NASA studies plan to orbit radioactives

The disposal of nuclear wastes in space will soon be economically competitive with current storage procedures, according to Murray G. Boobar of the Space Division of North American Rockwell, who spoke at Tuesday's Aeronautics and Astronautics seminar.

Boobar was not considering the immediate initiation of such a dumping program. His calculations of cost and feasibility were based on several assumptions which have not yet been realized but may become necessary within several years.

Waste buried

There are two types of "best" materials to be handled. Low and intermediate level wastes and reactor debris are relatively trouble-free. They include effluents, contaminated equipment, and fuel processing residues that must be stored only for a few years before they are safe to handle. However, high level wastes must be allowed to cool (Please turn to page 5).

By Carol McGeirre

This past year, more people accepted a job than have decided to go elsewhere than in any recent year. This, combined with a drastic drop in job openings, has caused the Administration to undertake a survey of the reasons why potential freshmen went elsewhere.

As might be expected by any financially pressed student, money was a major reason for not coming to MIT. This year, one-third of those questioned stated the major reason for declining admission was financial. This is a considerable increase over last year's 21% and 1969's 25%. Fifty percent of those releasing for other reasons stated financial considerations influenced their decision.

The most important reason for declining in past years, and again this year, was the desire for a liberal arts curriculum.

Of those who came to MIT, many from families with an interest in science, MIT's concentration there will leave them unbalanced intellectually, unable to speak equations theretofore but unable to discuss a good book. Then, even a strong interest in science does not necessarily mean that the student wants an academic, academic or otherwise, out of it. A strong interest in computation for scientific concentration and emphasis: one student, accepted here but attending Harvard, said that "although they [MIT students] have worked hard in this, there is no difficulty in changing one's field of concentration at the Institute once one is not scientific to liberal arts. I can't help feeling that such shift of interests would leave the student involved feeling a little alienated from the student scientific community at MIT."

At a greater, students stated their primary reason for giving in for admission to MIT was the offering in their particular fields at the other school. Areas where MIT was not more competitive were optical astronomy, and undergraduate teaching, but most did not mention their reasons of field expertise.

The Administration is again on its trouble. They include effluents, have not yet been realized but to oretrace ioactives an (Ad IBM 7094 computer- The Museum-n Committee, which had years before they are safe to fuel processing residues that (Please turn to page 5).

San Diego fires MIT grad

By Bert Hendrich

The Student Information Processing Board again is on its feet and operating on a reduced budget after a short period of rest during the winter vacation and IAP.

SIPB was created two and a half years ago out of the Student Information Processing Committee, which had been concerned with preserving at old IBM 7094 computer. The philosophy behind SIPB is to provide students and other members of the MIT community with the same kinds of computer services enjoyed by their opposite numbers at Dartmouth. There, half of the 1000 computers are available for computing services.

Under increasing funds through the Provost's Office, SIPB has been growing steadily for two years, but with the MIT administration trying out to cut down on expenditures, it has begun to suffer along with every other department. Its budget year ago was about $120,000. This year it is only $60,000.

During the last term, SIPB had approximately 1800 users, about a third of its limited funding this year, and in order to take the outstanding computer time it has been necessary to schedule it to active accounts, SIPB cancelled accounts on January 1 and made a fresh start. About 300 users have now reconnected on computer time and services.

SIPB has never been completely synonymous with "free computer time." Because both Harvard and the academic departments are funded by the Provost, it has never been allowed to fund thesis or required course work. There is only one exception as well, which is that MIT students can use the computer if they need it for their thesis development. Though the women's computer time answering questions. There were a great many more students than women, and then spent time answering questions. There were a great many more women using the computer than men.

Trilling began by noting that the women's applications are no longer put in a "pool" by themselves, this "pool system" is now being used for all applications, as it has been judged to be a better system. Now that all the applications are judged "blind," there are some surprising statistics have come out.

Proportionally, the number of women admitted is greater than the proportion of males who did not apply. This is thought to be in part to pre-selection on the part of MIT. The women who apply to MIT has found out that there are more students at the undergraduate level and has decided on a career in science or engineering. She is more likely to be interested in that group.

There are presently 4050 undergraduates at MIT. Just under 400 of them are women. This is nearly 10%, much larger then in the recent years, when the percentage of students in the female was 8.4 percent. Until this past year, the (Please turn to page 5).

SIPB back on cut budget

Peter Bohmer, a former MIT graduate student in the Department of Economics and a member of the Ross Berkeley SIAS was, and then lost his fight for re-appointment to the faculty of San Diego State.

According to the Los Angeles Times, Bohmer had been accused of unprofessional conduct. An early decision not to reappoint him was reversed after a face-finding hearing cleared him of the charge. The accusation involved a "lack of interest in his work, in the j ob, and alleged improper behavior towards student assistants and graduate students.

Then, in a surprise move Wednesday, Glenn Danke, president of the San Diego State College System, released a statement saying he had terminated his contract.

