the semi-annual "Off Your Assumptions" dinner in direct line with the hall.

Xuan Tang '96 prepares Mark Fieldmuseum '96 for the East Campus Carnival last spring.
Memories of the Fernald School haunt MIT still

By Christopher L. Falling

MIT's involvement in a number of radiation experiments during the 1950s and 1960s culminated in two lawsuits in which MIT was named. Documents released by the federal government in 1993 revealed new information on thousands of human radiation experiments conducted by MIT and its top researchers during the Cold War. Among them were radiation tests conducted during an experiment at the Massachusetts Institute of Technology's Fernald Laboratory in the 1960s under the supervision of Massachusetts General Hospital neurosurgeon William Sweet.

The new information on the experiments prompted a lawsuit that charged the Institute of Medicine in Washington, D.C., with its role in overseeing the experiments. Further investigation into the tests indicated that the amount of radiation the children were exposed to was insignificant but that the subjects involved in the experimentation were not notified of their participation.

"I was sorry to hear that at least some of the youths and their parents had not been informed that the children were being exposed to radioactive tracers," said President Charles M. Vest, vice president and dean for research and their parents apparently were unaware that the study involved radioactive tracers, said President Charles M. Vest.

"The procedure in those days was that the medical person who provided access to the patients was the one who was responsible for the informed consent process," said Professor of Physics J. David Litster PhD '65, vice president and dean for research and his colleagues.

Both Vest and Litster emphasized that informed consent is required for all research performed now, and that much stronger safeguards and guidelines are in place.

A second radiation lawsuit was filed over tests performed at the MIT Nuclear Reactor Laboratory during the 1960s under the supervision of Massachusetts General Hospital neurosurgeon William Sweet.

State investigates tests

Shortly after the government declassified the documents about government-sponsored radiation experiments, Vest read of the Fernald School tests in a Boston Globe article. Litster saw the article as an indication that he should investigate the Institute's records.

A state task force and a special hearing of the Senate Committee on Labor and Human Resources, chaired by Sen. Edward M. Kennedy, D-Mass, also investigated the experiments. The state of Massachusetts, researchers at the Fernald School, and the Quaker Oats Company were also charged in the suit.

Consent not obtained

The state task force also concluded that the youths and their parents had not been informed that the children were being exposed to radioactive tracers.

The presidential advisory committee to Clinton on Cold War human radiation experiments concluded that the Fernald School experiments were "morally troubling" and that the government owes the subjects an apology. But because there was no evidence that the subjects were harmed by exposure to any dangerous levels of radiation the government is not obliged to monetarily compensate them.

At a Oct. 3 news conference that announced the completion of the federal committee's report, Clinton made a formal apology to the subjects of all radiation experiments reviewed.

The report stated that the children of the Fernald School were "unfairly burdened" by researchers from MIT and Harvard, who encouraged the children to take part in tests with promises of gifts or trips to Red Sox games.

The researchers also appeared unwilling to respect some children's wishes not to participate in experiments, according to the report. The parents of the children involved in the experiment were not told that the tests involved radiation.

The committee's findings stressed the immorality of researchers failure to obtain consent from test subjects and their families.

Tests involved low exposure

After a four-month investigation, the state task force concluded that "no significant health effects were incurred by the research subjects as a direct result of the nutritional research studies.

Litster calculated the amount of radiation the Fernald youths were exposed to based on the researchers' original data, which was published in several journal articles and a doctoral thesis.

Litster said that he is currently looking for any information that may have been overlooked by the state task force.

The highest exposure for any single subject involved in the experimentation was 330 millirem, less than the yearly background radiation in Denver. The doses were all below the standards of the time, as well as today's more stringent standards.

Current government standards allow a 500 millirem yearly exposure to radiation for minors exposed to radiation and a 5,000 millirem yearly exposure limit for adults.

The equivalent increase in the risk of fatal cancer would be about 1 in 2,000 as the result of a 330 millirem exposure.

Cancer experiments kill 10

A second radiation lawsuit was filed over a separate radiation lawsuit filed in September. Evelyn Heinrich and Henry M. Sienkewicz filed a lawsuit on behalf of 140 patients who underwent experimental nuclear medicine treatments that killed at least 10 of them, including Heinrich's husband and Sienkewicz's mother.

Sweet is accused of using patients as guinea pigs for radiation experiments that were known not to work. He conducted some of his research at MIT's nuclear reactor during the 1950s and 1960s.

Heinrich said that she and other patients' relatives were not properly informed and were sometimes misled about what was being done to patients. The procedure used to treat patients, called boron neutron capture therapy, did not require surgery and use a higher-powered radiation beam than Sweet's experiments. The boron drug used in the new experiments is also more efficient.

Litster declined to comment on the details of the lawsuits themselves, which are still ongoing.
Les Aspin '66

Aspin delivered the commencement keynote address in 1992, in which he talked about the many changes that faced the first class to graduate in the post-soviet era.

Perry N. Finley '92
Perry N. Finley '92 died on April 3. His sister, Tiffany Finley '97, would not comment on the circumstances of his death.

Kristen E. Finnegan G
Kristen E. Finnegan G died unexpectedly on June 23 in Cambridge of a heart condition.

Finnegan was a doctoral student studying the history, theory, and criticism of art and architecture. She was to have traveled to Germany this spring to study the role of technology and engineering in art and industry in the early modern period in Germany.

Finnegan also worked in the Program in Writing as a teaching fellow. "She had a really nice manner regardless of what she was doing or who she was working with; students loved her," said Andrea P. Julow, who worked in the program with Finnegan.

An award for students in the history of architecture that has been established is Finnegan's name.

Martin R. Friedmann MArch '33, a former graduate student in architecture, took his own life on Feb. 28 at MIT. Friedmann worked in the Media Laboratory but was not enrolled at MIT at the time of his death.

In addition to his work at MIT, Friedmann pursued several other activities, among them a virtual reality demo now at the Chicago Science Museums. Friedmann also created a World Wide Web page for the Rolling Stones, and at one time was also a contender for the world championship in skateboarding.

"Around Martin ... there were three ways of looking at life: the right way, the wrong way, and Marty's way, which made the 'right' way look foolish," said Bradley Howard, a friend of Friedmann.

But his adviser, Media Arts and Sciences Associate Professor Ed Furlani '82, said that he remembers Friedmann not for his many accomplishments or intellectu- al abilities but for his "amazing energy and fearless enthusiasm."

John N. Krikels G '97
Delta Upsilon brother John N. Krikels G '97 died Sept. 3 when his motorcycle crashed into a telephone pole in a remote area near Plymouth. He was not wear- ing a helmet.

"John was a very free- willered person," said Alexander F. Hoemann '91, a close friend of Krikels. "He did whatever he want-
ed. He had a very full life and he loved to be free."

