

Computer petition achieves results

by Howard B. Bernard
Newspeak Staff

A petition was circulated recently by a group studying the problem of overloaded computers at WPI. The group, which is composed of students who are concerned about the growing problem, is backed by Tau Beta Pi, the national engineering honor society, and is dedicated to studying the performance problems of the campus computers — the DEC 20, the MV 8000, and the Univac 90/60. Their petition was designed to initiate study on an official basis and define the problem that exists; according to Paul J. Harriman (CS, '84) a "lot of noise was generated" by the petition, so apparently it was successful.

The petition is only one of the many reactions on campus to the situation

regarding the campus computers, which is growing rapidly worse. The problem is basically one of too many people on too few terminals. The results are long waits for terminals, long waits for responses from the computer, and frequent system crashes when the computer does the electronic equivalent of a human passing out under the strain.

Many people — CS majors, the many students in classes like physics or SS1102 who have classwork to do on the computer, and people using the computer as a word processor for papers and other written products, among others — use the computer, so there is a large amount of interest in the problem and its efficient and quick solution. President Cranch has even commissioned an advisory committee, which

hopes to report to him, with a recommendation on how to proceed by December 18.

Among the alternatives being considered are providing for students, or requiring students to purchase, terminals or minicomputers for use in their rooms. However, more terminals would mean more people could gain access to the computer at once; on the surface, that appears to be a solution, but closer inspection reveals that while more students would be logged on at once, the added burden of so many students would slow the computer down so much that there would be no gain in time at all. Minicomputers alone are too shallow in terms of linguistic capability, memory size and other parameters to work efficiently. However, a system that does

have promise is a series of personally-controlled minis connected through what is called a "virtual terminal network" (VTN); this arrangement would allow students to use their minicomputers to perform simple functions, and thus ease the load on the main frame computers, but to have the minis "talking" to the mainframes for complex or sophisticated operations.

Other schools, including Carnegie-Mellon Institute, Rensselaer Polytechnic Institute, have initiated computer programs similar to the ones described above. But WPI has at present no policy to do so. The petition Harriman and his associates initiated, however, is but one example of the fact that the school cannot afford to remain inactive on this matter.

WPI Newspeak

The student newspaper of Worcester Polytechnic Institute

Volume 10, Number 23

Tuesday, December 7, 1982

Special Plan
education issue

Harrison: scientific and technological impacts on society

by Kirsten Storm
Newspeak Staff

Dr. Anna J. Harrison, the President-Elect of the American Association for the Advancement of Science and the former President of the American Chemical Society, delivered a lecture focusing on the positive and negative impacts of science and technology on society and defining the responsibility of each scientist and engineer in today's world. Sponsored by the Chemistry Department and Skeptical Chemists Club, she gave her fifty minute speech to an audience of approximately eighty people in Kinnicutt Hall.

ledge," she explained, "is the source of the creation of ourselves and our environment, the basis of technology, and finally and most importantly, the factor which allows society to extend knowledge even further, in terms of accelerating the process of acquiring knowledge as well as controlling the direction this process will take. Technology, on the other hand, she described as "all those things producing goods and services and getting them on the market. The basis of technology," she reasoned, "is knowledge."

She proceeded to explain the main topic of her speech: the impact of

The un-happy hour

by Jeanne Benjamin
Newspeak Staff

On December 3, 1982, The Friday happy hour was officially closed to the under 20 crowd. This is the first time that such a strict approach has been necessary, and it is not one that has been established without thorough investigation. Assistant Director of Student Activities, Glenn DeLuca, has discussed this problem and its alternatives with the pub staff, Pub Council, and members of the Dean of Students Office. In a *Newspeak* interview, Glenn stated, "I know a lot of people won't like the new situation, but there are no other choices due to legal liability."

Although the Commonwealth of Massachusetts raised the drinking age to 20 years, the law permits 18 and 19 year olds into drinking establishments if the place so chooses. In the past, the Pub has enforced the drinking restrictions and utilized the option to allow students into the Pub if they were 18 or 19 to maximize student enjoyment of the facility. However, those students under 20 who frequent the Pub were expected

to respect the rules, but such has not been the case. It has been reported that many of the students who are underage have perceived the present regulations as a game, and because of the overall lack of cooperation, the Friday happy hour has been restricted to those of legal drinking age.

The Pub chose not to compound restrictive measures because it creates too many boundaries and hassles for those who are of age. There is no ideal situation for everyone concerned, so the Institute's legal liabilities must continue to remain a priority. This obviously is not the most restrictive of possible circumstances, since some colleges completely ban those under the age of 20 altogether, or have designed separate seating areas according to age.

At this time only the Friday happy hour has been restricted. If in the future other Pub events become problems, they will be dealt with individually.

As an additional point of interest, *Newspeak* checked with students working at the door during the happy hour on

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Dr. Anna J. Harrison.

— Geoff Strage.

She began the speech, after a few opening comments, stating that many scientists of today have lost track of the meaning of the word "science". "Science," she began, "is the process of investigation and the knowledge derived from these investigations." She then explained that "the integrity of the knowledge acquired from these investigations can only be determined from the integrity of the investigations themselves." Thus, she concluded, much knowledge of today is not valid because of the nature of some investigations that have been performed.

She then defined the terms "scientific knowledge" and "technology" and how they could be related to society. "Know-

science and technology. She said that "everything, from medicine to transportation, is affected by science and technology, the main result being more freedom of time for most members of society. However, all technological innovations have positive and negative aspects." She said that unfortunately, those involved in these innovations are reluctant to admit this fact because of their pride in the beneficial impacts produced.

Her question, "to what degree are we willing to accept the negative aspects to utilize and benefit from the positive," began her last topic: value judgments in society and who makes them. "Each

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CCS compiles literature on the history of the Plan

by Gerry Earabino
CCS Chairman

This issue of *Newspeak* contains many articles written by members of the Committee of Concerned Students (CCS) about the Plan's history and its present re-evaluation. The CCS is a segment of the WPI Student Government which acts as a direct communication link between fellow students and the faculty. We are an open committee whose sole aim is to keep the faculty informed about student opinions and vice versa, as well as initiate student action. Our latest project is the compilation of literature on the Plan's history as a student education program. Hopefully after reading our articles you will be more confident to become involved in the re-evaluation process, however you see fit. The CCS has included: summaries of original Plan documents, a list of all full length documents available in the library on reserve, a calendar of faculty meetings, and who is on the faculty committees. We designed the contents so you could save them for future reference when needed.

The faculty want your input because they lack the student's point of view, which they need to vote responsibly. Since most of you are studying under the Plan and know if the Plan is working

for you, then you are the best source of information relating to the re-evaluation of the Plan. If you think the Plan is what makes WPI unique and the Plan is one of the reasons you are here, then you should consider making your ideas known. Your opinions are crucial for the Plan evaluation.

As an example, there is a possibility that a questionnaire from the Executive Council of Student Government will be coming soon. Please take the time to carefully answer each question. This is one way in which your opinion can be heard. If anyone has any questions about the best way to voice their opinion, the timetable of events, or about the role of the Executive Council of Student Government, please contact Student Government President Matt Goldman, Box 1138.