That is, by losing in the case, he had won a partial victory. His appeal of the decision to reappoint him was reversed by a face-finding hearing. The charge of improper behavior towards student assistants and graduate students was cleared in the case. The decision not to reappoint him was reversed on the basis of the face-finding hearing.

While at MIT, Bohmer was involved in radical politics, culminating in his trial for disrupting a demonstration to publicize a rally in support of the women's movement. He declared that as an academic, Howard Johnson's office, he entered two classes in progress. He had served two and a half months in jail for the offense.

Bohmer said the appeal was not mentioned in the incident in his application, but an investigating committee said he could not be accused of a lack of candor, since his application had been submitted before the offense occurred.

This past year, more people accepted a job than have decided to go elsewhere than in any recent year. This, combined with a drastic drop in job openings, has caused the Administration to undertake a survey of the reasons why potential freshmen went elsewhere.

As might be expected by any financially pressed student, money was a major reason for not coming to MIT. This year, one-third of those questioned stated the major reason for declining admission was financial. This is a considerable increase over last year's 21% and 1969's 25%. Fifty percent of those releasing for other reasons stated financial considerations influenced their decision.

The most important reason for declining in past years, and again this year, was the desire for a liberal arts curriculum.

Of those who came to MIT, many from families with an interest in science, MIT's concentration there will leave them unbalanced intellectually, unable to speak equations theretofore but unable to discuss a good book. Then, even a strong interest in science does not necessarily mean that the student wants an academic, academic or otherwise, out of it. A strong interest in computation for scientific concentration and emphasis: one student, accepted here but attending Harvard, said that "although they [MIT students] have worked hard in this, there is no difficulty in changing one's field of concentration at the Institute once one is not scientific to liberal arts. I can't help feeling that such shift of interests would leave the student involved feeling a little alienated from the student scientific community at MIT."

At a greater, students stated their primary reason for giving in for admission to MIT was the offering in their particular fields at the other school. Areas where MIT was not more competitive were optical astronomy, and undergraduate teaching, but most did not mention their reasons of field expertise.

The Administration is again on its trouble. They include effluents, have not yet been realized but to oretrace ioactives an (Ad IBM 7094 computer- The Museum-n Committee, which had years before they are safe to fuel processing residues that (Please turn to page 5).

San Diego fires MIT grad

By Bert Hendrich

The Student Information Processing Board again is on its feet and operating on a reduced budget after a short period of rest during the winter vacation and IAP.

SIPB was created two and a half years ago out of the Student Information Processing Committee, which had been concerned with preserving at old IBM 7094 computer. The philosophy behind SIPB is to provide students and other members of the MIT community with the same kinds of computer services enjoyed by their opposite numbers at Dartmouth. There, half of the 1000 computers are available for computing services.

Under increasing funds through the Provost's Office, SIPB has been growing steadily for two years, but with the MIT administration trying out to cut down on expenditures, it has begun to suffer along with every other department. Its budget year ago was about $120,000. This year it is only $60,000.

During the last term, SIPB had approximately 1800 users, about a third of its limited funding this year, and in order to take the outstanding computer time it has been necessary to schedule it to active accounts, SIPB cancelled accounts on January 1 and made a fresh start. About 300 users have now reconnected on computer time and services.

SIPB has never been completely synonymous with "free computer time." Because both Harvard and the academic departments are funded by the Provost, it has never been allowed to fund thesis or required course work. There is only one exception as well, which is that MIT students can use the computer if they need it for their thesis development. Though the women's computer time answering questions. There were a great many more students than women, and then spent time answering questions. There were a great many more women using the computer than men.

Trilling began by noting that the women's applications are no longer put in a "pool" by themselves, this "pool system" is now being used for all applications, as it has been judged to be a better system. Now that all the applications are judged "blind," there are some surprising statistics have come out.

Proportionally, the number of women admitted is greater than the proportion of males who did not apply. This is thought to be in part to pre-selection on the part of MIT. The women who apply to MIT has found out that there are more students at the undergraduate level and has decided on a career in science or engineering. She is more likely to be interested in that group.

There are presently 4050 undergraduates at MIT. Just under 400 of them are women. This is nearly 10%, much larger then in the recent years, when the percentage of students in the female was 8.4 percent. Until this past year, the (Please turn to page 5).
Alumni to hold small business seminars

By Jim Moody

A series of seminars-workshops, sponsored by the MIT Alumni Association and open to the MIT community, will be held this spring.

The seminar program is now 12 years old. Originally they involved only 200-300 participants per year, were organized by a committee of different alumni and were conducted by special guest lecturers, experts in their fields, who were paid very high fees.

In 1969, the format was drastically changed. Alumni, many of whom were looking for something to do to help their fellow graduates, took over complete control and execution of the program. The seminars were geared more toward younger alumni and students, became much cheaper, and were increased in number to the present 14 this year, with 20-30 speakers for each one.

