Plans made for HASS req't

By Stephen Blatt

Preparations for implementing the new Humanities, Arts and Social Sciences (HASS) requirements, which will go into effect next term, are currently under way, with the School of Humanities and Social Sciences devising administrative procedures to handle the new requirement.

Lists of distribution and elective courses have been prepared and will appear in the 1974-1975 Catalogue. Dean Donald Blackmer of the School of Humanities and Social Sciences has drawn up a proposal applying the new requirement to students. The fifteen fields of concentration are being organized.

The new HASS requirement includes 8 term subjects, totaling at least 72 weeks in the humanities, arts and social sciences, with a distribution requirement of 3 subjects drawn from three separate fields, a concentration requirement in which the student takes three or four courses in one field, with the specific fields for implementing the requirement determined by the fifteen fields of concentration.

Blackmer's proposal for implementing the new requirement includes the following points:

- Students who have completed at least three subjects from the present combined freshman and sophomore lists should be considered to have completed the distribution portion of their requirement.
- Students who have completed three such courses will have to complete eight upper class subjects to fulfill the necessary number of distribution subjects.

Present sophomores will only have to take three subjects in both English and foreign languages, though freshmen and incoming students may have to take four subjects in certain fields (to be decided by the various fields). This will be the first change in present requirements for precept concentration, which sophomores presumably may have started.

Present juniors will be asked "to complete a special farm identifying the eight or more subjects they have completed (or plan to complete) in fulfillment of the requirement previously in effect." These forms will be treated similarly to petitions and will be reviewed by the School of Humanities and Social Sciences and by the Registrar's office, "to confirm that the subjects noted have in fact been successfully completed."

While future students will register with their field of concentration in the spring of their sophomore year, present sophomores will register for their field early next fall (but after Registrar's Day).

"We ought to do it this spring so people know what to do," said Blackmer, but the interdepartmental committee of the new requirement by the faculty, and the subsequent necessity to prepare the information for the catalogue before its deadline closed (preparation of distribution and elective subject lists) precluded organizing the concentration procedures early in the year.

A committee of faculty, administration and students is being formed to oversee the transition to the new requirement. Blackmer sees this committee as a "fairly permanent one which will effectively administer the new requirement."

However, he would like to "get out of the business of distribution requirements," and currently be circulating among the Registrar's Office and faculty and administration the Schools involved. He is also looking for student input, "in that they are the ones who have to take the courses."

True technical solutions are elusive, says Aigrain

By Dave Danford

Mistrust of the state has been one of the major reasons for a massive misdirection and problems of technological side effects, according to Pierre Rachel Aigrain.

AIgrain, Henry R. Luce Professor of Environment and Public Policy, speaking at Tuesday's Technology and Culture Seminar, said that application of present technology is not sufficient to provide true technical solutions to environmental problems: "If we can go to the moon," he commented, "it shows one thing: we can go to the moon."

Instead of searching for true technical solutions, Aigrain said, "Ninety percent of the effort is in applying technological fixes." He said that such fixes are maneuvers to achieve fast but limited success, yet unfortunately, few have long term positive effects.

Reaction to the public ignorance of technological insufficiency, Aigrain cited other sides to the technological fix, "including the way the normal politician discounts the future."

He noted that politicians tend to think in terms of next election, and back strict standards which force industries into short term technological fixes.

"Not all environmentalists are against technology," said Aigrain. He claimed that many environmentalists are only against personal image-building and protection of private interests. "Those who do the best job are those who are trying to do the best for humanity," he said.

"Because of a number of social, political, and institutional pressures, a lot of the approaches to the problem of reducing the bad side effects of technology are going the wrong way," said Aigrain. "This is not necessary, we can do better," he said, suggesting "a lot more attention be given in this institution toward real technical solutions and maybe a little less towards technological fixes."