Although the CCS would have liked to fill this entire issue, due to limited time and space we decided to include only what is here. We do, however, have access to much more than this, so please ask us for it. The summaries and articles were by various CCS members and are not intended to convey any opinions, merely facts. I hope all readers appreciate our effort and will provide feedback, however small.

police NEWS

by Greg Doerschler
Associate Editor

Highlights

Auto Thief Captured

On Friday, November 26 at 10:20 P.M., a WPI student reported that he was observing a male subject attempting to steal his vehicle, which was parked on Boynton Street. The subject fled as the WPI cruiser approached, and was pursued on foot by Sergeant Steve Hill into Institute Park, where he was captured at the water's edge. The ignition on the vehicle was found to have been popped. The subject was charged with breaking and entering to a motor vehicle with intent to commit a misdemeanor (to wit steal the car), malicious mischief to a motor vehicle, and possession of burglarious tools.

Student with Gun Arrested

A call was received from the Pub on Friday, November 19 at 11:45 P.M. requesting that a disruptive male WPI student be removed from the facility. The subject was gone when WPI officers arrived, but was later located in the Wedge. A pat frisk upon threshold inquiry revealed a firearm on the subject. The subject was arrested and charged with carrying a firearm without a license, carrying a firearm on campus and being a disorderly person.

Subject Arrested Discharging Fire Extinguishers

A call was received from an RA in Riley Hall at 9:50 P.M. on Friday, November 19 reporting two subjects discharging fire extinguishers in the building. The male subjects were located by WPI officers on West Street and were determined to be Holy Cross students. After being asked to return to the station for identification, the subjects fled on foot. One subject was apprehended in front of Alden Hall after a foot chase and was arrested. He was charged with malicious mischief and being a disorderly person.

Police Log

The following are excerpts from the WPI Police log for the period November 19-December 2. The listing consists of significant incidents and items of general student interest.

Friday, November 19

2:30 A.M. — A WPI student reported that his vehicle had been struck in a hit-and-run incident on West Street. The Worcester Police Department (WPD) was contacted.

3:15 P.M. — A WPI student reported that clothing was stolen from his locker in Alumni Gym.

8:15 P.M. — A WPI student was caught stealing an item from an academic building. The subject was turned over to Student Affairs.

9:50 P.M. — An RA in Riley Hall reported two persons discharging fire extinguishers in the building. See Highlights.

11:45 P.M. — A call was received from the Pub requesting that a disruptive male WPI student be removed. The subject was later found to be in possession of a firearm and was arrested. See Highlights.

Saturday, November 20

1:10 A.M. — A WPI officer reported two subjects destroying an automobile at the intersection of Institute Road and Boynton Street. The vehicle belonged to one of the subjects, who was kicking it and smashing the windows because it would not start.

2:05 A.M. — A WPI officer reported a large fight in progress on Boynton Street at Institute Road. The fight was broken up and the group dispersed.

10:05 P.M. — A call was received reporting a brush fire on Mass Avenue in the area of A.J. Knight field. WPI officers responded and the Worcester Fire Department was contacted.

11:30 P.M. — WPI Police Student Security reported arousing a drunk found laid out on the lawn of an Ellsworth apartment.

Sunday, November 21

12:40 A.M. — A WPI officer reported a fight in progress on Beech Tree Circle. The altercation was broken up and the subjects sent on their way.

12:45 A.M. — A WPI officer reported a group of students on the library service road throwing objects at pedestrians.

1:10 A.M. — WPI Police Officers reported breaking up a fight in a fraternity parking lot.

1:35 A.M. — A WPI officer reported a fight in progress at the intersection of Institute Road and Boynton Street. The altercation was broken up and subjects involved sent on their way.

1:45 A.M. — A fire door window was reported broken in Morgan Hall.

Monday, November 22

1:25 A.M. — A report was received of a group of WPI students moving a car parked on the Quad. The subjects were located and the owner of the vehicle contacted. No damage was done to the vehicle.

10:15 A.M. — A WPI student reported that the window of his vehicle parked on Russell Street had been smashed.

Tuesday, November 23

1:00 P.M. — A WPI student reported his jacket was stolen from Alumni Gym.

5:05 P.M. — A WPI student reported that his vehicle was broken into and items were stolen from it between November 18-23.

6:25 P.M. — A WPI student reported a larceny of cash from his wallet in his residence hall room.

Wednesday, November 24

9:50 A.M. — A larceny of cash was reported from a desk drawer in the Project Center.

Friday, November 26

10:15 P.M. — A WPI officer reported confiscating a keg found in a residence hall room. Subjects in possession of the keg were minors.

10:20 P.M. — A WPI student reported that a subject was attempting to steal his vehicle parked on Boynton Street. The subject was arrested. See Highlights.

Saturday, November 27

5:40 P.M. — WPI Police reported a broken window in Morgan Hall.

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Everything you wanted to know about ABET

by Susan Kreda and
Missy Hurley, CCS

Do you think the Plan is going to be changed? Have you been told that WPI is going to lose accreditation? Did your best friend tell you that the Plan is doomed? Hopefully this newsletter will answer many of these questions and more that the Committee of Concerned Students (CCS), has encountered. In this issue of *Newspeak* are summaries of technical reports about the intended philosophy of the Plan to give you an accurate basis for constructive criticism. We have also included lists of important meeting dates, key faculty members and reading materials which will be made available. Most importantly, we have supplied a list of what you may do as a responsible student to protect your interests in the Plan. We have provided you with several avenues for action. So please think about your education and what it means to you and be concerned. Take these articles seriously and read them all because the future of the Plan is **not only** in the faculty's, but also in the students' hands.

The following is an introduction to ABET, and the ABET report which has caused some controversy as of late. ABET is an acronym for the Accreditation Board of Engineering and Technical Schools. It is an instrument of the professional engineering societies used

to maintain a standard level of quality in college engineering programs. ABET accredits four programs at WPI: Electrical Engineering, Mechanical Engineering, Civil Engineering, and Chemical Engineering. This in addition to the blanket form of accreditation WPI holds from the New England Association of Schools and Colleges, (NEASC), which accredits the institute as a whole. In the spring of 1982, a team from ABET came to review these four programs. Overall they were pleased with WPI's efforts with the Plan, but offered some constructive criticism as well. ABET is responsible for continuing our accreditation, therefore it is important that we review their comments. ABET is a very influential organization and there are distinct reasons why ABET accreditation is necessary. Some of these are that it allows ROTC students to come to WPI, it ensures students of getting into graduate school; it increases the likelihood of WPI receiving gifts from companies, and it facilitates getting a professional license.

WPI is a unique institution and because of this, responding to ABET is not always simple and clear cut. Problems arise when you consider the criteria by which ABET evaluates engineering programs. ABET necessitates that all graduates in the accredited institution meet

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Creativity is an individual's greatest resource

by Ray Burlingame

CCS

The WPI Plan. It's such a common expression nowadays. But how many times did you ever stop and think about why it is so universal to us WPI personnel and how it's going to affect (or has affected) our future years of education? There are so many different elements we must consider.

Some thoughts I would like to express concern the subject of our own individual creativity. Simply put, creativity is the success of our educations and the Plan helps us to create. It would be unreasonable to say that we're all 100% inventive geniuses. But what is true is that here we all have the chance to explore our own individual creativity to its utmost limit.