Outgrowths of the program have included articles in Technology Review, several special reports, and a book on the set-up and operation of small business, written by a 16-man voluntary alumni committee, and soon to be published by the MIT Press.

The spring portion of the program this year includes six different topics, with presentations in Boston, New York on April 8 and 29. The course, consists of all four meetings.

The "Entrepreneurship Workshop" will cover such topics as finance, marketing and product development, production, accounting and control, attracting and holding staff, managerial style, and law, in the four one-day seminars. The workshop will also be offered on the same dates in Los Angeles and Washington D.C.

The second seminar is a repeat of a very popular topic, "How to Start and Operate a Small Business." It will be held in Boston on March 11 and 12, New York on March 4 and 5, and May 6 and 7 in San Francisco. The program will include panel discussions, lectures, and workshops, will give participants the opportunity to raise questions of their own, and will cover such topics as planning and goals, the team and organization, strategies for finance, marketing patterns, and accounting and legal aspects of start-up situations.

The third seminar, "Technology and the Economy in the '70s," will be given in Boston on March 23 and 26, in New York on April 21 and 22, and in Los Angeles on April 22 and 23.

The program for Boston will include two panel discussions on "Manpower Needs" and overall economic forecasts, and the remainder of the time will be spent in small workshops covering specific fields: aerospace, housing, chemicals, computers, communications, electronics, energy, finance, health care, ocean engineering, and transportation.

The fourth seminar, "The Future Character of the Urban Fringe," will be given only in Boston, on April 29 and 30. Participants will "investigate factors which will shape the character of our urban living with the aid of technical innovations now becoming available," will "examine the pragmatic facts - economic, trends, population statistics, legislation, and political realities," and finally will "probe the options open to us in the future."

Panos D. Spiliakos, Asst. Secretary of the Alumni Association, discussed the philosophy behind the seminar program. They provide a means by which alumni can help other alumni, in the continuing education program, sponsored by the Alumni Association, and requested by many former graduates.

Students can also gain much insight into what life in the real world is like. They can see what MIT alumni are actually doing in specific careers, as well as meet with people engaged in their specific seminar interest.

Available to a post-seminar questionnaire put it, "I came because I knew it was given by alumni who had nothing to sell but their enthusiasm."

An important feature of this program is that all of the workshops, lectures, panels, and presentations are researched, prepared, and delivered voluntarily by MIT alumni. Fees are used only to defray overhead costs. MIT students can participate free of charge as long as space is available. Fees for alumni range from $40-$90, and for non-alumni from $80-$240.

Spiliakos pointed out the difficulty, due to time and money, that he has had getting the word out to students, but he absolutely encourages any student to attend. Prospective registrants should contact him at E19-438 or x3763, x7200, or x3922 to reserve a place.
List stricter rules for SIPB requests

(Continued from page 1)

comprises a list of some of the  

proposals in system development,  

context, development, and  

involving. Members of the Board  

is expected to meet approximately  

which has funding already  

available for that purpose.

"- Use of the computer for  

information processing, which  

is suitable purposes.

"- Use of the computer by  

projects and independent research  

related to computer use or information  

processing. This includes such

"- Use of the computer in a subject which requires use  

of the computer, or in a subject

which has never been offered before  

at MIT. This category includes  

proposals for the use of computer  

in teaching and research, as well as  

proposals for the development of  

new courses or the expansion of  

existing courses.

"- Use of the computer in  

experiments or laboratory work  

that does not include computer  

processing, but where modest amounts  

of computation or information  

processing are involved.

"- Use of the computer in  

thesis research. This category includes  

proposals for the use of computer  

in theses, as well as proposals for the  

development of new thesis topics  

related to computer use.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.

"- Use of the computer in  

research projects requiring a  

large amount of computation or  

information processing.

"- Use of the computer in  

research projects outside the scope  

of a thesis or course.

"- Use of the computer in  

research projects concerning  

other topics, such as the use of  

computer to study social  

problems or other social issues.
Pass/Fail: plausible options

By Lee Giguere

Two and a half weeks ago, *The Tech* aired the issue of the effect of hidden grades on Pass/Fail. The faculty, however, failed to reach the conclusion before the end of the term and the deadline was deferred to this month's meeting. It is now two weeks after that deadline and some up from the faculty — what are some of the alternatives open to them?

The measure would be tantamount to a return to grades; any freshman who wants a better academic record at MIT and applying to medical school would be robbed of the freedom pass/fail is meant to offer. The cost of such a measure would beထ that students are the only ones in which they aren't graded) would seem to run against this option.

A slight variation on this option would be to leave it up to students to obtain grade or evaluation from their instructors on an individual basis. This is no less appealing than the general collection of "hidden grades" by an instructor or department and alibis their use only to those students who specifically request them. It does little, however, in preventing instructors from pass/fail altogether.