Winter weather has taken a toll on the grounds of the Institute as well as the people, and Physical Plant discovered this spring that they were going to have to repair the concrete in the student plazas at the Student Center and the Herman Building. Supervisor Richard Deloff of Physical Plant cited safety as the main reason for replacing the concrete, which has been damaged by freezing weather and chemicals used to clear off ice and snow. Deloff estimates that the repairs at the Student Center and Herman will probably cost about $8,000.

The Building 7 Lobby was invaded Wednesday evening by some hundred and fifty gold balloons, Advanced Television Systems technicians, and a moderate crowd of curious spectators. The event was "Son Of Balloon Carpet," a creation of Professor of Aeronautics, Horace O. White. Last fall, after a son getting a similar amorphic balloon structure off the ground, the original silver "Balloon Carpet" was launched. This week marks the fourth effort, sponsored significantly and filmed by the German TV network, Nordislandischen Rundfunk, which is doing two 45-minute documentary episodes on Professor White's work. "Son Of Balloon Carpet" proved to be a slightly embellished version of the original, featuring myriad metallic balloons attached to tethers and a number of other effects. Reaction ranged from incredulity and dismissal of the art as too scientific, to the too conceptually challenging. The MIT Center for Media Art agreed this week that it was "great." The escaped or left-over balloons proved to be excellent souvenirs of the glittering spectacle.

Federal plan still has 45M surplus

By Mike McNiece

Last minute efforts by the Department of Health, Education, and Welfare to distribute $56 million in federal grant money to students were unsuccessful, according to an HEW spokesperson.

According to Ms. Jeanne Langdale, Director of Federal Aid Programs at HEW, "we still have about $45 million left," in the Basic Educational Opportunity Grant Program, despite extensions of the deadline for applications to the program. The BEOG grants, which average at $250 per student, are not calculated to come first year students at colleges and vocational schools.

An announcement in March that the program, which has funded with $512 million in federal funds last June, was badly underestimated. At that time, HEW predicted the deadline for applications to the program would be in April.

The attempt to get more applicants was only a partial success, however, and the program only distributed a total of 300,000 grants. Almost 500,000 students applied, Parks said.

Parks told The Tech that HEW is now faced with the problem of distributing the $45 million surplus. "According to the omnibus bill from which a number of grants come, we have to distribute it among the states on the basis of those who got grants," she said. "We are asking Congress to allow us to apply the money to next year's program."

Congress ordered HEW to distribute the money to the current grant-recipients, the average grant will be increased to almost $400. Parks told The Tech that the department probably could not distribute the money "until nearly September."

MIT financial aid offices told The Tech (March 12) that the extension of the application deadline had little effect on MIT's financial aid situation. Only about 60 MIT students could meet the exacting standards that the BEOG program places on students. However, Director of Financial Aid Daniel T. Langdale, said that applications had been liberalized, which students had applied for and received grants prior to the extension.

"We made a careful attempt to reach those students who were eligible, said Langdale. "We were able to contact almost all of the students."

Langdale pointed out that the BEOG program will be changing next year, Parks said, who expects a larger number of students to take advantage of the program, and who will have grants this year will receive grants next year as well. The standards for the grants, which were criticized by many financial aid officers as "too high," may also be liberalized, which might help some people learning about the program sponsored and supported by the federal government. Langdale said.

"We aren't sending any material about BEOG to incoming applicants yet," Langdale told The Tech. "MIT likes to keep the matter of a college choice and financial aid separate."

Ziegler: "We have two options. We could intelligible, or we could unintelligible."
MIT patent rules clarified

By Julie Mallon

Ownership of an invention by someone at MIT very often depends on who that person was working for when he made the discovery due to MIT's regulations on patents and royalties.

For example, if that person were working on a research sponsored by someone outside the Institute, explained Arthur Smith, General Counsel for the office of sponsored programs, the ownership of that invention would depend on the contracts that MIT has with that company. Smith said that in such cases the Institute likes to get title to the invention, with the company receiving a royalty free license to use it.