To the incoming freshmen, that creativity will probably be limited to the creation of a course curriculum for the

years ahead. With patience a creative attitude will develop into the ultimate learning experience, the project work.

Creativity is really very difficult to define. According to one source, *A Freshperson's Guide to WPI*, it is a word filled with mystery intrigue and surprise; it is boundless and undefinable even though it's an important part of all of our lives. Most people know very little about it, yet it is behind every discovery, every invention, and every joke that man ever made. Creativity is an individual's greatest resource, possibly one of the two sources of true happiness (the other being an act of love), and most importantly, it can be developed.

And it's all just a part of this Plan; but a very important part. It's everyone's responsibility to understand this, for it will most undoubtedly reflect in future success.

The future of Two Towers: Part I and II WPI sets goal to be unique

The Future of Two Towers I & II are reports investigating WPI's educational system as of the late 1960's. These two reports are summarized below.

by Julie Ruksnaitis

CCS

"An attempt to make a good college, an excellent college."

The original objective of WPI was to be a unique college with a reputation of being a source of soundly-trained, practical-oriented engineers. The school achieved this goal and maintained it for approximately 90 years.

With the change (advancement) in technology, WPI had to change also. Its response however was modeled after leaders of American technical education, the MIT and California Tech. The results? A disappearance of uniqueness at WPI.

The then-president, after receiving input from departments as to what they thought were areas in need of attention, appointed a committee of faculty to develop a proposal of educational direc-

tions the school should take. Thus were the beginnings of the Plan.

The first objective was to define present goals at WPI and what they should be in the future. In order to achieve these tasks, there were several planning tasks to establish. Next were the possible goals for the school and the different criteria for evaluation.

WPI underwent a partial analysis of the type of alumni that it graduated, the type of students applying, the undergraduates presently attending, the faculty or staff, and several other areas. The purpose of this analysis was to get a good look at where the school was and where it had been. As part of the analysis, the students and faculty were able to respond with ideas as to what could be done to improve and enhance the educational system at WPI.

While all this was occurring, the school held a planning day which was attended by students, faculty, alumni, and trustees. The outcomes was a definite feeling that what the participants desired was an objective that would bring about the change in atmosphere they obviously felt was lacking. Some of the things they felt lacking were more openness, less structure and

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The future of Two Towers: Part III

The first model of the Plan

by K.C. Greenwood

CCS

Two Towers Part III was designed as a synthesis of Parts I & II, describing a proposal (model) for a new educational system at WPI. It was assembled by the Faculty Planning Committee in September 1969.

The report begins with its own summary of what the program would be. It was a program:

- in which projects and independent study are major educational tools.
- to teach WPI students to learn for themselves and to develop in them an understanding of the interplay between technological advance and human need; rather than completion of prescribed courses.
- to be carried out with a student/faculty ratio of 15:1 with a three year implementation program.

Part III established a goal for WPI, i.e. to bring into the second century of the school's existence a new, dynamic version of its great Two Tower tradition.

The report's introduction stated that the curriculum was described as being too restrictive, not permitting individual development by a "formidable set of prerequisites. Intellectual interchange is the exception rather than the rule." Thus, the purpose of the independent college was being challenged.

Part III defines "the major contribution of the Independent College is to leaven the national educational scene with diversification and a source of innovative energy which lies beyond the capabilities of the public institution." The new model outlined in Part III is an effort to utilize the assets of a private institution to their fullest.

Next, the proposed educational program was broken down into details. Discussion of educational tools, (projects, independent study, and courses), degree requirements, advisory responsibilities, and the scheduling of the

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WPI

Interviews

Friday, December 10, 1982

MITRE will be conducting campus interviews Friday, December 10, 1982. Contact your Placement Office to arrange an interview if you are a BS, MS, or Ph.D. candidate in:

- Electrical Engineering
- Computer Engineering
- Computer Science
- Mathematics
- Physics

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THE ENVIRONMENT TO DO WHAT YOU DO BEST.

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Police Log

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Tuesday, November 30

11:15 A.M. — A WPI student reported a larceny of cash from his residence hall room.

Thursday, November 2

1:25 A.M. — A WPI student reported witnessing a hit-and-run on Trowbridge Road. A description of the vehicle was given and WPD was contacted.

...WPI strives to be unique Do you hear what I hear?

(continued from page 3)

school year provided adequate overall representation of the program.

The next issue presented was addressed as "co-ordination of college community life with academic purpose of the college." Nine possible cases, with brief details, of student living arrangements were discussed. Major ideas expressed stated: "Student life and interaction among students has as important an influence upon the educational effectiveness of the college as does the formal structured academic program."

Part III then explains the logistics of projects and independent study. Topics include 1) percentage of time devoted to such work; 2) project structure; 3) student to supervisor ratios; 4) space requirements; 5) technical services; 6) project development; and 7) organizing the new program.

Lastly, further development of the educational model is presented. Areas needing additional research are described and directions are given as to their pursuit.

...First model of the Plan

(continued from page 3)

rigidity, an escape from provincialism, and more debate and interaction between faculty and students.

Another way the committee was able to assess student opinion was by visiting the dorms and different fraternities.

After assessing opinions and ideas, the committee was able to present some objectives for the school which included classical education, middle college invention and entrepreneurship, and several others.

Now was the problem of implementation, which required major changes in

the nature of WPI. Faculty qualifications were examined — differences in duty, responsibilities and prerogatives. There was a feel for an important change in living arrangements, administrative structure and a devised system that would bring the entering student to the point where he could take intelligent advantage of the freedom of choice and responsibility for his own learning.

"Education is what is left after one has forgotten what he has learned," and that was precisely what WPI was looking to accomplish.

by Debbie Allen
News Editor

With the coming of the Christmas season at WPI, the revival of an old tradition will be occurring starting this week; the carillon will be played in Alden Tower on a regular basis. A carillon is defined as "a set of stationary bells, each producing one tone of the chromatic scale, now usually sounded by means of a keyboard." The revival of this tradition is due to the efforts of a group of

concerned students.

The carillon was given to WPI by Mrs. William Binns Smith in 1943. Its tunes chimed over the city of Worcester twice a day until the 1970's when the tradition died away. Now, because of the efforts of these students, the carillon will be played on a regular basis. If any member of the WPI community has any input concerning this, they should contact Kathy Kruczek, Box 388, Vinny Vignaly, Box 626, or Dan Farrar, Box 120.

Soccomm previews

Tuesday, December 7

Cinemathech Film Series presents "Diva", a film savored most for its style and unusual imagery. The setting is in France and it's guaranteed to keep you on the edge of your seat. Admission is free and open to the public starting at 7:30 p.m. in Alden Memorial Auditorium.

There will be a twist to this Tuesday's Happy Hour as "The All Cotton Band"

will perform. The band is made up of WPI students and admission is free. Showtime is 4:00 p.m.

Thursday, December 9

Artie Traum will provide the entertainment for this week's coffeehouse. Artie is an acoustic guitar player who performs a wide variety of mellow music. The show begins at 9:00 p.m. in the Wedge.