Krikels' parents, Nich- olas C. and Eileen Krikels of Raffaela, Gt. Cheese, have established a scholarship fund in his name. The $5,000 scholarship will go to a mechanical engineering major of Greek origin, or in the absence of such a stu- dent, to an outstanding mechanical engineering major from D.U.

Anya Pogosyants G, 26, and her husband Igor Slobodkin, 25, died in an automobile accident. An undergraduate research award has since been established in her name.

The couple died in a head-on crash in Rutland, Vermont, on their way to a ski trip in Lake Placid, New York.

Pogosyants worked in the Laboratory for Computation Science and the History of Scientific Compu-
ted systems. Her work included research in formal verification of distributed algorithms and developing easy-to-use verification tools.

Pogosyants' hobbies included playing guitar and singing folk songs. Slobodkin enjoyed mountain climbing and poetry writ-
ing. "All relatives and friends of Igor and Anya are people full of ideas, joy and optimism," said Angelika Lee G, a friend and colleague.

Francis O. Schmitt
Institute Professor Emeritus Francis O. Schmitt, internationally recognized as a pioneer in modern biological research and the study of the brain, died Oct. 3 at his home in Weston. He was 91.

In 1941, Schmitt accepted an invitation from MIT President Karl Taylor Compton to head the Institute's effort to develop a leading center for molec- ular biology, and started an intensive program of teaching and research in that field.

Schmitt was one of the world's foremost authorities on the biological uses of the electron microscope. Many of the stu-
dents Schmitt worked with during that period went on to become world leaders in mol-
ecular biology.

In the early 1960s Schmitt helped establish a Division of Biochemistry to provide a concentration in this area of analytical biology. He served as head of the biochemistry depart- ment from 1942 to 1955, after which he divided his attention to teaching and research until his official retirement in 1969.

Schmitt was an active member of the Neurosciences Research Program from 1962 to 1974, whereby he helped promote research in the Neurochemistry of Learning. He considered the last frontier of scientific understanding the function of the brain.

James A. Smith G
Physics graduate student and Harvard Medical School student James A. Smith G died Jan. 31 from injuries after an eight-year struggle with brain cancer.

The cancer, which had been in remission, returned in the fall of 1994. Smith was diagnosed with an inoperable brain tumor in January. "He was a very intelligent person, but he fell into a coma on Jan. 30, and died the next day."

Smith worked primarily in the Artificial Intelligence Laboratory and was pursuing a degree in medicine through the Harvard-MIT Division of Health Sciences and Technology.

He was working to finish medical school in May and his PhD within three years.

His work at MIT dealt with vision, the development of the eye's ability to do things such as recognize faces and patterns recognition. The James Andrew Smith Memorial Fund has been set up to fund future research that Smith had planned to pursue.

By all accounts, Smith tried to get the most out of life. He enjoyed hiking, biking, rock-climbing, skiing, and frisbee playing. He was also a supporter of cooperative living.

Joseph S. Snyder '44
Joseph S. Snyder '44, a former treasurer of MIT and a long-time member of the Corporation, died Feb. 28 at the age of 87. Snyder is credited with having made invest- ments in companies such as Fossil, which have helped MIT deal with post-Cold War cuts in go-

cernment-funded research.

During his tenure as treasurer of MIT from 1950 to 1975, Snyder sought to protect the Institute against a possible future down- turn in government sponsorship of scientific research. Snyder thought that "MIT needed to have growth in its assets" in case govern- ment money should "slow up for any rea-

son," said current Treasurer Glenn P. Strehle '58.

Snyder attended MIT in the Department of Chemical Engineering, and he served as a director of the investment consultant firm Colonial Management Associates, Inc.
A look back at the year of Tech editorials

Thus it happened that the editorials' generalization - those at Random Hall, for example,校园。Frequently, we wrote about problems we felt demanded an immediate solution - those at Random Hall, for example. Thus it happened that the editorials generally glossed over the many ways we like about MIT and campus life and instead focused on aspects of MIT that could use some improvement.

The most serious examples this year involved the administration's flawed decision-making process. When it came to including students in decisions that could fundamentally change their daily lives, administrators more often than not treated students miserably. They often sought student input only as an afterthought, if at all. When students were included, their input was often just nominal: Administrative departments had already circumscribed the options available, or prejudiced the outcome of discussions by hardening organizational routines.

This year's annual summary of editorials features a "report card" that rates the inclusiveness of each decision-making process covered in an editorial in 1995. Each letter grade is followed by a brief evaluation describing any progress made since the editorial was written, and a summary of the grade assigned. We used the following scale:

A: Excellent performance in including the student body as an equal partner in the decision-making process. All interested student groups were given the opportunity to participate in every phase of the process, from determining goals and designing options to making the decision itself.

B: Good performance. Many interested student groups were given an opportunity to participate in most phases of the decision-making process. Student groups were considered nearly equal partners in that process.

C: Moderate student involvement. Students were given some opportunity to participate in a few phases of the process. Student involvement was limited to a few select students or student groups. Student participation was considered on an unequal or "customer" basis.

D: Belated and nearly irrelevant student involvement. Students were included only after key phases of the planning process completed. List of available options was highly circumscribed in advance of student involvement.

F: Token or irrelevant student involvement. Secretive or conspiratorial process.

Decision Makers Must Involve Students

February 10

First and foremost, administrators need to define what "input" and "inclusion" they want. The managed, ex post facto dialogue planning the Strategic Housing Planning Committee, for example, was designed to fail. When students were belatedly asked to present their views, they were disappointed that the result was both professional and productive. But there was no reason for students to be put in the position of reacting to administrative planning. They should have been involved in it from the start. The supreme mission of "input" must be consensual.

In general, decision-making processes affecting students on campus were not overly inclusive during 1995. Issues such as the development of MIT's policy on Student Affairs or Engineering, dean searches, intermediate grades, food services, and housing planning (to name but half-a-dozen) were handled either by including students belatedly, or not at all. The following editorials discuss in further detail the exact nature of policy-making inclusivity.

Institute Must Plan To End ROTC

February 14

In response to a 1996 faculty resolution that challenged the ROTC policy, the president and provost have indicated that they will appoint a committee in the fall to reexamine the disparity between the Institute's equity and the Defense Department's ROTC policy. This committee's charge should be unequivocal: If the DoD policy continues to be incompatible with ours, the committee should develop a plan to end ROTC.

Furthermore, the faculty and administration must expunge this review. The Institute has conscientiously endeavored for many years to change the policy — perhaps the time has come to let our actions speak for themselves. To do otherwise would be to dilute the fundamental principles of our academic community.

Because the "working group" phase of the MIT ROTC discussion was apparently not designed to actually make any decision or even recommend any course of action, student involvement may have been as much of a waste of time as the working group itself.

UA Should Avoid Mid-Election Changes

February 24

Undergraduate Association election season is here, and unfortunately it began with discontinuation and conflict. The confusion results from the overturning of the UA's election rules. The UA badly needs legitimacy, and does not stand to gain by altering election procedures after the season begins. The problem was that the UA passed an amendment to the election code on Feb. 13, reducing the signature requirements for amendment to the election code on Feb. 13, reducing the signature requirements for candidates. The problem was that the UAC's charge should be unequivocal: If the DoD policy continues to be incompatible with ours, the committee should develop a plan to end ROTC.