"The sponsor is only really contracting for the work that the person does on that project," Smith explained. "The product is just a by-product above and beyond what the sponsors are paying for. We feel that as a non-profit organization we're better able to facilitate the widest possible use for such an invention."

Smith stated that not all MIT's contracts with other companies resulted in institute ownership, however, and he used the National Aeronautics and Space Administration (NASA) as an example. "In order to get funding from NASA, we have to agree to give them title to whatever our people working with them come up with. If we can prove to them, however, that our owning the product would be better for the public, then we can ask them to waive their claim to title. So far we've been 100% successful in our requests for such a waiver but there's no guarantee that that average is going to continue."

Another organization that Smith mentioned as having the right to decide whether or not it will keep the rights to a certain invention was the National Science Foundation (NSF). Smith added however, that "we've been able to convince them that we are better suited to handle an invention, and they've now agreed to turn all such titles over to us."

According to Smith, MIT divides inventions done without the aid of an outside sponsor into two categories, depending on whether or not the inventor made "significant use of funds, space or facilities administered by the Institute" in developing his product. The payment of salaries from unrestricted funds and the use of offices or library facilities are not construed as constituting 'significant use'.

If the inventor does use Institute funds, space or facilities 'significantly', then the question of ownership comes down to one of how the inventor is associated with the Institute. If he is a member of the "academic staff" then the invention is considered to be the property of the Institute. If MIT undertakes patenting and commercialization (Please turn to page 4).
Peaceful laser applications grow

By Julie Molle

Work is beginning to use "science" of lasers may be slowing but not the pursuit of its applications, according to Saul Shaoul, associate professor in Aeronautics and Astronautics and head of the Laser Application group in the Research Laboratory of Electronics.

Speaking at an Aeronautics & Astronautics Research Laboratory of Electronics General meet- ner, Ezekiel said that $300 mil- lion is currently being spent on laser research, "and especially its applications."

Ezekiel said that the military is "most probably where a lot of this money is going. I don't know if they are actually plan- ning to test lasers as offensive or defensive weapons and if I did I most probably wouldn't be able to talk about it. With so much money floating around, though, I guess someone's thinking about it.

Ezekiel touched on other possible military uses for lasers such as tracking and range find- ing and fiber moored on to what he termed "more peaceful" appli- cations.

Among these, Ezekiel cited the possible use of lasers in pollution sending. "With lasers now on going at Lincoln Labs on monitoring with lasers the pollu- tants in automobile exhaust."

Ezekiel said that a system of such monitors placed in a city could keep a 24 hour watch on pollution "and tell us to put on our gas masks when things get bad."

Ezekiel also stated that lasers could very possibly be used to use modern communications as we know it. "The use of lasers could make - communications much cheaper and more efficient than it is now. Coupled with low loss fibers, lasers could be the com- mon denominator when and if. Send RPM inde- xations, and test novel induction pipe expected to give RPM inde- xation when and if. Send RPM inde- xation when and if. Send RPM inde-

Ezekiel added that as a scien- tist the laser holds just as much promise. As one example, Ezekiel said that the use of lasers in spectroscopy had resulted in an increase in accuracy, "so great that nobody knows what to do with it... with the capa-
bilities that we have now, there's no telling what we might discov- er.

"No matter how you look at it," Ezekiel concluded, "a laser is still just a source of light. But it's a light source with so many possibilities... I think lasers are going to play a large role in things to come."

The four letter word that's not that SBLT. It's not a word. It's an idea. Just about the lowest cost five-year renewable term or stra- ght life insurance you can buy any- where. Savings Bank Life Insurance. Cambridgesport Savings Bank, 689 Mass. Ave. in Central Square.
COMES SEE

George Bernard Shaw's famous comedy
PYGMALION

Directed by JOSEPH EVERINGHAM at 8:30 P.M.
May 3, 4
Little Theatre, Krage Auditorium, MIT
All Seats $2.50. Reservations 253-4720
THE MIT DRAMASHOP

MICK JAGGER / IS HERE WITH JIMI HENDRIX
AND COCAINE!