What You Can Do?

The faculty needs your input in order to make a well informed decision so help them out — take the Plan reevaluation process seriously and voice your concern. Here is what you can do:

1. talk to your advisor
2. talk to faculty members listed in *Newspeak*
3. attend Committee on Academic Policy meetings*
4. attend faculty meetings*
5. read the literature available in the library
6. use *Newspeak* to speak out
7. talk to your fellow students and join together
8. attend CCS meetings*

*See CCS bulletin board and this issue of *Newspeak* for meeting times and locations.

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The Shipyard is an equal opportunity employer with a commitment to affirmative action.

"What do you think of the new rule that doesn't allow persons under 20 into the Pub during Friday Happy Hour?"

Interviews by Robert DeMattia.
Photographs by Dan Jacavano.



1. "The restriction on people is the wrong avenue to go through... if the Pub employees were doing their jobs and there were an adequate number of pub employees, there would be more security... the problem would be solved with increased security."
— Bill Holland '83 EE



2. "We go to the pub... well, we went to the pub... we didn't drink or anything... it's a great way to meet people... the general purpose (of happy hour) was to have fun... not to get drunk."
— Robin Gately '86 CM



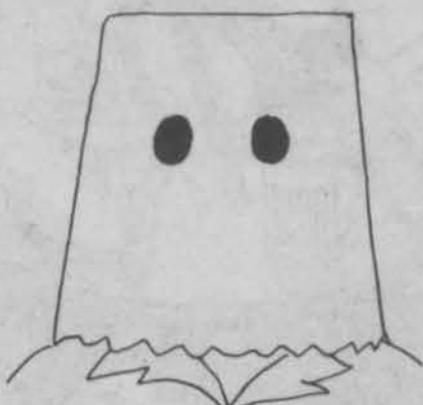
3. "It's fine. It's one way to take care of it (the problem)."
— James Dumas '85 ME



4. "A lot of my friends and my friends' friends are under 20. We used to go in there just to talk, but we can't do that anymore."
— Bill Cahalane '84 CH



5. "I think in a school this small that they shouldn't say that freshmen and sophomores can't get in... everybody goes there to talk and to meet everybody... it will diminish the number of people there."
— Bob Skratton '84 ME



6. "I don't go to happy hours, but it seems to me that by restricting who goes in, you are also restricting the extent to which a person can be "happy"... what about people who are friendly with underclassmen? There's more to the concept of happy hour than just drinking."
— Joan Marler '83 ME



7. "I'm on the Pub Council. We discussed a lot of different ways to police (the situation), but we couldn't come up with anything more equitable... if people don't like this and they see another way for (happy hour) to work, then that's why we're here."
— Marty Ferguson '84 EE

PRE-CHRISTMAS SALE

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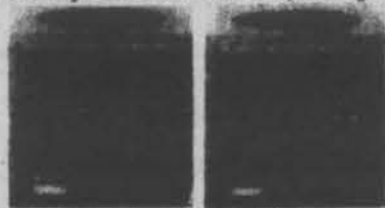
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LETTERS

Pub restriction shows lack of communication

To the Editor:

Last Thursday a letter was sent out to WPI students by Glenn DeLuca, Assistant Director of Student Activities, informing us that no persons under 20 years of age will be admitted to the Pub during Friday happy hours. While Mr. DeLuca's concerns regarding alcohol consumption by those underage are legitimate, the measure which has been taken seems unjustified. Besides being an outright ban on attending a WPI social function for nearly half of the WPI undergraduate population, it represents a lack of communication with the WPI community and indicates disrespect for the personal integrity of WPI students.

The Goat's Head Pub is an establishment which is currently run and partially subsidized by WPI. Most would agree that it exists for the benefit of the WPI community, and that Friday happy hours are WPI social functions. Considering the financial expenditure which one must make to attend WPI, an undergraduate would expect to be allowed to attend WPI social functions, remaining within the limits of the law. Indeed, Friday happy hour is one of the few instances where a student can converse informally with other students as well as faculty members, an essential aspect of a healthy intellectual environ-



ment. to expedite the process. Regarding the underage problem, the hand stamp system has proven inadequate, partially because it is not always enforced. Additional effort directed toward tightening this system or developing a better one could likely have produced a workable solution to the problem.

A more important issue concerns the disrespect for student integrity and lack of communication exhibited by this decision. The WPI community was not forewarned in any way of this action. In the letter which Mr. DeLuca sent to the WPI campus, he stated that "Many students under 20 view the current system as a game to be beaten..." While admitting this, no attempt was made to dispel this view and convey the severity of the problem to the students, including informing us that continued violations would result in such actions as that which has just been taken. DeLuca acknowledges that "any system can only work if all involved cooperate," yet no sincere effort was initiated to gain cooperation from Pub patrons.

I believe that a system which includes an improved method of identification, more efficient serving techniques, and which stresses student awareness and the necessity of cooperation should have been implemented prior to any serious consideration about not allowing those between the ages of 18 and 20 into the Pub. Such a system could possibly have included WPI implemented penalties for violators. Perhaps the measure which was implemented last week was done so as an "easy way out" to the problem. In any event, the issue needs to be re-evaluated and a sincere attempt made to arrive at a more congenial solution.

— Greg Doerschler '84

Letters Policy

WPI Newspeak welcomes letters to the editor. Letters submitted for the publication should be typed (double spaced) and contain the typed or printed name of the author as well as the author's signature. Letters should contain a phone number for verification. Students submitting letters to the editor should put their class year after their name. Faculty and staff should include their full title. Letters deemed libelous or irrelevant to the WPI community will not be published.

The editors reserve the right to edit letters for correct punctuation and spelling. Letters to the editor are due by noon on the Saturday preceding publication. Send them to WPI box 2472 or bring them to the Newspeak Office, Riley 01.

Commentary articles reflect the opinions of the writer and not necessarily of Newspeak.

ment.

Problems which arose during happy hours on Fridays are twofold: large crowds making it difficult to obtain beverages, and large numbers of underage persons consuming alcohol. In response to the former item, sufficient consideration has not been given to improving the current serving methods