Senior Gift to UROP is Timely, Laudable

February 28

The decision of the Class of 1995 to give its senior gift to UROP is especially timely. To do otherwise would be to dilute the fundamental principles of our academic community.

Because the "working group" phase of the MIT ROTC discussion was apparently not designed to actually make any decision or even recommend any course of action, student involvement may have been as much of a waste of time as the working group itself.

The Year in Review 23
Congress Must Not Sacrifice Scholarships

March 9

The House of Representatives appropriations subcommittee last week submitted a list of proposed budget cuts of $17 billion, including $130 million in cuts to higher education student aid programs. Money saved from the scholarship cuts will be applied to defense spending and deficit reduction, all in line with House Speaker Newt Gingrich’s "Contract with America." It is disturbing that Gingrich has always claimed to be a futurist and a technologist, seems to lack the foresight to realize the country cannot afford to fall behind in line with our peer universities as well as with reasonable earnings expectations.

MIT Must Curtail Self-Help Increases

March 14

Most students are accustomed to the announcement of the annual tuition increase: Like a schoolboy waiting for the ruler to fall on his knuckles, it is only a question of how much it will hurt. But year after year, a parallel announcement goes relatively unnoticed: the increase in the self-help levels. This year’s increase in self-help is not based on the actual earning potential of students. MIT’s learning environment must afford the true price of an MIT education. The Institute should take whatever action necessary to keep the self-help levels in line with those of our peer universities as well as with reasonable earnings expectations.

Plus-Minus Scheme Doesn’t Make the Grade

March 17

The Committee on Academic Performance’s report this year was due to a proposal that has prompted an important campus debate. While intermediate grades may increase the equity of grading or allow for better self-evaluation, we believe they will detract from MIT’s learning environment by increasing the focus on grades and, correspondingly, the stress on students. The faculty should not adopt the intermediate grades proposal. Intermediate grades will create more problems than they will solve. They will be inaccurate, difficult to implement, and create more stress. The CAP should concentrate on correcting other viable options that will allow for self-evaluation without these problems, and MIT should concentrate on learning in grades.

C

Since students first learned CAP was considering intermediate grades, MIT has accepted and implemented a three-year intermediate grades proposal. While intermediate grades may increase the equity of grading or allow for better self-evaluation, we believe they will detract from MIT’s learning environment by increasing the focus on grades and, correspondingly, the stress on students. The faculty should not adopt the intermediate grades proposal. Intermediate grades will create more problems than they will solve. They will be inaccurate, difficult to implement, and create more stress. The CAP should concentrate on correcting other viable options that will allow for self-evaluation without these problems, and MIT should concentrate on learning in grades.

Don’t Spoil R/O Speaking Opportunity

May 2

Some unofficial publicity for the contest suggests that a "speaker who tactfully lets it be known that part of his/her good experiences at MIT has been spending time in an FSILG could do wonders [for] rush." This attitude is inappropriate; any constraint on the choice of speakers is unacceptable.

The competition should be open and fair to all interested students, regardless of their current residence or FSILG affiliation. Public speaking is an important skill at which most MIT students hardly excels. The sort of competitive opportunity offered by the Killian Kick Off speech is a valuable way to encourage more students to take an interest in public speaking. Anyone with an interest in speaking should take the opportunity to apply — it’s a rare privilege. We look forward to hearing a great speech in August.

UA Constitution Debate

May New Low

By their own admission, council members waited until yesterday’s meeting without having seen the text of the new constitution. Rarely has MIT witnessed so great an impropriety as the suspension of UA rules to replace an old constitution with a new document sight unseen. No matter how important the changes, there is time to make them according to the rules and with proper consideration. The constitution is the fundamental document of student government. To change it in such a reckless, injudicious, and immature manner is a disgrace that should not be allowed to happen.

Welcome, Class of 1999

August 24

Congratulations and welcome, Class of 1999. While hard work has indeed gotten you far, be proud not only of your academic accomplishments but also of your decision to come to MIT to begin the first of what may well be the most important years of your life.
collect ideas rather than make proposals. However it remains to be seen whether ideas collected at the focus group level will be transformed into proposals that will be weighed by the community at large. We hope that whatever plan results from these activities both includes student ideas and allows for large-scale student input in its acceptance or rejection.

**ROTC Action**

**Appropriate Now**

September 22

Next month, the administration working group on ROTC ends its unremarkable five-year tenure. The last half-decade has seen little action by the group and a similar lack of motion on changes in the program's anti-homosexual policy — "don't ask, don't tell" — violates the Institute's own non-discrimination policy as much as the old government rules did. The "work- ing" group deserves special criticism for its failure to do much of anything. Surveys, meetings, policy endorments, and advertisements hardly qualify as legitimate efforts to effect a policy change. All too often has the provost reported on the "little progress" of the group at annual faculty meetings.

**Institute Must Consider All Food Options**

October 17

The Department of Housing and Food Services has decided to extend Aramark's five-year food service contract one more year, primarily to review food service options, consider student input, and prepare to take bids. We endorse this strategy. Student input is indeed essential to the success of this process. Furthermore, during this year of discussion, MIT should attempt to resolve the many problems associated with the current food service monopoly by finding a reasonable alternative. There must be an alternative to the Aramark monopoly. The Student Center has room for a host of small food outlets, as does the floor of Walker Memorial. Instead of having one corporation attempt to handle all of these facilities at once, there could be competition among a number of small, diverse vendors. MIT should consider offering a multiplicity of small concessions, without guaranteeing a profit. A system like this might mean more paperwork for administrators, but the potential benefits for students could be huge.

**Bates Appointment Lacked Student Input**

October 20

On Tuesday, Dean of Undergraduate Education and Student Affairs Ronald H. Williams announced the appointment of Margaret R. Bates as the new dean of student life. We welcome Bates to MIT, having no doubt of her qualifications for filling the position. However, it is disappointing that the new position has not been widely advertised before the appointment process began. Bates could have benefitted from more student input and consideration of various candidates before the decision was made. The deanship is particularly unnecessary and untimely, considering that it comes in the middle of the re-engineering effort. The Office of the Dean of Undergraduate Education and Student Affairs has operated successfully for the past several years without a separate Dean for Student Life. Since Dean Bates will serve as a subordinate of Dean of ASES Ronald H. Williams, it appears that the new position has merely added another layer between the student and the person most directly in charge of their affairs.
Campus arts are redefined by ambition and excellence

By Craig K. Chang

It has been a year of renewal and courage for campus arts. Many groups finally tore through the cobwebs of past mediocrity and revisited the expectations of audiences for the better. A tradition suggesting students’ heavy workloads hurt quality dissolved in sight of the past year’s excellent performances.