Sympathy for the Devil (1+1)
"JIMI PLAYS BERKELEY"

NOW CONTINUOUS FROM 2:30 P.M.

Lowe's / The Apollo

Today she could become an admiral.
It's a new Navy, with opportunities to do something different and exciting. Full scholarships available, plus a unique trial offer this summer.
Be someone special in the new Navy. Come see us in 208-125 or call 3-2991

6 Days Only!! "Let's Be Buffaloes the Rolling Stones Concert on film with Quadraphonic Sound at the Boston Music Hall for a limited engagement, starting May 9th. 1130 P.M.

Call 262-1303.

Pledge Sunday
10 A.M.

Performances weekdays, 7:30 P.M.
Saturday and Sunday, 4:30, 7:30 & 11:30 P.M.

For further information, call (617) 547-5491.
the tech arts section

Marcel Marceau
(see page 6)

drawing by Nancy Pierce
On the cover:

Silence is golden

by Nancy Pierce

Marcel Marceau, the genius of pantomime, appeared for two weeks last month at the Symphony Theatre and he exceeded even the highest of expectations. Throughout the month, in spite of the silence each show, the audience was captivated and thoroughly entertained by Marcel’s movements and philosophy, and insight into what human beings really are. 

He was described as an artist among artists, those who feel, see, and express their inner world with poetic movement. He showed not just movements, but concepts, and are highly entertaining.

These mimes are the simpler of the two types, with easy to grasp situations and situations common to everyone. Whether Bip is learning to skate or mingling with the rich at a society party, he faces it all with a determination and assurance that has endeared him to audiences all over the world.

Throughout the more than two hours of a program consisting of Mozart’s Requiem, the larger ensemble was much more atmospheric and effective else-where. The Mahler First Symphony was, as expected, a real tour de force, and all sections of the Symphony acquitted themselves nobly. Balances and phrasing particularly stood out. The first movement was particularly fine, and the second, with a slight over-bright sound, did not reach the heights of the first. The third, a Sarabande, was done very well, though the audience did not seem to be particularly moved by it. The fourth, a Finale, was well done, though the audience did not seem to be particularly moved by it. The fifth, a Coda, was well done, though the audience did not seem to be particularly moved by it.

The final concert of the year for the MIT Symphony Orchestra was held at Sanders Theatre on May 12 at 3:30 pm, and will include Haydn’s Symphony Concertante, composed by Haydn in 1774 for the two pianos and orchestra, and Schubert’s Symphony No. 8, “The Unorganized.” The program also features soloists, including the soloist in the Symphony Concertante.

The Coham's Crosswinds

by Bob Reina

Coham's Crosswinds

Billy Coham (Atlantic)

When the Mahavishnu Orchestra dissolved, everyone wondered who would become a member of this highly acclaimed band. Billy Coham's Crosswinds became a favorite of the fans, and his work with the band has been highly praised.

The band that finally appeared on stage differed from the Crosswinds lineup with Billy Cobham, as the Mahavishnu Orchestra was dissolved. The new lineup was comprised of Billy Cobham on drums and vocals, Jan Hammer on keyboards, and Billy Cobham's other band, Coham's Crosswinds.

The band's sound was very different from the Mahavishnu Orchestra, with more emphasis on the keyboards and electric guitar. The album, Crosswinds, was released in 1974 and was a commercial success.

The opening track, "Spanish Moss," set the tone for the rest of the album. The song features Billy Cobham on drums, Jan Hammer on keyboards, and Billy Cobham singing lead vocals. The album also features guest appearances by Jan Hammer on keyboards and Billy Cobham on vocals.

Throughout the album, Billy Cobham's drumming is highlights the sound and feel of the album. The drum beats are fast, yet controlled, and the rhythms are complex and unusual. The keyboards provide a foundation for the songs, with Jan Hammer's synthesizers and keyboards adding layers of sound to the music.