COMMENTARY

News from the Nation's capitol

by Jean Salek

- Who's going to get sent home first?
- Don't worry Tom, we've got four more weeks to find cheap beer, so for now, let's dance.
- We're wondering if Larry is really a workaholic or if that secretary is taking him out to dinner now instead of lunch. Besides, Larry still thinks our address is 1440 Rhode Island Avenue. Please send Larry quarters... he's into 25¢ movies.
- Brian, alias "sexy bod", is on his way back to Georgetown to find "that girl", but the girls in 313 and 314 love him best — especially when he dances.
- Jim still can't decide whether girls can make decisions or not, but the girls have decided that he gives the best backrubs... thanks for the roses, Jim.
- "Maid" Jean, wake Kathy and Cathy up by 6:30 so that they can take a shower and you can get your beauty rest. What do you mean Jean the Maid doesn't do dishes? If you spray that bug spray, we're opening the window — the Tijuana kid.
- Nancy is on the phone, where is "Big Time"? Oh, Dave is downstairs smoking his pipe and playing Pac Man.
- Steve, it doesn't snow on Capitol Hill. How was the prom? Did Marie enjoy it? Do you know what she's named? So Disco Steve, where did you find that funny hat? It's really enlightening. Off to Trinity again?? You are a glutton for punishment.
- Kathy, how was your day? Are Tom and Amine picking on you again? Have you figured out the Metro yet? Answer the phone. What's our address?
- Lessons provided in Arabic. Inquire in room 306... ask for Amine. Mellooo... blondes preferred. Drive much?? To the Palestinians... are you from Lebanon too? — pun — Why don't you give Gigi a call, or Connie, or Jennifer, or...
- Karen, stop picking on short people. OK, let's go out and have a good time. Oh baby — one of these! Tom's little brother wants a date. Wait till you see your phone bill — San Diego Princess.
- Chad and Loring are the same person. That's news to me! Look alive. Walk much? Limp faster, the last Metro is leaving the station.
- Andy, have you received any mail for Michael Smith today? Go mooch dinner off your sister! Love those taxi rides — especially when two "ladies" try to get money from you.
- Cathy, do dishes much — or ever? Heard you had fun at the Irish Pub? See Cath for free packing service. Duck, here comes a flying mug. Candid pictures at Georgetown. Learn not to mess around with Little Wilsacks.
- Bruce, you are much too tense — loosen up baby! It's no biggie. Superdancer — Excellent chicken, boy you'll make someone a good wife. 7:1 — How do you like those odds?
- Marie's got Jacuzzi withdrawal symptoms, or maybe jet lag. Prom Queen, sure can tip the cup. Learn how to chug.
- Terri, have any cornflake fights lately? Stop picking on me. What do you mean no ringing? It's 3:00 p.m., send Terri home cause she is tired.
- Paul and Tony — keep up the good work and enjoy Washington while you are here.

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Newspeak

(USPS 535-480)

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COMMENTARY

A Goat's Head above the competition

by Neil Sullivan

What does the Goat's Head Pub have to offer the average WPI student? It is obviously lacking in some very basic areas necessary to make a successful bar. So how does the Pub stack up against other bars?

The Pub has no Tiffany lamps, no romantically lighted corners for lovers and adulterers to slip into and hold hands (or whatever they want to hold), no cute little round tables with a flower or candle in the middle, and no fan

overhead slowly spinning for no particular reason. The Pub has sticky floors. So sticky in fact that anyone trying the new wave dance, "The Worm", might never be able to get up. The pub has no romantic corners. In fact, the closest it has to a romantic corner is the wall where the video games rest, where anyone living a second childhood can be humiliated by a computer program written by some thirteen-year-old from Nebraska. The Pub has nice square tables that tip just enough when some-

one leans on them to spill beer all over the offending leaner. The Pub has doors to open when the air gets so sweaty that a tropical fish may swim by at any moment.

Some might say the Pub has no class. No one in the Pub has enough class to lift his pinky while drinking (a sign of polished etiquette often displayed by

Richard Simmons and Don Rickles have stamps on their hands, and it is rumored that Ted Kennedy can often be seen with a green sploch on his forehead.

The Pub has no theme, per se. It is not designed like a railroad car. It does not have movie posters in place of wallpaper. It is only subtly decorated with fraternity and sorority plaques and by the stuffed goat's head that prominently does not reside on any wall where no one can see it.

The Pub does not have Joe the bartender who knows how to mix every drink from a Harvey Wallbanger to a Pina Colada and who listens to life-shattering problems and stops the local accountant from throwing himself off the local bridge. The Pub has Frank the Chem. Eng. who is trying to work his way through this school with the nickels and dimes that friends leave in those tacky cups on the bar. Frank the Chem. Eng. will be here until 1994.

However, besides WACCC, the Pub is the singles scene on campus. Not since *Leave It To Beaver* can the average student get quality entertainment comparable to seeing a gweep trying to pick up a Becker girl.

Considering all that the Pub is not, what is it? Just a place where students can see friends and professors at happy hours, dance to a band, watch a movie or a football game, relax in the quiet during the "slow" nights, or just have a good time. It is an oasis amidst the hallowed walls of academia: the Pub.



Comp prep number 5

Well seniors, it's time to start thinking seriously about your Comp. It's time to sharpen those technical skills and position your psychology to tackle the most intimidating of the degree requirements. But, relax seniors. During B term *Newspeak* is offering "Comp Prep", which will be presented as a series of Engineering/Science problems designed "to lighten you up" by challenging your alleged bearing as the stereotypical no-non-

sense student of technology.

One problem will be presented each week. Submitted solutions that are most consistent with the spirit of the problem statement will be printed in subsequent issues. Not only seniors but also faculty administration, and underclassmen/women are invited to try their hand.

So here is Comp Prep Problem No. 5 with an introduction to the author. Send in those solutions!

Introduction to the author

The author of Comp Prep Problem #5 is our own Dr. Lionel Hogbag, professor of Bio-Chemistry and former mustard dispenser at the Bluebonnet Bowl. Hogbag received much campus-wide acclaim for his pamphlet entitled "Demystification and Shortening of the Titles Found in the 'Presentations and Papers' Section of the Monday Memo."

Stories abound of Hogbag's exploits in the laboratory. During his lecture on the difference between molality and molarity, one enraptured student nodded off, falling from the lab stool into a vat of formaldehyde which preserved him long enough to bog Hogbag down in a term's worth of litigation.

While explaining a separation process to another student, Hogbag stuck his finger into a running centrifuge, which whirled him far enough across the room to put his surprised expression in contact with the lip of a 10 kiloliter beaker.

Dr. Hogbag is an expert on the chemistry of planets in the solar system. Unfortunately, Hogbag's expertise is not of our solar system, but of the solar system "N5R," which is located in a remote galaxy outside the constellation Pegasus. How he knows anything about this solar system remains a complete mystery.

Dr. Hogbag does have some knowledge of our planet Neptune, having once gone there in a dream. But he only took pictures of his wife standing below some statues and then came right back.

Although Professor Hogbag has been assailed by his colleagues as "not knowing the difference between a benzene ring and a Florida sink hole," we have decided to print Professor Hogbag's Comp Prep Problem because it has the potential to elicit the kind of nonsense we're looking for.

Chemistry: Neptune

The Pioneer Spacecraft, launched in 1972, will pass the planet Neptune in 1983 and scientists from all over the globe are getting very excited. They expect Pioneer's sophisticated optical equipment of coke bottles and flashlights to reveal a lazy, moody, but colorful atmosphere. Some scientists feel that Neptune's surface has the consistency of a Baked Alaska, while others insist it is not unlike that of buttered jello. Most experts, though, agree that its bubbling formations mostly resemble cream cheese and chives.

status of being the planet most remotely positioned in the solar system. In an interview for *Friendly Orb*, the eminent scientist and former carrot placer at Rockingham Park, Dr. Ephretta Von WonWinnerwin was quoted as saying: "Those heavy elements — how they can elevate it like that is beyond me."

Neptune can be seen in the North American sky about the time of the Guru Purnama. It will be off to the viewer's right just above the horizon between the big dipper and "Eat at Sweeney's" advertising plane.