The most improved groups of the year featured the collective strength of many students. Perhaps the year was February’s revitalized MIT Musical Theatre Guild. After several years of mediocre and occasionally awful musical theatre productions, the Guild hit the nail squarely on the head with the production of Stephen Sondheim’s ‘Sunday in the Park with George’.

An equally impressive in its transformation was the MIT Shapero Orchestras. It and the MIT Concert Choir joined forces in May to produce the German Requiem.

By the end of the show, the performers seemed to have taken an exhilarating — and successful — journey. The MITSO also gained strength from recruiting a group of excellent new players in the fall. In October, their wonderful performance of Schubert’s Unfinished Symphony attested the power of many students coming together to express their love of music.

Nowhere was the rallying for the arts more apparent than in the year’s dance concerts. In September the MIT Caperonia Club declared its mission to inform others of Brazilian capoeira, a kaleidoscope of dance, music, and martial arts. With the Seventh Annual Capoeira Angola Encounter in Kresge Auditorium, the group also advertised free capoeira lessons during this year’s Independent Activities Period. The MIT Dance Trope also sought to win dance lovers with its November Definitions concert. Since its revival in 1994, the group has not only tripled in size but has begun offering a larger number of dance class and choreography workshops.

Risk and innovation breed success

A student performance of Different Trains, a multimedia tapespieling Reich’s childhood train rides and the similar train rides taken by Holocaust victims, entranced listeners with its power and beauty. The real music-making lay in a sort of faith, a dedication to simple musical kernels, sprouting and swelling back upon themselves to make the performance rest in the audience’s capacity for self-revelation.

Campus artists also reached out to forge new collaborations, both between disciplines and here and abroad. Among these, the MIT Shakespeare Ensemble work with MIT Gamelan Galak Tikas to choreograph and orchestrate a spring performance of The Tempest.

The year’s most memorable successes did not come from playing it safe, the best events and programs of the year were also Marc’s March 20th Evening with Steve Reich, students and faculty took the seeds of Steve Reich’s experimental and minimal music and discovered a new world of expression.

A student performance of Different Trains, a multimedia tapepiel Reich’s childhood train rides and the similar train rides taken by Holocaust victims, entranced listeners with its power and beauty. The real music-making lay in a sort of faith, a dedication to simple musical kernels, sprouting and swelling back upon themselves to make the performance rest in the audience’s capacity for self-revelation.

Campus artists also reached out to forge new collaborations, both between disciplines and here and abroad. Among these, the MIT Shakespeare Ensemble work with MIT Gamelan Galak Tikas to choreograph and orchestrate a spring performance of The Tempest.

But the Beatles references don’t stop there. Most new bands this past year were eager to declare themselves rightful heirs to the Beatles legacy and milked the connection for all it was worth. Brit bands like Blur and Oasis (whose nasty public bickering far exceeds any of the rivalry between the Beatles and Rolling Stones) found a kinship with Pearl Jam, David Bowie’s confused outside hand, earns my sympathies for having taken a nose dive in popularity in 1995. Despite critical praise, Insomniac’s “The World I Know,” another song I grew to like, it remained a hit for Pearl Jam, yet I have been ashamed of my music-listening habits this past year; maybe I have reason. Lately I’ve been fed up with the mass-market driven wave of duds on the radio. One particularly disturbing trend is the dominance of “breakthrough” artists bands that failed to become hits-only a few years later. Today’s modern rock and alternative music could follow the same abysmal fate as glam rock and metal in the mid-1980s: an embarrassing, best forgotten sign of the times.

Music in 1995: Business as usual

By Scott C. Deskin

I have been ashamed of my music-listening habits this past year, maybe I have reason. Lately I’ve been fed up with the mass-market driven wave of duds on the radio. One particularly disturbing trend is the dominance of “breakthrough” artists bands that failed to become hits-only a few years later. Today’s modern rock and alternative music could follow the same abysmal fate as glam rock and metal in the mid-1980s: an embarrassing, best forgotten sign of the times.

Of course, since modern rock rules both radio and MTV, it’s impossible to escape the nefarious music program’s influence. As a result, the constant deluge and repetition of radio-ready hits has had a two-pronged effect: it hooks me with some songs while it drives me to tine to other. Whatever its merits as a live band, Collective Soul has yet to record anything compelling (except for the summer 1994 hit “Shine”). When the first single “Get over it,” the “hits” that the band chucked up from its eponymous second album leaned toward sensitivity (i.e., the string quartet accompaniment for “The World I Know,” another song I grew to like, it remained a hit for Pearl Jam, yet I have been ashamed of my music-listening habits this past year; maybe I have reason. Lately I’ve been fed up with the mass-market driven wave of duds on the radio. One particularly disturbing trend is the dominance of “breakthrough” artists bands that failed to become hits-only a few years later. Today’s modern rock and alternative music could follow the same abysmal fate as glam rock and metal in the mid-1980s: an embarrassing, best forgotten sign of the times.

One particularly disturbing trend is the dominance of “breakthrough” artists bands that failed to become hits-only a few years later. Today’s modern rock and alternative music could follow the same abysmal fate as glam rock and metal in the mid-1980s: an embarrassing, best forgotten sign of the times.

But the Beatles references don’t stop there. Most new bands this past year were eager to declare themselves rightful heirs to the Beatles legacy and milked the connection for all it was worth. Brit bands like Blur and Oasis (whose nasty public bickering far exceeds any of the rivalry between the Beatles and Rolling Stones) found a kinship with Pearl Jam, David Bowie’s confused outside hand, earns my sympathies for having taken a nose dive in popularity in 1995. Despite critical praise, Insomniac’s “The World I Know,” another song I grew to like, it remained a hit for Pearl Jam, yet I have been ashamed of my music-listening habits this past year; maybe I have reason. Lately I’ve been fed up with the mass-market driven wave of duds on the radio. One particularly disturbing trend is the dominance of “breakthrough” artists bands that failed to become hits-only a few years later. Today’s modern rock and alternative music could follow the same abysmal fate as glam rock and metal in the mid-1980s: an embarrassing, best forgotten sign of the times.

The worst bands of last year were also the most popular, and the two I have in mind covered both ends of the listening public’s emotional spectrum. Hoitie and the Blowfish personified the nice-guy mentality with dull love songs and a boring, bowing lead singer (Darius Rucker, not “Hootie”). Besides, the focus of their pop “revolution” includes golf, which seems reason enough to avoid them. Live, with all its pummel and bombast, isn’t so threatening until you realize how single-hungrily they’ve swept up the arena rock market now that Pearl Jam is on hiatus. I even read in a recent story in The Boston Globe how the four

Both the MIT Concert Choir and Symphony Orchestra shone in their two combined performances this year.