The album features a variety of styles, including rock, jazz, and blues. The songs are well written, with catchy hooks and memorable choruses. The lyrics are thoughtful, with themes of love, loss, and hope.

Crosswinds is a great album, and Billy Cobham's Crosswinds is an incredible band. The album's sound and style are unique, and it is a great addition to any music collection.
Tech varsity, for instance, took year. However, Harvard pulled away, but they have raced no cover the second kilometer than twenty-nine more seconds to the 1000 meter mark. During year's national champions, Wisconsin gradually in the first half. Vweights host Wisconsin and races progressed in similar fashion. Now ranked fourth in a new, and potentially decisive, body of the race. Contributed to the fade that the somewhat higher pace than Harvard. This new, and potentially decisive, squeezed into third place two seconds. Secondly, this was the first time this spring that MIT was losing in the body of the race. The new, and potentially depressingly time-consuming experience could have contributed to the fade that the Engineers suffered. Now ranked fourth in a recent coach's poll, the MIT heavyweights took Wisconsin and Dartmouth this Saturday. Last year's national champions, Wisconsin is presently ranked second, but they have raced no major events in the last ten years.

Avoid the summer! Consider this.

Radcliffe outsrows women

Last Saturday, MIT's women's varsity crew team experienced defeat in the first annual Burger King Women's Invitational at Regattas. To both the four and the varsity eights race. A lack of stale boats to prevent the six entries from deftly complicated the start of the four race, held early in the morning. With all boats finally settled, the starting commands were given, but three of the boats, MIT eliminated, never left the line. On the premise of a false start, the race was restarted, this time for good. MIT's entry got off to a good start, but at the halfway mark of the 1000-meter course, the line was evident. Finishing last behind Radcliffe (the winner in 4:19.6), Boston University 'A', BU 'B', Cambridge Boat Club, and Wellesley, the race was a great disappointment to the MIT crew, as MIT did not enter the other two races in the regatta. The lightweights and the JV eights, the women had lots of energy saved for the big race, the varsity eights, with individual medals and a silver trophy at stake. Although the eight had to overcome last minute changes, hopes were high for defeating Radcliffe, the national champion.

Once again, more difficulties were encountered at the starting line. First, there was a dispute over who was to referee, with the decision going to Gail Pieron, former National Women's Sculling Champion. Then, due to a strong headwind and the lack of a battery-powered megaphone, Pieron's commands were practically inaudible. Thus, when the start was called, no one was ready.

Nonetheless, all three boats did their best to recover and maintain their positions. At 300 meters, MIT was two seats up on both Radcliffe and BU — victory seemed attainable. At that same moment, Radcliffe shattered the Tech hopes with a surge, over-taking MIT and BU and finishing about one length ahead. However, MIT managed to edge out BU by one-tenth of a second.

MIT's women travel to Princeton tomorrow to take on Princeton and Yale.

New Concept in CONTACT LENSES

WET LENS

Interested in more comfortable, longer wearing contact lenses? Then you should look into "wet-processed" contact lenses. Call us for more information about "wet-processed" contact lenses. Contact Lens Specialists,

77 Summer St. Boston, MA 02210

286 Liberty St., New Bedford 02740

Serving Massachusetts

COPIES WHILE YOU WATCH!

Instant Printing

876-8098

Cambridge, Massachusetts

NOW!

Electrical Engineering and Computer Science Majors

Consider this.

Data General Corp., is the second largest minicomputer manufacturer in the world. Our sales have more than doubled every year for the past four years. We are a technological leader in our field, famous for applying large computer architecture to the small computer industry. We believe that what the small computer can achieve can be achieved and we'd like to talk to you about your future with us.

There are many choice opportunities in our hardware and software Research & Development Departments, and various other areas where you can profitably put your training and ideas to work.

For full information, please send resumes with copies of your transcripts to Allen Sabourin, Data General Corporation, Route 9, Searshook, Mass. 01772.