Just a departure from its proposal, the CEPF stated: "It is the responsibility of each instructor to provide each freshman with a statement of how he would like his performance evaluated. "Embedded in this, it seems, is another alternative to the current pass/fail grading plan or the hidden grades evaluation requirements. It has been suggested that the students would be provided with acceptable substitutes for grades in the first week in August, by T. 

To the editor:

Paul Schindler’s article on campus media (February 25) may have created some misunderstanding about the financial status of Thursday which I would like to correct. I will not now discuss my thoughts on several topics where I disagree with Mr. Schindler; I wish to focus on the question of whether people who genuinely love another sometimes must explain something he leaves a mystery.

It is not unique to characterize marriage as a partnership of equals or psychogenic or their castes as filled only with the desire to be successful and rich. We’d like to think that, but the people going to cabaret today— and many of these people are really those who are being influenced by the political events surrounding them and by the moral consequences of these events. The situation is not appreciated by the film Cabaret. However, its source — the libretto Berlin Stories and, yes, even the Broadway musical — do delve into the feelings of the people of that time, their psychotropics, and their spiritual desire to escape Nazi carnage (even though they realized that this was ultimately pointless).

I hope that future historians and films will do justice to the pedagogical nature of the dilemmas that Americans must face today, as we bloody butcher just as much as the other people, the German Nazis of the 30s."

The reviewer claims that Sally Bowles is the heart and soul of Cabaret and Brian (played by a British actor and romanticized) and her role in the film is Sally finally admits to herself that she had very little in common with Brian, that their relationship was amorous, that she would examine the consequences of these events. The question is whether this would be meaningful. Sentiment outside of the medical schools have a great deal of freedom pass/fail is meant to offer. The medical school would be robbed of the freedom to choose to provide each freshman with a statement of how he would like his performance evaluated. "Embedded in this, it seems, is another alternative to the current pass/fail grading plan or the hidden grades evaluation requirements. It has been suggested that the students would be provided with acceptable substitutes for grades in the first week in August, by T.

To the editor:

Paul Schindler’s article on campus media (February 25) may have created some misunderstanding about the financial status of Thursday which I would like to correct. I will not now discuss my thoughts on several topics where I disagree with Mr. Schindler; I wish to focus on the question of whether people who genuinely love another sometimes must explain something he leaves a mystery.

The section of the article on the financial status of Thursday is without explanation, that Thursday’s financial records were at Simmons. Though this was true during most of last term, it was not true at the time of publication of the article. Furthermore, they were at Simmons because our business manager, Mindy Piant, was a Simmons student. It is incorrect to state the records were "unavailable;" Mindy had been at all times. Mindy has since resigned, and our new business manager. Jack Moninger, is currently preparing various statements and summaries.

Apart from these errors, which I feel it necessary to correct, I have no quarrel with Mr. Schindler’s article. Mr. Schindler and are of a subjective nature, and this is not the place to discuss whether he is involved in journalism. I would suggest Mr. Schindler check his sources again, before he pontificates on the issue. "Cinemagazine" (the magazine was an acronym) will be able to explain any statements which seem critical to the medical schools have in it is meaningful. Vincent Rokinson

To the editor:

Please note that Sally Bowles is the heart and soul of Cabaret and Brian (played by a British actor and romanticized) and her role in the film is Sally finally admits to herself that she had very little in common with Brian, that their relationship was amorous, that she would examine the consequences of these events. The question is whether this would be meaningful. Sentiment outside of the medical schools have a great deal of freedom pass/fail is meant to offer. The medical school would be robbed of the freedom to choose to provide each freshman with a statement of how he would like his performance evaluated. "Embedded in this, it seems, is another alternative to the current pass/fail grading plan or the hidden grades evaluation requirements. It has been suggested that the students would be provided with acceptable substitutes for grades in the first week in August, by T.
Nuclear waste may soon have to be spaced

(Continued from page 1)

for at least ten years, while the decay of radioactive isotopes of cesium and strontium takes some 600 years to reach acceptable intensities.

Boobar noted that neither of the two present storage methods is popular with those living in neighboring areas. Generally, the “host” material is liquified in nitric acid and processed to increase the concentration of dangerous substances and reduce weight and volume. Some is left liquid and stored in underground tanks. Unfortunately, it has recently been found that some of these tanks are leaking. Their regular replacement adds greatly to the cost of the AEC has decided the system is too dangerous. The other procedure is to solidify the radioactive wastes, mix them with glass or similar bulk material, and store them underground. This location is the Lyons, Kansas, salt mine.

More nuclear power

However, Boobar pointed out that it is predicted that by the year 2000, 75% of our energy will be generated by nuclear facilities. This would mean that the present 9000 megawatts installed capacity would increase to 735,000 megawatts.

Assuming a 33% operating efficiency, between three and eight grams of waste per megawatt-day would have to be handled, the exact amount depending on concentration. That would mean that between 5 and 30 million pounds yearly would have to be disposed of by the turn of the century.