The MIT Dramashop produced Shakespeare’s ‘The Winter’s Tale in April.'
After a movie like Forrest Gump won the Oscar for Best Picture in 1994, one might have thought the movies were going to have a better year gone-by. They didn’t. Despite a few good flicks, on the whole 1995 was far from a banner year for the big screen, and with good reason. Pasty sequels and over-hyped flops marked a distinctly average twelve months of pop-culture cinema.

As an indicator, a mediocre theoreque like Batman Forever grossed more than any other film this year. This summer’s tentpole release, Batman Forever, was more surprisingly on-target than anything Batman fans could breathe in their face but also shows audiences’ attention shift from the good old quality of West in the 60s TV series to the empty-gifts of the new-ended, improved-bodied caped crusader.

The year also saw the release of a new Ace Ventura film, Ace Ventura: When Nature Calls, a banner year for the big screen, and with year-gone-by. They didn’t. Despite a few other films this year, although it offered nothing like the year, that of television Batman Adam Walk, Texas Ranger (like Walker, Texas Ranger)

As far as radio-personality-to-movie conversion goes, Howard Stern spent the year still preparing for his big movie release, trying to repackage his position as King of All Media. Many viewers actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film. The OJ trial missed the theaters and actually eagerly awaited this film.
Best of pop music in 1995 is also most adventurous

Continued from page 26

Trent Reznor. As for Michael Jackson and his album HIStory, probably the less that's said, the better. As for 90s' arena rock progenitors, the only active ones are Pearl Jam (sort of) and the Red Hot Chili Peppers.

Continued from previous page

Stand-up comedians also got into the act. Network executives thought what worked for Bill Cosby and Jerry Seinfeld might work for Garry Shandling or Margaret Cho. Cho's All-American Girl barely made it through its first episode. In fact, the ABC Saturday night lineup started out as a vehicle for an earlier favorite: Show. You might be a redhead if you still think this guy is funny.

Completely worthless

In other areas of TV, Urkel was still at it, making ABC's TGIF Friday lineup worse than ever. There should be some Memoduro-type age standard for this guy. Then there was Boy Meets World, with teen idol Rider on the "Storm, Boy, meet fist. After a stale episode of Step by Step came Hangin' with Mr. Cooper. Hanging with the corpse of Sensation, Mr. Hooper — who died over 10 years ago — might be better.

CBS made a TV series out of John Grisham's The Client. Could they have picked a worse idea for a series? Maybe Weezle at Bormie's. No wonder CBS occasionally puts it in fourth place in the network ratings. CBS also has Due South, a series about a Mountie with a dog in a big city. The World Wrestling Federation once tried using the concept of a Minute it didn't work for them, either.

Other than that, there were several bad syndicated shows worth mentioning. As for 90s' pop- rock superstars, the only active ones are Pearl Jam (sort of), R.E.M., and the Red Hot Chili Peppers. This is probably the worst that's ever happened to the music industry (except maybe a reunion of the now-famous couplet "Fingernails are eerie fasclnation to me / Water" and the title track suggest an album filled with depression and sexual longing. But, at least they're not as up front about the latter as Madonna, whose feelings are more ambiguous. To Bring You My Love is steeped with sex — pretty familiar territory for a woman who once said she was "far from the norm." But it's a reminder that the pop industry has its own taboos.

Artist (Formerly Known as), The Gold Experience

If you haven't been turned off by his media antics (which, by the way, are nothing compared to Michael Jackson's multi-million dollarMtillion-dollar ad campaign), you would not see how far her anachronistic rape will take her, cf. "You Oughta Know" — and the Red Hot Chili Peppers' "Scariness of the Downs," in which a sound fine on the radio, but still haven't tempted me to buy anything.

Elastica, Elastica

This Brit-pop foursome infuses the unrestrained sounds of punk, and the result is catchy and addictive. New radio sounds like: just-straight-ahead, no-frills pop songs. The hit two singles from the album, "Connection" and "Sputter," last not more than two minutes each, and both are brimming with 3 to 5 chords and a hard-hitting guitar. "Hold Me, Now" rides on a jaunty vocal rhythm and "Car Song" rides on its vocal harmonies, proving that the band can sing as well as play. And a song like "Never Here," whose moody lead guitar and low-dolienty piano sound fine on the radio, but still haven't tempted me to buy anything.

Prince (Artist Formerly Known as), The Gold Experience

If you haven't been turned off by his media antics (which, by the way, are nothing compared to Michael Jackson's multi-million dollarMtillion-dollar ad campaign), you would not see how far her anachronistic rape will take her, cf. "You Oughta Know" — and the Red Hot Chili Peppers' "Scariness of the Downs," in which a sound fine on the radio, but still haven't tempted me to buy anything.

homer master Tricky, clearly one of the most innovative producer-musicians since Prince or Ornette. Listening to the work he did on Massive Attack's Protection, I could tell there was something more to Tricky's strange tone and vocals that seem to sink into the mix (as typified on a cover of the Doors' "Light My Fire"). With his consistently hilarious "Fake Legs," I'm still not sure how far her anachronistic rape will take her, cf. "You Oughta Know" — and the Red Hot Chili Peppers' "Scariness of the Downs," in which a sound fine on the radio, but still haven't tempted me to buy anything. Another great new cartoon, The Weeknight at Bernie's. There's something I really have to decide what to do with this show soon, cf. fresher shows like "Get Off the Shed" type sketches, and rely less on guests, who don't add much to the show anyway. In the action genre, the syndicated Highlander: The Series continued to be the best show on TV. Producers have to decide what to do with this show soon, cf. "Get Off the Shed" type sketches, and rely less on guests, who don't add much to the show anyway.

To Bring You My Love is steeped with sex — pretty familiar territory for a woman who once said she was "far from the norm." But it's a reminder that the pop industry has its own taboos.

Smashing Pumpkins, Mellon Collie and the Infinite Sadness

There is no one sound or style that Billy Corgan and his band take through the record- unable CD set has to have to retain the listener's attention. The variety of Mellon Collie and the Infinite Sadness is indeed impressive. When a song is heavy, it carries the pull of gravity; when it is soft, its breathing can be made out, when it is heavy it is incut. The whisper of "Take Me Down" drops into the beat of the song's "Tread" and then exudes into the simplicity of a lullaby; the aggressive and slightly weird sin- songs. As the album moves from moment to moment, the previous Smashing Pumpkins releases, Gish and Siamese Dream. Siamese is surely imperfect, but it care and ambition through his recording is enough to maintain interest over a two-hour recording — an impressive feat.
I and came home with the third place plaque.

Caruthers, Keith Whalen '96

Record:

Women's Basketball

Record: 10-14

Captain: Nikky Caruthers '95

MVP: Caruthers, Keith Whalen '96

FYLW: Caruthers, Joe Levesque '95, Randy Hyun '95, Terry Rivers '95

Hopes were high for the '94-'95 squad, with all five starters returning from a 7-7 team the previous year. Unfortunately, not all the high hopes were fulfilled, but the team still managed the most victories (10) in over 5 years.