COMPS WE'D LIKE TO SEE

Qualitative analysis techniques have failed to turn up anything definite about Neptune's chemistry. Once a specimen is available scientists feel they'll have more success. Consensus is strong that not even primitive life forms will be found on Neptune, although one scientist is sure he spotted a raccoon through his binoculars.

Concerning the possibility of life on Neptune, one science fiction writer helps us get a feel of what it may be like: "Since Neptune is almost 3 billion miles from the sun, getting a tan requires a great deal of patience. And since it takes Neptune 165 years to make one revolution around the sun, most people don't live to enjoy the four seasons. And because they are so far out in the solar system, Neptunians remain aloof and find it hard to be hospitable to those who just drop in." A second printing has not been called for.

Neptune is soon to be elevated to the

Based upon the foregoing and your general knowledge of Chemistry answer the following:

1. If most experts are right and the surface of Neptune is like cream cheese and chives, which of the major salt ions will most likely be present? Pepper ions? Oregano ions?
2. Do you think that the earth and Neptune have good or bad chemistry? Explain using "Quentin's Law" which states: "The good chemistry between any two planets is inversely proportional to the distance between them." What would Neptune and Mercury have in common?
3. Using the Kensington Alignment Series (without substitutions and ducking the $n/2$, $n^2/4$, ... $n^2/?$ trapping) perform the Steinmetz expansion of the ignoble gasses for the Neptunian bathysphere.

Double standard

by Dave Wall
Newspeak Staff

Those of you who've been to your mailbox recently have probably come across a letter from Glenn DeLuca regarding a Massachusetts law and how it applies in a situation like the Goat's Head Pub. Mr. DeLuca noted that the law is very difficult to enforce in peak business hours, especially the Friday afternoon happy hour. Therefore, in order to preserve the Pub's liquor license, he has decided to restrict the Friday afternoon happy hour to people over 20.

As the hue and cry raises, remarks will be directed at Mr. DeLuca, since it is his letter and his decision, and he is the manager of the Pub. But what it boils down to is that the law is the law, and screaming at or screaming about Glenn isn't going to change it.

But that doesn't make it any less irritating.

Before we go any further, let us set

they were caught committing a crime, they would be tried as an adult, and if convicted, sent to prison with the rest of the adult criminals. Some states chose not to change their standards, and there you still had to be 21 to see a dirty movie or buy a bottle of beer.

As the 70's wore on, it was noticed that deaths caused by drunk drivers were becoming significant. And, in addition, one notices that the incidence of teenage alcoholism was on the rise, and so on and so on. The statistics said that lowering the drinking age was a mistake. And so, some states, Massachusetts among them, began raising it.

Okay. Nice sentiment. It might even make sense. But it is silly.

Think about it.

You can be sent to die on the soil of a foreign country, defending a country and state whose laws don't let you drink.

The law says you can be held responsible for murder, but you can't buy a drink.

OUT OF TURN

some things straight. This is not going to be a temperance lecture, a proclamation of the evils of alcohol, or anything like that. It is going to be an inquiry into the logic of our legislators, whose grasp on reality is occasionally a trite shaky.

Almost everywhere in the country today, in the eyes of the law, a person is considered an adult at age 18. This all comes from the amending of the Constitution in the early seventies stating that the age of franchise would be lowered to 18. That amendment was a display of amazing efficiency by the Bureaucracy — it was out of both houses in less than a week and it was approved by the required 38 states by July of the same year. If one wants to look back further, one can attribute this to the thriving youth activism of that period. But it wasn't really a new idea. In the Roman Empire, for example, a male could own property and be a member in a legion at the ripe old age of 14.

In the wake of this, many states also accepted 18 as the standard for a lot of other things. The argument of that time was simple: If the 18-year-olds could vote, they ought to have all the privileges society rewards the mature. And they would have all the responsibility, too. If

You are old enough to drive a car, start a family, and assume control of every facet of your life except to go out and get a bottle of schnapps. You could get married, and according to the law, you could not partake in the toast.

Silly, isn't it?

It makes one wonder. This rationale is the same one guiding the country. The patriot might wonder why today's youth is not willing to defend the American ideal. How can we?

I wasn't going to write about this at first. I thought it was simply a reaction to not being able to go to happy hour. But if government can't make consistent decisions, then something is wrong.

This is what is called a "double standard". It is not only the earmark of flaws in a judicial system, but is one of the classic techniques of parental methods to explain why elder siblings can do something that the younger children can't do.

And what's really frustrating is that this isn't even effective. Any high school student with an ounce of brain has got his liquor channels well laid out. If they want it, they'll come up with it.

One wonders if the legislators don't have anything better to do.

...everything you wanted to know about ABET

(continued from page 2)

all their requirements (the school's) in order for ABET to continue accrediting that program. Since there are no required courses at WPI, it is difficult to match a WPI student's curriculum to the ABET model. The current recommendations by faculty and students floating around campus are in response to ABET's report (received in April, '82), the result of serious evaluations on the part of the WPI community. The philosophy of the Plan is not in danger. The proposals, (and there are now many), are what the authors feel will not only enhance the plan, but also follow ABET criterion. However, there still may be other resolutions on which WPI and ABET can concur.

Outlined below are the major points of criticism taken from the ABET final report with additional supporting facts.

A. "Every staff member interviewed felt that the workload was greater than the faculty could sustain over a long period. There seems to be a shortage of faculty and an unequal division of project supervision."

Projects are considered the most important part of the WPI education but they also place an enormous burden on the faculty.

B. "The specific weakness evident in all programs but Chemical Engineering is that students are able to graduate without the one-half year of basic sciences required by . . . the ABET Engineering criteria."

The founders of the Plan considered basic sciences comparable to the humanities in that they are essential for a well-rounded education. However, they didn't foresee that engineering and science majors would not be taking enough basic science for that was the case in the past. This explains the current absence of a science requirement and why we have the Humanities Sufficiency.

C. "It is essential that advising procedures be tightened to ensure that the ABET criteria are being met by all graduates of the accredited programs."

D. "The grading system may allow marginal or unqualified students to survive until the competency exam identifies them." Such students should be identified earlier and with the present system, this responsibility rests heavily on the advisor.

E. ABET feels that our competency exam should be a comprehensive exam which would objectively test a student's knowledge in his accredited program. In

other words, ABET wants to use the Comp to prove the student has adhered to the program since without required course work they have no other way of knowing this. The Comp is presently used to test a student's competency to carry out his/her prospective career through the solving of "real life" problems.

What do you think of ABET's comments? Do you agree, disagree? Maybe you have ideas as to what should be done about them. Students' ideas are very important since they come from a different viewpoint. Without student opinions the faculty has only their own point of view to go on. They are the ones who make the final decisions. While it's important that we make our ideas known, it's even more important that we go about it in the correct way.

One suggestion from Dean Van Alstyne is as follows: Once students gain a fundamental understanding of the issues at hand, he said they should form groups each representing one viewpoint towards a single issue. The next step would be to present that viewpoint to faculty members. By visiting these faculty, your idea will be strengthened or revised and hopefully gain support. Sitting in on faculty meetings is also a

good idea in order to gain further insight into the issues by hearing other points of view. The Committee on Academic Policy, (CAP), is the organization responsible for any changes in our educational program and is a good place to start. Next voice your opinion publicly at meetings. Student action taken in this way, Van A said, "certainly would receive serious consideration."