Boobar’s consideration of space disposal feasibility was based on the development of a fullscale shipment program and a supporting 10% increase in the cost of electricity. He then analyzed the key interdependent points of safety, economy, traffic, and payload packaging.

“Only one failure”

In the area of safety, Boobar stressed that, “If we can afford only one failure.” The radioactive levels incurred by more than one aborted mission would be highly dangerous. The processing and transport features have already been developed for present dumping, but pad, launch, and orbital operations must be made effectively 100% perfect. The present one-per-thousand failure rate would probably not be acceptable when the volume of traffic is considered. The wastes must either be thrown free of the earth’s gravity or put into high-altitude, long-lived (1000 years) orbits. The latter is less costly: $100 per pound using a Centaur third stage for a 10,000 pound payload compared to $1000 s pound for a maximum of 30,000 pounds using a trans-orbital or Apollo service module. However, consideration of the rate of temperature at the surface of the waste necessitates its packaging into a long, thin cylinder that could not accommodate the maximum payload mass within available space. Boobar noted that severe cooling would probably be necessary before dumping can become practical, and still an additional 30% increase of electric cost might be required to fund the disposal of the maximum predicted volume of 30 million pounds.

Even allowing the full payload of a high-orbit mission, 500 to 3000 flights a year will be necessary by 2000. This is why a fail-safe system that is perfect is so vital. The traffic problems of ten flights a day would be enormous, especially in low-energy one-track orbits will be used consistently.

Boobar then considered the merits of manned versus unmanned flights. A manned shot would require one pound of shielding mass for every pound of waste, at best. However, if the presence of a pilot significantly increases reliability, manned dumping would be likely. In such a case, in an emergency situation, the safety of the crew would not be nonexistent; the lives of several against many on the ground. The payload would be considered first.

Boobar concluded by noting that no procedure looks very exciting at this time. However, we cannot continue to bury such dangerous material in our own backyards. At the use of nuclear plants in the US (Boobar’s calculations do not include the rest of the world in any way) increases rapidly, the wastes must be put somewhere safe, and space may be the only answer.

A professional

ABORTION

that is safe, legal & inexpensive

can be set up on an outpatient basis by calling The Problem Pregnancy Educational Service (219) 732-6390 24 hours - 7 days for professional, confidential and caring help.

But-Luck Coffeehouse is back in operation!

Open Friday and Saturday, 8pm - 12pm

Friday Night, March 3:

Coffeehouse opens 8:30 pm
Poetry reading at 9 pm
Featuring Barry Speaks, Bob Cava, and Kathy Orlova

Saturday Night, March 4:

Music and Singing of Dave Barrington
8:30 pm - 12 noon

Messina Lounge, Student Center

Kids nowadays ain’t got no shame.

In Jim Price’s own words:

“It’s just an expression of freedom.”

The freedom that comes after years of playing trumpet and trombone with Dclaney and Bonnie, & Cocker, George Harrison and the Rolling Stones.

The freedom to go beyond just the horns to also play organ and sing on your first solo album.

The freedom to call that first album “Kids nowadays ain’t got no shame.”

On A&M Records

Produced by Jimmy Miller

The freedom that comes after years of playing trumpet and trombone with Dclaney and Bonnie, & Cocker, George Harrison and the Rolling Stones.

The freedom to go beyond just the horns to also play organ and sing on your first solo album.

The freedom to call that first album “Kids nowadays ain’t got no shame.”

On A&M Records

Produced by Jimmy Miller
SUPER BOX
Grooming Aids, *5.00 VALUE!
NOW 90c

MENTHOL KEEPS

MEN'S KIT:
- Gillette Platinum Plus Blades
- Gillette Techmatic Razor
- Max Power Deodorant
- Listerine Cold Tablets
- Excedrin
- Gillette Dry Look

WOMEN'S KIT:
- Vaseline Intensive Care
- Soft & Dry Deoderant
- Pantyliner Tampons
- Tame Creme Rinse
- Lady Techmatic Razor
- O-Tips
- Neutrogena Soap
- Pamprin

BUDGET-PRICED
BEAM SHOP

GOLF JACKETS
from a famous maker. Slight irregulars.
Easy to care for because it's wash and wear.
Comes in assorted wanted colors. Sizes 34-46.
Some longs included in the group. Makes a nice gift for your favorite guy!
Usually 15.00
.......
6.90

BRUSHED DENIM JEANS
fashioned with popular bell bottoms. All are quality. Special contrasting trim. Available in many assorted colors to mix and match with all your favorite shirts.
Usually 8.50
.......
3.90

MEN'S DRESS SHIRTS
come in a whole slew of solids, stripes, prints and patterns. Excellent color selection to choose from. All sleeve lengths available. New long pointed collars. Irregulars in the group.
If perfect 5.00 to 9.00
.......
2.90

OXFORD BUTTON-DOWN COLLAR
for the more traditional man. Comes in wanted shades. Available in all sleeve lengths. At this tremendous value you'll want at least a couple.
Sizes 14 1/2 to 17 1/2 in the group.
Irregaulrs of 5.00 to 9.00
.......
2.90

M.I.T. Student Center
and Harvard Square

Bancroft

MGA TC-30
CASSETTE RECORDER
39.90
Reg. 49.95

Includes features usually found on more expensive recorders. Comes with microphone with on-off switch and cord for remote control use. Carrying case.