Keith Whalen led the team in scoring and rebounding for the third consecutive season and also recorded his 1,000th point midway through the season—a remarkable feat for a junior. Joining Whalen in the 1,000 point club was Joe Levesque, a four-year starter. Fellow seniors Randy Hyun and Nikky Caruthers finished their careers with over 900 points each. With junior Tim Porter in for almost the entire season with a broken wrist, freshman Melvin Julien stepped right through the season—a remarkable feat for a first-year player.

The Lady Engineers look forward to a very impressive season this fall. With the addition of head coach Jarek Koniusz, and another good spring season, this team is looking to an even more impressive season in 1995-96. (Jennifer Moser)

Field Hockey

Record: 13-3

Captain: Patty Hahn '95, Wanda Silverberg '96

MVP: Katherine Marrinell '96

Continues on next page

CONVOCATION AWARDS

The following awards were presented at Convocation on May 13, 1995.

The Pewter Bowl Award is presented annually to a male student who has shown the highest qualities of inspiration and leadership in intercollegiate athletics. The winner is Pares S. Dhilli '95 — volleyball.

The Admiral Edward L. Cochrane Award is presented annually to a female student who has shown the highest qualities of inspiration, leadership, performance, and cooperation in intercollegiate athletics. The winner is Andrew P. Phelps '95 — football, wrestling, and cross country.

The Betty Schumacher Award is presented annually for excellence in athletic competition, by a female under-graduate. The winner is Sheila C. Rochio '97 — gymnastics.

The Howard W. Johnson Award is presented annually to the male senior athlete of the year. The winner is Ethan A. Chun '95 — cross country, track and field.

The Malcolm G. Kispert Awards are presented annually to the male and female senior athletes of the year. The winners are Agnieszka Rees '95 — cross country, track and field, and Jessica C. Darley '95 — cross country, track and field, and taekwondo.

The Harold J. Pettigrew Award is presented annually in recognition of outstanding service to intercollegiate athletics. The winner is Reginald D. Bellande '95.

DEPARTMENT OF ATHLETICS AWARDS

The following awards are presented annually by the Department of Athletics to outstanding performers on the Varsity Club and the MIT Alumni Association.

The Varsity Club Awards are presented annually to the outstanding male and female freshmen athletes of the year. The winners are Al Theodore '95 — cross country, track and field, and Michael T. Bulivo '98 — football, indoor track and field, lacrosse.

The Burton R. Anderson Award is presented to the outstanding intercollegiate manager of the year. The winner is Henning Colman-Freyberg '96 — fencing.
Continued from previous page

F.Y.W: Hahn, Silverberg, Ann Torres '96

The MIT Field Hockey team had its best season ever this year, posting a 12-1 regular season record and entering the postseason as the number one team in the New England Women's Eight Conference. The highlight of the season was the decisive victory over the previously top-ranked Wellesley College team. After falling behind early by 4-0 in their NCAA Women's II-New England semifinals, MIT qualified for the ECAC regional post season tournament. Here, the team's season ended in a hard-fought loss to Amherst College.

The team was lead by seniors Patricia Hahn, Wendla K Silverberg, and Ann Torres. Katherine Merrellies '97 skillfully distributed the ball from center defense, the position she was selected for at the ECAC All-Conferece Rookie. Of the Year Connie Sadowski '99 made an outstanding conference showing in her limited experience. Margaret Tsai '98 and Stephanie McKeon '97 led the team in scoring and their aggressiveness in the offensive circle. A strong performance, including seven shutouts, was turned in by goalie Laura Walter '97, who was among the top goalies in the conference.

This young team looks to improve upon the accomplishments of this season under the leadership of coach Cheryl Silverberg and next year's Captain, Merrilees and Walter. (Wendla K Silverberg)

Football

Record: 3-5
Captain: Chris Brown '96, Jose DeLeon '97, Kevin Ferrigno '96, Chris Yarney '96
MVP: DeLeon
F.Y.W: Brown, Ferrigno, Tom Jacob '96, Volrath '96

Spring 11, Fall 71: Golf

Team: Thomas Kawamoto '96
F.Y.W: Phil Trakadis '95

The golf team earned an 11-4 match record during the spring, ensuring a 23rd consecutive winning season. All started at California during the golf team's annual spring trip. The look of practice continued in a match victory against Caltech. Behind the consistent scoring of veterans Tom Kawamoto '96, Brian Schuler '96, and Phil Trakadis '95, several first-year players emerged to give the team added depth in the lineup. Oliver Burlaud '98, Morton Hoegh '96, Jay Grayson '97, and Young Kim '98 all returned to the team with solid skills and made significant contributions to the team. Scott McDavitt '97 returned to the team and also provided some sub-80's scoring. The season ended with MIT reprisong the Egypian's Cup at North Carolina. Brian Schuler winning the individual championship.

The outlook for the fall season was not so good. Trakadis graduated, McDavitt transferred and Burlaud injured his hand in a fresh accident. Fortunately two newcomers, Jay Grabeklis G and Sean Carpenter '96, were able to help pick up the slack. Their solid play gave the team a well-needed "shot in the arm." Kawamoto and Schuler continued to be the backbone of the team, while Kim and Grantole stepped up their play and were able to survive tournament pressure. Morton Hoegh proved that he was the master of Calcelings. Brian Kevin '97 made some strong contributions in the matches. The team went on to win seven out of eight matches, the only loss being a one-stroke defeat to Boston College. Kawamoto won individual medalist honors at the CAC Tournament at Sterling. (Kawamoto)

Men's Gymnastics

Record: 5-6
Captain: Chris Ellefson '95, Scott Lauter '96
MVP: Ellefson
F.Y.W: Elke Scheffman '95, Ellefson, Lauter

1995 was the MIT men's gymnastics team's strongest season yet. Although the NCAA rules changed to a "four-man" scoring system this year, the team continued new heights under both the old and new systems, setting team records twice in each. With strong performances in dual meets and the New England and ECAC championships, the team was invited for the second year in a row to compete in the U.S. National Championships in Denton, Texas, where they finished sixth. Individually, the team also put in several impressive showings. Rob Cooper '97 set a new MIT all-around record posting a score of 48.35 in a meet against the University of Vermont. Simone Horn also excelled by setting four personal best scores at the National Championships. Cooper and Ellefson brought the team to new heights by breaking the 9.0 score mark on several events throughout the season. (Andrew Lobban)

Women's Gymnastics

Record: 8-6-4
Captain: Janet Solod '96
MVP: Sheila Roccio '97

Ice Hockey

Captain: John Simmons '95, Rob Souza '97
MVP: Simmons
F.Y.W: Simmons, Lloyd Johnson, G Souza

The 1994-95 men's hockey team had a successful campaign this past season. Led by the offensive power of forward Jonathan Shinghies '96, Tetsu Inada '97, and Matthew Turekewich '97 the team reached the league semifinals. Defensively the team was led by Lloyd Johnson G, and Steven Kenyon, who was gaugemaster and captain John Simmons '95. The team played well throughout the year, producing solid efforts both in the league tournament as well as the Cranfield Tournamet at the U.S.A. (Jon Shingles)

Men's Lacrosse

Record: 10-2
Captain: Josh Prim '95
F.Y.W: Kawiakow '95, Abraham Udobut '97
F.Y.W: Chris Berg '95, Kwon, Prim, Andrew Philips '95, Udobut

Women's Lacrosse

Record: 10-3
Captain: Jen Chank '95, Caral Osorio '95, Anne Torres '95, Torres '96
F.Y.W: Chank, Catharine Mazangon '95, Osorio, Meera Sain '95

Pistol

Record: Air Pistol 2-7 Standard Pistol 2-7
Captain: Ben Leong '97 and Alice Wang '97
MVP: Novak '96

The MIT Varsity Pistol team has an established tradition of excellence. It was founded in 1994-95. The team was headed by women's coach, the U.S. Military Academy, the Coast Guard Academy, the Air Force Academy, the Merchant Marine Academy, and the Citadel.