Another suggestion is to take time to carefully answer the upcoming Executive Council questionnaire on student opinions. We will compile the answers and present them at the faculty meetings.

The time element is another factor. This issue is extremely important and should not be resolved in a rushed manner. However, if any changes are to be implemented next fall, they would have to be approved sometime before the end of D-term. Consequently, Professor Orr, chairman of CAP, would like to see organized student response completed by the first few weeks of C-term.

The time to act is NOW!!! If you feel strongly about an issue and would like to voice your opinion, talk or write to Gerry Earabino, Box, 446. He and the CCS will get you started and support your efforts.

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...the un-happy hour

(continued from page 1)

December 3. They estimated that attendance had dropped only by ten percent at the most, and noted that the new regulation made working behind the bar and on the floor of the Pub much easier since they did not have to search for underage drinkers.

Anyone who has a constructive, alternative proposal or suggestion is encouraged to contact Glenn DeLuca in the Dean of Students Office.

Overnight parking

WPI students are reminded that there is no overnight parking allowed in the East or West campus lots except by special arrangements made in advance with Campus Police. Also, during the upcoming Christmas break, there will be no overnight parking in any WPI parking lots except by special permission obtained in advance from WPI Police.

...scientific and technological impacts on society

(continued from page 1)

citizen," she declared, "must understand all risks involved and participate in these value judgments." Scientists and engineers, she explained, have a different role; they must not only contribute to the extension of knowledge but they must also assess the magnitudes of the risks and benefits of their research and inventions and articulate them to the public. She emphasized that the expertise of these researchers does not give them superiority over other citizens

in value judgments. She explained the importance of the interaction between scientists and society, pointing out that WPI students gain invaluable experience in doing their IQP, "because they are made to realize that although science and technology are essential, they alone cannot solve scientific problems." She then closed her speech with a thought for all those attending. "Science and technology can develop better technological options; the implementation of these options is a social, economic, and political matter."

The future of Two Towers: Part IV

Plan makes students more responsible for their own education

by Ed Williams
CCS

The Plan was a set of procedures set up to achieve the goal of WPI. The Plan was put together after reviewing the reports of sub-committees and was also influenced by other faculty and student input. The Plan was designed so that the student would be responsible for his or her education and lifestyle. This design also made provisions for the flexibility required to accommodate the varying backgrounds and needs of students.

The Plan required new degree requirements to help achieve its goal and also to ensure that students were achieving this goal. These degree requirements are: a Comprehensive Examination in the major field of study, qualification in a minor field of study either by a Sufficiency Examination or by two units of work in a minor area, two units of work involving independent-study or project work, one being in the major field of study. These requirements would provide the flexibility required to create innovative, technological, and humanistic students.

Each student would be assigned an academic advisor who would assist the student in developing his or her academic program. The advisory program

was considered to be an integral part of the Plan which required motivated and enthusiastic faculty. The faculty would also play an important role in stimulating the students in course and project work.

The Plan called for an environment that would help the student become a mature responsible adult. This was to be achieved by allowing the students to make their own decisions but also to hold them responsible for them. This environment would not involve a strict set of laws which would be strictly enforced but rather would allow students to think for themselves and become respectable adult members of our society. Social events and student faculty interaction are also important aspects of this environment.

The graduate program was to be included as an important part of the overall revitalization of the college. In order to fulfill this requirement the program would need some revisions. It was decided that an attempt to refurbish the undergraduate and graduate programs simultaneously might be detrimental to both programs. Hence the major efforts would be focused on the undergraduate program and the graduate

(continued on page 10)

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...Plan makes students more responsible

(continued from page 9)

duate program would later be evaluated and reworked so as to be beneficial for itself as well as the undergraduate program.

The Plan also included a schedule for the implementation of the new program. This schedule would allow progressively larger numbers of incoming freshmen

to participate in this new program while not interrupting the academic programs of the upperclassman; the upperclassman would not be totally left out of the program because they would benefit from new course offerings and teaching methods and also the spirited atmosphere created by the Plan.

Bravo for Saga

by John S. Dranchak
Newspeak Staff

Saga: **World's Apart** (C.B.S.) This past September saw the entry of another Canadian rock band into the American music market. **World's Apart** is Saga's first American release, but is actually their fourth L.P.. At the time of its American release **World's Apart** had already been certified gold in Canada and Germany and with good reason.

Saga's style of music could most accurately be described as accessible art rock. The influence of British progressive rock acts such as Genesis, King

member of the ensemble knows it is the overall group sound that really counts. Another feature of Saga's "trademark" sound is their heavy emphasis on keyboards. With three of Saga's five members playing keyboards at one time or another, they create a lush wall of sound. Also, not to be forgotten is the guitar style of Ian Crichton. Instead of going for the popular "sustained" guitar that is so popular today, Crichton, for the most part, reaches for (and achieves), a very staccato and muted style, similar to fusion guitarist, Al Dimeola.

ON THE BEAT

Crimson and Yes is clearly evident in their music. Because of this background, their music sometimes sounds reminiscent of Asia (for better or worse), because Asia's background is British art rock.

The key to Saga's sound is their strong emphasis on melody. Even the solos have a great melodic flow. A good example of this is the unison guitar/keyboard solo in "On The Loose." There are many other virtuoso displays on the album, but it is evident that each

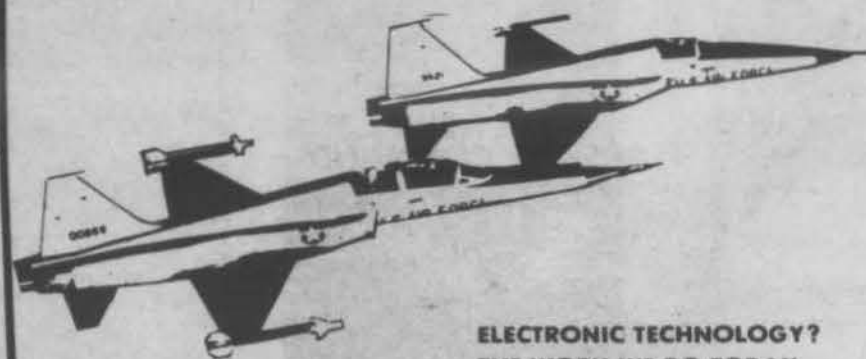
The fact that they have their own characteristic sound is great, but what is even greater is the fact that they can deviate from it without losing their overall feeling. They display their diversity on the ballad oriented "No Regrets (Chapter V)" and the new wave influenced "Conversations."

In closing, all I can really say is, bravo for Saga, a band that well deserves the success they are now receiving.

Records reviewed courtesy of Music World in the Worcester Center Galleria.