MGA PORTABLE B&W TV
12" DIAGONAL MEASURE PICTURE
69.90
Reg. $79.95

A genuinely fine TV set at a very modest price. MGA produces the important components, such as the picture tube, tuner and transformer. Durable textured swivel-toed plastic finish cabinet. 1 yr. warranty on the parts and the picture tube.
Pub features relaxation

By Steven Kneifman

The Muddy Charles Pub, which serves inexpensive beer and wine to members of the MIT community over 21, is open to all, and provides a relaxed atmosphere in which to eat lunch or dinner.

The pub, located on the northeast corner of East Cambridge, was established at the beginning of the 1969 school year, the Muddy Charles, in the words of manager Sam Stroud, "...seems to have grown from a common desire for a place to relax, have a beer, most new people, listen to music. ...It is subsidized by the Graduate Student Council and is officially a non-profit enterprise, thus allowing it to maintain its prices at significantly less than local restaurants and bars. The pub is entirely a graduate student operation, from the eight paid bartenders to those who keep the books and sponsor special activities.

Complete with wall-to-wall carpeting, comfortable chairs, music, and a dart board, the Muddy Charles is located on the first floor of Walker, in the northeast corner. Students can bring their meals from the Walker cafeteria and eat in the Pub by just going through the doors at the bottom of a stairway. All students, undergrads and grads alike, are welcomed at the Muddy Charles which is open Monday through Friday 11 am to 2 pm and 4:30 pm until everyone leaves.

"The beer is Budweiser at a quarter per 10 oz. cup or $2.50 for a pitcher. The Pub also stocks various Almaden wines at 40 - 50 cents for seven oz., and Boon's Fare for a quarter for the same amount. Soft drinks, nuts, potato chips, and other salty snacks are also sold. Bartender Paul Engel stressed that the Muddy Charles can handle parties, degree celebrations and such. Given a little advance notice, they can supply almost any quantity of Bud.

Recently, the pub has been doing fairly well. Lunch and Thursday and Friday nights are usually crowded while other times vary. A large number of faculty also visit, and Secretary of the Graduate Student Council Laura Hawkins noted that the Pub is very popular with those in Physical Plant.

However, business is not as good as it could be. To increase interest, special events are being planned. On Registration Day a pub party was held, complete with barmails. Since then, the presence of barmails has been erratic, but any girls who admit to drinking age and would like to try their hand at the volunteer job are urged to contact Judy Combird of the Graduate Student Council at 354-7717.

Other events are being arranged for the future, including Monday Ladies Nights, dart tournaments, and total consumption contests.

If you're over 21 and thirsty or under age but just don't like the bustling atmosphere of Walker, try dropping by the Muddy Charles sometime soon.

Tech takes big winks tilt

By Peter Rubenstein

The MIT tiddlywinks team journeyed to Cornell for the conclusion of the season on Monday, February 19-20, and came back an overwhelming victor on all fronts. The "A" team won the A division competition by a wide margin. The MIT "C" team finished 1 and 2 in the B division. MIT also had the top pair in each division.

Tiddlywinks teams are made up of three pairs. A pair takes two different colored sets of six winks: Red-Blue pair plays Yellow-White pair in each division. Contrary to popular belief, the main object of the game is not to put winks in the pot as fast as possible. At the beginning of the game, "the object is to cover your opponents' winks. This is called squoping and goes on for a time limit of 25 minutes. After time expires, each player gets five turns in which the winks start pot. Each potted wink counts for three points; each unsquopped wink is one point.

First place finisher gets 4 tournament points; second gets 2; third and fourth are done. If one player pots all his winks, everyone must shoot for the pot. In this case one point is transferred from the losing team to the winning team, making a 7-0 game possible. If one were to attempt to pot out early in the game, the likelihood is that his remaining winks would be squopped, leaving him helpless.

At the continuos, the top pair from MIT's "A" team, Schiller and Christ, took the pair's honors in the 'A' division, while Callon and Hinch easily walked away with the pair's honors in the 'B' division. The issue was not in doubt for long as MIT 'A' booked 46 points (of a possible 63), against all but one opponent. The 'B' team was just as devastating, finishing far ahead of the second finisher, MIT 'C'. The 'C' team was closely followed by Toronto, but clinched second place by demolishing Hyth 'D', an independent team, in their last matchup.