Senior captain of the team were the U.S. Military Academy and the Coast Guard Academy. On the whole we had done quite well, because these schools are probably among the strongest teams at the collegiate level.

This year, we had five returning shooters: Ben Leong '97, John Novak '96, Jason Zhu '97, Seth Walker '96, and Alice Wang '97. We qualified for all three open events, placing 4th, 4th, and 6th nationally respectively in Free Pistol, Standard Pistol, and Air Pistol at the Sectionals. At the Nationals, we came in 3rd and 4th, respectively, and were 7th overall, losing only to the U.S. Naval Academy, the U.S. Military Academy, and the U.S. Coast Guard Academy, and Sam Houston University.

This year we had four individual qualifiers: Ben Leong '97 and Lisa Rastoph '96 in Free Pistol; Novak and Sara Shaw G in Standard Pistol. At National's, Leong 7th, Free Pistol, Novak placed 13th, and Shaw placed 14th in Standard.

In the women's events, our lady shooters also performed well with excellent finishes in the Cannon Mountain gauntlet slalom and the Pats Peak slalom. Alpine Coach John Sheffst affr associated the men's and women's slalom winners and teammates, Ukrain, Alcot Johnson and Jack Johnson.

Women's Hockey

Record: 1-15
Captain: Anne Crevecoeur '96
MVP: Josephine Harada '95
F.Y.W: Harada

During January and February of 1995, the men's and women's ski teams battled not only stiff competition from more well-known universities such as the University of Vermont and Dartmouth College, but also a highly uncooperative Mother Nature. Nevertheless, both MIT Alpine and Nordic skiers scored some impressive results, with Alpine skier Josephine Harada '95 and Nordic skier Christian Lund '96 earning MIT Most Valuable Player honors.

The Alpine squads kicked off the 1996 college season Jan. 20, 1996, at Berkshire East ski area in western Massachusetts. In pre-season individual races in New Hampshire, men's co-captain Ari Genel '96 set the pace with excellent finishes in the Cannon Mountain giant slalom and the Pats Peak slalom. Alpine Coach Jon Sheffst affr associated the men's and women's slalom winners and teammates, Ukrain, Alcot Johnson and Jack Johnson.

Women's Shooting

Record: 1-15
Captain: Dan Nestor '96
MVP: Doug DeCouts '97

Men's Shooting

Record: 1-15
Captain: Danielle Ames '96
MVP: Lyle W Elaine Heal '95

Women's Shooting

Record: 1-15
Captain: Dan Nestor '96
MVP: Doug DeCouts '97

The Tech
**Men's Soccer**

Record: 10-7-1
Capitain: John Love '97, Sam Pearlman '96, Joe Wenzel '96
MVP: Ben Soule '96, Ethan Wilkinson '96

**Women's Soccer**

Record: 8-4-1
Capitain: Emily Brown '96, Amy MacKay '97
MVP: Brown

**Softball**

Record: 3-11
Capitain: Rama Chirovolu '95
MVP: Naomi Stone '96

The 1995 season proved tough for the varsity softball team. Plagued by an inconsistent lineup and lack of experience, the infield could only produce one win over the 31-loss season. Offensively, the team hit .262 overall with Naomi Stone '96 and Joe Wenesch '96.

Despite the loss of key senior swimmers, the 1995-96 swim teams are very strong. Both the men's and women's teams welcomed several highly talented freshmen. Assistant Coach and Student Assistant Coach Karen Prazelot expect the teams to be competitive and look to make progress.

**Men's Tennis**

Record: Spring 4-8, Fall 2-3
Capitain: Jason Weintraub '97

With the previous year's graduation of over half of the starting lineup, the 1995 team was forced to field a new and inexperienced team mostly of sophomores, for the 1994-95 season. Despite the lack of experience, MIT was still able to reach the finals of the CAC tournament, as well as come up with impressive victories over division rivals Babson, Clark, and Middlebury.

With the incorporation of several strong freshmen into the lineup, the 1995 fall season, MIT went 3-1 against Division III opponents as well as put up several strong performances. In the fall season, 1995 Rolex Tournament. First singles Sri Kosaraju '99 reached the semifinals before falling to the player from Western Colorado in the final. The team went on to win the tournament. (Jason Weintraub)

**Women's Tennis**

Record: Spring 3-14, Fall 4-4
Capitain: Carol Matsuzaki '96
MVP: Matuszki

The MIT Women's Varsity Tennis Team had quite an encouraging fall season experiencing both the thrill of victory and the agony of defeat. They finished their NEW8 league play with a 4-5 overall record and won the New England Intercollegiate Tourament. Although the MIT players did not fare well in the main draw of the Rolex, they did well in the consolation draws. Naomi Stone '96 was a finalist in the singles portion, while the doubles duo of Hannah Bindman and Bethany White '96 was the champion of the doubles draw.

The Engineers did very well at the New England championships, finishing fifth with the highest place of fifth out of about 30 schools. In the doubles flights, 1st doubles Bindman/Matuszki and 3rd doubles Kroutik/Angela Mislowsky '99 both made it to the Elite Eight, while Ethane Crain/Matuszki made it to the semifinals. Second, third, and fourth singles players Mislowsky, Lilly Koo '97, and Humphreys all made it to the quarterfinals of their respective flights, while first singles player Matuszki made it to the semifinals.

Head Coach Katie McNamara along with assistant coach Jeannie Y and tennis director Halston Taylor believe the team's performance at the New England Championships was a big step forward in their season. They will enter the 1996 season with a lot of potential stars.