Student Center Committee presents BEATLES Film Festival Friday, Saturday, Sunday, May 3, 4, 5 A HARD DAY'S NIGHT...7:40pm LET IT BE...10:40pm REEFER MADNESS...12:00pm

All movies are in the Sala de Puerto Rico, MIT Student Center. MIT or Wellesley ID required for admittance. Seating is on the floor — bring your own blankets!

Free Admission Free Popcorn
On Saturday and Sunday, the MIT women’s varsity sailing team placed second in the New England Championships, the Gerry Reed Invitational Trophy Regatta, and qualified for the Women’s National Championships, to be held next month at Newport Beach, California. The regatta, named for the well-known MIT Sailing Master, was won by Radcliffe in light shifty winds on Saturday and a steady southerly on Sunday.

Team captain Shelley Benson ’74, sailing with co-captain Barbara Bell ’77, took low-point honors in A-Division, while Anne Bradford ’74 and Ellen Schmidt ’77 co-skipped a second-place B-Division team.

The results of the regatta were: Radcliffe 66, MIT 70, Boston University 82, Jackson 95, Salem State 155, Yale 158, Rhode Island 183, Simmons 187, Newton 199, Brown 201, Smith 266, and Mount Holyoke 774.

Walpole outtruns track team: MIT is fifth in GMC meet

By Dave Dobos

Last Thursday, MIT’s track team highlighted by freshman Frank Richardson’s national qualifying time in the 3-mile, placed 17th in the annual Greater Boston College Track Meet held at BC. Powerful Harvard took up 151 points to easily outdistance runner-up Nor- estern with 53.

Two days later, WPi whipped MIT, 89-65, at Worcester, handing the Engineers their fourth loss without a win. Sophomore Greg Hunter’s 45.6” shot put was the bright spot of the day for MIT.

Rich Okine ’77 won the two hurdle events for 10 points, and freshman Vincent Wessan ’76 took second in both to add 6 more.

Richardson and co-captain John Pearson ’74 also scored 6 each. Pearson winning the hammer and placing third in the discus, and Richardson running away with the 3-mile and picking up a third in the mile. Co-captain Gary Wilkes ’75 won the 200, ran third in the 100, and anchored the 440-relay for 7/4.

In the GMC’s Wilkes placed third in the 220 and anchored the 440 relay team of Paul Carstenko ’77, George Chiesa ’74, and Jim Banks ’76 to another third. Richardson qualified for the National College Division track meet with his 14:24 clocking in the 3-mile, besting the time of 14:30 needed. Al Carlson ’74 showed his best form of the year, placing 4th in the 5-miles.

Freshman Jim Williams and Rich Okine placed fifth in the pole vault and intermediate hurdles, respectively, while the mile relay team of Chiesa, Banks, Okine, and Jeff Baerman ’76 picked up a fourth to round out the scoring for MIT. Six other runners placed sixth (no points), including a spectacular 4:19 mile by Jeff Baerman.

Women 2nd in qualifiers with Bill Rizzi ’76 crewing. Both Sullivan and Young placed second in their respective divisions. The teams were: MIT 16, Rhode Island 16, Harvard 17, Tufts 19, Coast Guard 28, Southern Methodist University 31, University of Maine - Portland/ Gorham 43, and Vermont 48.

On Sunday the men’s squad finished second of six schools in a dinghy Invitational at Boston University. Paul Erb ’76 sailed in A-Division with crew Stan Stasi ’76, while Young sailed in B, placing second with Mascharin Chong ’74 crewing.

The results were: Rhode Island 19, MIT 27, Boston Uni- versity 38, Tufts 49, and Trinity 71.

This weekend the team’s var- sity will compete in the New England Championships, to be sailed at Cottage Park Yacht Club on Boston Harbor. The regatta, also known as the Coast Guard Bowl, is the qualifying regatta for the American Championships. The women’s squad will sail in the Powder Puff Trophy Regatta at Rhode Island on Sunday, while the freshman team will sail to Coast Guard for their New Eng- lands, the Nickerson Trophy.