If you don't get Ziebart rustproofing here you won't get Ziebart rustproofing

W.F. Lacey & Sons
50 Mystic Ave.
Medford, Mass. 02155
(617) 399-2825
Automobile rustproofing

DINO'S PIZZA AND SUB SERVICE
FAST DELIVERY RESPONSABLE PRICES
CALL 266-6381 6 PM-12 Midnight
MASS. AVE. IN BOSTON NEAR BEACON ST.

Live and Work in Beautiful Newport Beach, California

DANALAB, INC.
Manufacturer of Precision Electronic Test Equipment is seeking
ELECTRONIC ENGINEERS
Interviews will be conducted Friday, March 10 by Mr. Norman Walker, Corporate Vice-President

Contact your College Placement Office for an Appointment

MIT Concert Band
Conductor, Corley,Leukas
SPRING CONCERT
with the Boston Dance Theater
WORKS OF HOLST, REED, KARLS, HINDEMITH, JENKINS
SUNDAY, MARCH 5, 1972, 3:00 P.M.
KRESGE AUDITORIUM
FREE ADMISSION

Proofreading

"I am able to work with MIT students, employees and visitors. Excellent pay.

JOBS ON SHIPS! MEN. WOMEN.

Details: Box 15071, San Francisco, Calif. 94403. 444-4444.


Tiddlywinks teams are made up of three pairs. A pair takes two different colored sets of six winks: Red-Blue pair plays Yellow-White pair in each division. Contrary to popular belief, the main object of the game is not to put winks in the pot as fast as possible. At the beginning of the game, "the object is to cover your opponents' winks. This is called squoping and goes on for a time limit of 25 minutes. After time expires, each player gets five turns in which the winks start pot. Each potted wink counts for three points; each unsquopped wink is one point.

First place finisher gets 4 tournament points; second gets 2; third and fourth are done. If one player pots all his winks, everyone must shoot for the pot. In this case one point is transferred from the losing team to the winning team, making a 7-0 game possible. If one were to attempt to pot out early in the game, the likelihood is that his remaining winks would be squopped, leaving him helpless.

At the continuos, the top pair from MIT's "A" team, Schiller and Christ, took the pair's honors in the 'A' division, while Callon and Hinch easily walked away with the pair's honors in the 'B' division. The issue was not in doubt for long as MIT 'A' booked 46 points (of a possible 63), against all but one opponent. The 'B' team was just as devastating, finishing far ahead of the second finisher, MIT 'C'. The 'C' team was closely followed by Toronto, but clinched second place by demolishing Hyth 'D', an independent team, in their last matchup.

If you don't get Ziebart rustproofing here you won't get Ziebart rustproofing

W.F. Lacey & Sons
50 Mystic Ave.
Medford, Mass. 02155
(617) 399-2825
Automobile rustproofing

DINO'S PIZZA AND SUB SERVICE
FAST DELIVERY RESPONSABLE PRICES
CALL 266-6381 6 PM-12 Midnight
MASS. AVE. IN BOSTON NEAR BEACON ST.

Live and Work in Beautiful Newport Beach, California

DANALAB, INC.
Manufacturer of Precision Electronic Test Equipment is seeking
ELECTRONIC ENGINEERS
Interviews will be conducted Friday, March 10 by Mr. Norman Walker, Corporate Vice-President

Contact your College Placement Office for an Appointment

MIT Concert Band
Conductor, Corley,Leukas
SPRING CONCERT
with the Boston Dance Theater
WORKS OF HOLST, REED, KARLS, HINDEMITH, JENKINS
SUNDAY, MARCH 5, 1972, 3:00 P.M.
KRESGE AUDITORIUM
FREE ADMISSION

Proofreading

"I am able to work with MIT students, employees and visitors. Excellent pay.
Page 8 FRIDAY, MARCH 3, 1972 
THE TECH

SPORTS

O’Brien named new varsity b-ball coach

By Brad Billdeaux

"His first season will be a winner," Professor Ross Smith, MIT Director of Athletics, predicted at the press conference called Wednesday to name Fran O’Brien as the new varsity basketball coach. O’Brien, who has held the post of assistant coach since 1969, succeeds Jack Barry, Engineer cage coach for the last thirteen years.

O’Brien's prediction was half joyful and half hopeful, as O’Brien will obviously have his work cut out for him to produce a winning record in basketball next year. "Roughly 3500 points will be graduating," Barry said to his successor, who no doubt is aware that the meat and potatoes of the MIT cage five this past season will be dishing cup and gloves come June. Both co-captains Harold Brown and Steve Crosby, as well as guard Minot Cleveland are class of 1972. Brown became the top scorer in MIT history and Cleveland placed fifth in the nation rankings this year, while Godfrey was a leading rebounder and was second in the final court.

Despite this depth and talent, the team had to spark at the end of the season to comprise a 13-10 winning record. The primary reason for this was the lack of a strong bench to spell the starters.