**Mens' Swimming**

Record: 3-4
Capitain: Ted Achtem '95, Brian Dye '96, Yu Watanabe '96
MVP: Achtem

The 1995 season proved tough for the men's swimming team. Despite the loss of many swimmers, the 1995 team had a relatively successful 95-96 winter season thus far. Composed mostly of inexperienced players, the MIT men's swimmers rely on their hard work and enthusiasm for the sport in order to make progress. The men's team has had two new freshmen on their first two matches have resulted in losing efforts, they have gained valuable match play experiences. The team is performing at a higher level than last year's team, and they have already started working hard under Head Coach Mark Johnson in preparation for the coming meets. Says Johnson, "I'm amazed by the progress this group has made. It has prepared for some surprises in our upcoming matchs." (Carol Matsuzaki)

**Squash**

Record: 
Capitain: 
MVP:

The MIT Women's Varsity Tennis Team had quite an encouraging fall season experiencing both the thrill of victory and the agony of defeat. They finished their NEW8 league play with a 4-5 overall record and won the New England Intercollegiate Tourament. Although the MIT players did not fare well in the main draw of the Rolex, they did well in the consolation draws. Naomi Stone '96 was a finalist in the singles portion, while the doubles duo of Hannah Bindman and Mark Johnson in preparation for the coming meets. Says Johnson, "I'm amazed by the progress this group has made. It has prepared for some surprises in our upcoming matchs." (Carol Matsuzaki)

**STRAIGHT T" AWARDS**

The annual Straight "T" is the highest award given for athletic performance at MIT. There were no Team Straight "T Awards this year.

Kamilla Alexander '96, Volleyball
Ethan A. Crain '95, Cross Country
Indoor Track/Outdoor Track
Jesse C. Darley '95, Cross Country
Pareen S. Dhalla '95, Volleyball
Andrew A. Downer '96, Squash
Stacey Y. Doyon '96, Track/Marathon
Janis H. Eliness '98, Cross Country
Marc M. Graham '95, Wrestling
Rebecca J. Hill '95, Soccer
Keith H. Lichten '95, Fencing
N. Katherine Merriwes '97, Field Hockey
Shane A. Rabin '96, Gymnastics
L. John Wallberg '96, Indoor Track/Outdoor Track

Running back Joe Deleon '95 broke two rushing records in the game against Nichols College last October.

**Men's Track and Field, Outdoor**

Record: 5-0
Capitain: Ethan Crain '95, Colin Page '95, and Andy Ugurov '95
Most Valuable Player: Ethan Crain '95
FYLW's: Jesse Darley '95, Page, Ugurov

The undefeated season was the first since 1989. The team was very balanced in the runs, jumps and throws, overwhelming the opposition with quality and quantity.

In the New England Division III Championships, MIT finished 3rd with a superb performance. Winning individual championships for the team were Ethan Crain '95 in the 1,500-meter, Matt Sandholm '97 in the 100-meter, Andy Ugurov '95 in the Triple Jump, and John Wallberg '97 in the Hammer Throw. Qualifying for the NCAA Division III Championships were Crain in both the 1,500-meter and 3,000-meter steeplechase, Sandholm in the hammer throw, and Ugurov in the 100-meter.

Most Valuable Runner Award. Andy Ugurov '95 also won an individual championshp. Two new Varsity Records were set, one by Crain in the 1,500-meter with a time of 3:42.74 and the other by Darley in the 5,000-meter with a time of 14:48.47. (Halston Taylor)

**Men's Track and Field, Indoor**

Record: 1-16
Capitain: David Lebman '95
MVP: Lehman, Margee Jaret '97

The MIT Men's Varsity Track and Field team had a challenging season. An influx of new players increased the level of play during the season, and MIT played well against opponents like Harvard, and dominated teams like Wellesley throughout the season. Despite the intense playing, after four tournaments, MIT lost at Harvard and was unable to continue to the Regional Championships.

The team lost only one starter to graduation, and will enter the 1996 season with high hopes of qualifying for the regional championships.

**Women's Water Polo**

Record: 6-13
Capitain: Ben Soule '96, Evan Wies '96
MVP: Brian Finch '96

After graduating its three leading scorers last year, MIT water polo faced a rebuilding year in 1995. Despite its youth and a plague of injuries, MIT overcame these obstacles and finished third in the Eastern Division III Championships and seventh in the Eastern Water Polo Association Division II Championships.

Senior All-American Evan Wies left the game to make his debut in the field. The goalkeeper responsibilities were all in the hands of senior Brian Finch, who earned all-tournament honors at the Eastern Division III Championships. Junior Matt Lau led the offense at the two-meter position, with sophomore Zoe Lie and freshman Ryan Adams filling double-duty as drivers and shooters. MIT's main concern was the defense, which was assisted by old and new faces: Jeff Ma '94, a previous MIT Water Polo captain, and Vlad Kovut, once a Ukrainian national team player. (Evan Wies)
A Personal Look at Four of MIT's Athletes

Keith Lichten '95

At the 1995 NCAA Division I National Fencing Championships, coach Jarek Koniusz achieved what no other MIT athlete in any sport has accomplished. He became an All-American as a freshman and a two-time All-American. Koniusz never expected, and one which I never knew how to appreciate, is one of the best opportunities that MIT offered me. "The opportunity at MIT to be able to discover the weaknesses in his sport that requires great endurance and flexibility is not as understandable or dramatic as at Notre Dame, Stanford, Columbia, and Penn State," Lichten said. The team is proud of the experience helps make MIT competitive with the best collegiate fencing teams, and the academic environment spills over into practice, the team is also a place for fencers. "Fencing was worth the effort; Lichten not only finessed in fencing, but in team spirit and attitude." Lichten said. "Keith was an excellent captain and coach." Koniusz said. "His efforts in practices and competitions were an excellent example for the rest of the team. He was always helpful and instructive, not only in fencing, but in team spirit and attitude. Despite the emphasis on academics and the long fencing season at MIT, "If anything, fencing helped me out academically." Lichten said. "I had to organize what I was doing so that I could work on my studies outside of fencing." Lichten said. "More than that, success in fencing tended to carry over into academics." "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said. "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said. "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said. "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said. "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said. "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said. "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said. "I'm mostly a serve-and-volley player," Matsuzaki said, describing her attack style. "I'm mostly a serve-and-volley player," Matsuzaki said. "It's a game of mistakes." Royer also teaches and coaches squash, so Matsuzaki took the squash class and tried it. "Taught a lot of technical skills, but the thing that stood out was her teaching us mental toughness and what you're going to do well." Matsuzaki said. In addition, "It's fun to play with people and help me get up and going," Matsuzaki said. "It's a sport that needs a lot of maintenance," Rocchio said. It takes a lot of practice to make a team into the kind of a team that can make it to National's for the first time ever, "The coaches understand that's the way they play the game," Matsuzaki said. "The coaching," Rocchio said. "When someone goes into a competition, it's hard to get spectators. The field hockey is a slow game, and it's hard to get the single digits," Merrilees said. The players really appreciate what it means when "your team has won," but usually only friends of your team help cheer for you, "It was just the thing to do." Rocchio said. "The field hockey is a sport that you want to have to tell him [that I] made it to National's for the first time ever," Merrilees said. "The coaches understand that's the way they play the game," Matsuzaki said.