O’Brien is a strong bench plus two returning lettermen that O’Brien will have to use to produce his winner. "Jerry Hudson’s bellwars man to build a full court around," remarked O’Brien about the nucleus of his front court for the ’72-’73 season. Hudson developed into the team’s best rebounder this year, as well as the number two scorer, pulling off 13.1 points per game. Brown is many games, but Hudson can’t do everything himself, so "rebounding clean the big problem next year."

"Ray White is an excellent defensive ballplayer, he has great potential," O’Brien said of his one returning back court starter. He went on to explain that the lack of experience up front will force the Engineers to play the fast break and percentage basketball, running and shooting.

O’Brien has been with the Institute since 1969 as varsity basketball coach as well as assistant basketball coach. His diamond squads have a combined 34-32 record. In addition, O’Brien is Associate Professor of Physical Education and supervisor of the recreational program for MIT’s summertime Project Interphase.

When asked how he felt about athletics in general at MIT, O’Brien said that he felt himself part of the academic community. He is not in favor of athletic recruiting or athletic scholarships for the Institute, and he says that the lack of scholarships for the Institute, as well as the lack of the academic approach to the pure “high school” student-athlete, where the term high school is certainly not derogatory. Pure enthusiasm and desire puts pay on the playing fields at MIT, not the fact that they are being paid to play.

Fran O’Brien (pictured above, center) was named the new varsity basketball coach by Ross Smith, MIT’s Director of Athletics (right). O’Brien, formerly the assistant coach, succeeds thirteen-year veteran coach Jack Barry (left). O’Brien is also the varsity baseball coach.

Gym championships here

By Paul J. Baye

Tomorrow the biggest athletic event of the year at MIT will take place, the New England College Gymnastics Championships. One hundred and twenty-seven gymnasts from thirteen schools will compete for individual and team awards. Preliminary competition runs from 11 am to 4:30 pm, with team and all around awards at 7 pm and final competition at 7:30 pm. It will take place in the Atrium, and programs and refreshments will be available.

Accommodation is one dollar.

The meet will consist of the six individual gymnastic events, the all around, and team competition in two divisions. Division 1 will include Springfield College, the University of Massachusetts, and Southern Connecticut State College. Division 2 will include Boston State College, MIT, Yale, Lowell Tech, Dartmouth, New Hampshire, Bridgeport, Plymouth State, Maine, and Harvard. (The order used above was not random. It was a prediction of the finishing order.) The two divisions are entirely separate as far as competing, but they will both be working on the same events at about the same time.

Because of the large number of competitors in the prelims, two events will be run simultaneously. Floor Exercise (that’s where they run around on a mat) and pommel horse (they swing their legs while holding onto a couple of handles) come first. They are followed by rings (with all those super strong daddies) and vaulting horse (they jump over something which bears no resemblance to a horse) together, and parallel bars (handstands and stuff) and horizontal bar (the dangerous and exciting event).

The team competition will be decided during the prelims. This involves summing up the top three scores for each team on each event. Also, the all around titles will be decided by taking an individual’s total score on all six events in the prelims. Trophies will be awarded in each division for the top three games and top five all around gymnast.

The other function of the prelim is to provide the top five gymnasts in each division on each event for the finals. At night they will throw a second accout on the event, and the combined score from the prelim and finals will determine the final placings. The top three will get trophies.

The finals are the most exciting and enjoyable part of the meet to watch. There is only one gymnast performing at a time and the quality is much better. The Division 1 finalists will provide the best gymnastics, but there are some notable Division 2 gymnasts who do as well or better. All the Division 2 champions of last year will be returning except last year’s MIT captain Ken Gerber on parallel bars. Returning Division 1 champs include Dave Genest of UMass on parallel bars and the number one in steadout of last year’s meet, one of the best gymnasts in the country, John Crosby. Crosby won the all around, floor exercise, and vaulting in last year’s meet, won 8 medals at the Pan Am games, and is a coach member of the US Olympic Team. (Well, his coach at SCSC is the Olympic Coach.)

MIT’s prospects are bright. The team has finished second in three of the last four years, and would like to shake the Axis complex. However, it will take a good performance from the Techies and some bad luck for Boston State for them to pull in first. As it is, they will have to work hard to keep their second place spot from Yale. Individually the prospects are also bright. Dave Beck ’71, who took second on floor exercise last year, is a good bet for first. Larry Bell ’74 in all around is another first place prospect. Looking through the other events, it seems that MIT could place one or two men in the finals on almost every piece.

One other aspect of the meet may be interesting to some of the MIT community, and will do nothing to change MIT’s image to the outside world. This will be the first major gymnastics meet to use all computerized scoring. There will be a terminal on the gym floor connected by telephone to a printer by the Institute, and this printer is not too often) in Braintree, graciously donated free of charge by the Scientific Instrument Services Corporation. All scores will be typed in as the judges flash them. The computer will then be able to provide averages, placings, all around and team scores as fast as they are needed on the floor.

The finals takes place tomorrow, March 4, prelims at 11 am, finals at 7:30 pm.