A READING LIST TO UNDERSTAND THE WPI PLAN AND TO EVALUATE HOW WELL IT IS WORKING

- The Future of Two Towers, Parts I, II, III, IV.
- Zen and the Art of Motorcycle Maintenance by Robert M. Pirsig.
- Recent department IQP, MQP, and Competency Exam self studies.
- A Freshperson Guide to WPI.
- WPI Journal Vol. 79, Nos. 5 & 6, Feb. - April 1976.
- Education at WPI — 1969 Through 1973 by John M. Boyd, Jan. 2, 1974.
- Report on Plan Implementation and Modular Education by John M. Boyd, August 1, 1976.
- The Educational Process at WPI: A Basis For Course Design, Sept. 1, 1977.
- The Impact of the WPI Plan on its Students and Graduates, 1972 - 1978, by Karen C. Cohen, Ph.D.
- Final Report of The Effects of the Implementation of the WPI Plan on the Faculty and Administration of Worcester Polytechnic Institute Worcester Massachusetts, by Frank Baker, Ph.D., and John J. Gabarro, DBA, March, 1976.
- WPI Graduates at Work: The Impact of the Plan on Early Career Development, by Geoffrey E. Bock, Ed.D., May, 1981.
- NSF Proposal.
- Final Report of WPI — NSF Advisory Panel, June 1975.
- Videotape of NSF panel at a WPI faculty meeting.
- Studies of the Competency Examination — Senior's Performance and Perceptions, by Geoffrey E. Bock, Ed.D., Consultant, August, 1980.
- The Zwiebel Report.
- CSA, CAP, and CAO committee minutes.
- Faculty meeting minutes, especially during the early years of the Plan.



SCIENTIFIC & ENGINEERING

**ELECTRONIC TECHNOLOGY?
THE WORK WE DO TODAY
IS THE STATE-OF-THE-ART
TOMORROW!**

**ELECTRONIC TECHNOLOGY?
THE WORK WE DO TODAY
IS THE STATE-OF-THE-ART
TOMORROW!**

Rome Air Development Center — the largest Air Force laboratory devoted to electronics research and development.

The 485th Engineering and Installation Group — engineering communications and electronic systems throughout the world.

Griffiss AFB recruiters will be on campus Dec 8th. Interviews will be for civilian opportunities as electronics engineers and computer scientists.

CAREER OPPORTUNITIES

**ROME AIR DEVELOPMENT CENTER
&
485th ENGINEERING &
INSTALLATION GROUP**

Griffiss Air Force Base, New York



Interested in Patent Law? Want to know how to protect your innovations?

A Philadelphia lawyer will explain how.

Sign up for Intersession course B368
developing your ideas.

Register with the Intersession Office
until December 17

Journal portrays Plan

by Paul H. Williams
CCS

This article presents important ideas summarized from the *WPI Journal* (Feb./April-1975) which came out when the first class of students educated using only the Plan was graduating. In this edition the four degree requirements are explained, comments on the success or failure of the Plan by people inside and outside WPI are presented, and a brief history of the development of the Plan is given. This article will touch on some of the more interesting and pertinent parts of the *WPI Journal*.

The first section of the journal raises some crucial points about the Plan. Implementing some of the four degree requirements was not easy. For instance, how socially or technically oriented should an IQP be? When is an IQP an MQP or an IQP? The competency exam was originally called a compre-

hensive exam. Immediately the question of whether it was to measure comprehensiveness of a student's knowledge or a student's competency was raised. The question of what "competency" was also was brought up. In the humanities department, it was found that most students were not properly prepared for the sufficiency. This resulted in the addition of "concept" courses to the curriculum.

How successful was this radical change in education? Soon after the Plan was implemented, Dr. Karen Cohen of M.I.T. conducted a study of pre- and post-Plan students. She concluded that the quality of academic work under the Plan was equivalent or superior to pre-Plan work. Despite the fact that the Plan greatly increased the work load of the faculty, two-thirds of the faculty thought that the Plan offered a superior educa-

(continued on page 14)

NSF funded the Plan inception

by Gerry Earabino
CCS Chairman

After the Plan's guidelines and structure were decided upon, WPI's new system of education was ready to enter a test period. The National Science Foundation (NSF) funded the preliminary stages of the Plan's inception so they formed a committee to monitor its progress. From 1972-1975 they scrutinized every aspect of WPI and the Plan. A summary of the final report is presented below.

Each of the seven members of the panel contributed their final opinions to the complete document. They represented the different areas of society: education, science, engineering and industry. The structure of their visits was left entirely up to the individuals

(continued on page 16)

IQP relates Technology to Society

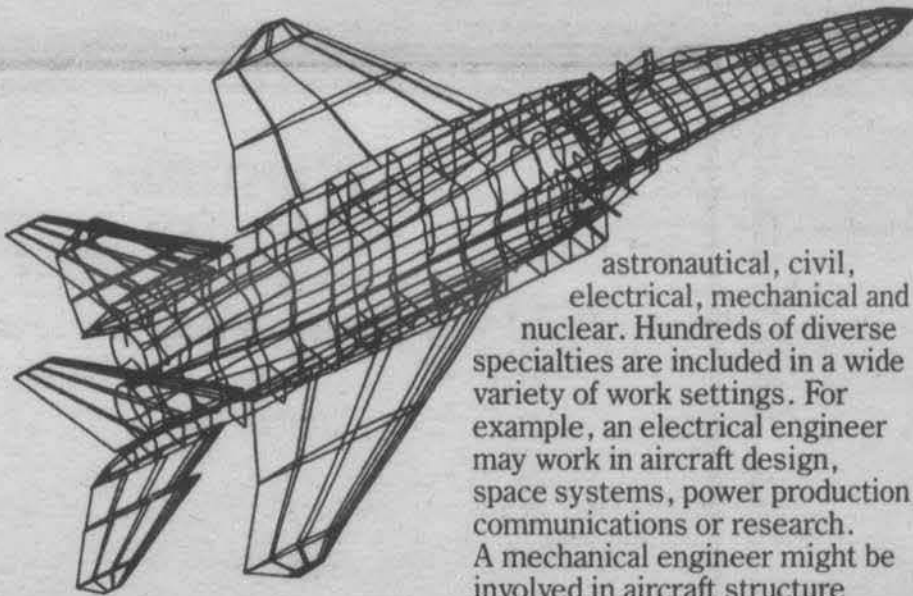
by Ray Burlingame
CCS

The IQP emphasizes interactions between technology, society, and human needs. This means that with the WPI education, students will be able to assess the philosophical and social implications of their actions because it has become increasingly evident that the institutions and value systems of society are strongly related to its rapidly changing technological base. As a degree requirement, the IQP is intended to effect a broader and more integrative education for engineers and scientists.

The means of executing such a project development are incorporate within the WPI Plan. Preparation for each

(continued on page 16)

ENGINEERING TAKES ON EXCITING NEW DIMENSIONS IN THE AIR FORCE.



Computer-generated design for investigating structural strengths and weaknesses.

astronautical, civil, electrical, mechanical and nuclear. Hundreds of diverse specialties are included in a wide variety of work settings. For example, an electrical engineer may work in aircraft design, space systems, power production, communications or research. A mechanical engineer might be involved in aircraft structure design, space vehicle launch pad construction, or research.

Developing and managing Air Force engineering projects could be the most important, exciting challenge of your life. The projects extend to virtually every engineering frontier.

8 CAREER FIELDS FOR ENGINEERS



Air Force electrical engineer studying aircraft electrical power supply system.

Engineering opportunities in the Air Force include these eight career areas: aeronautical, aerospace, architectural,

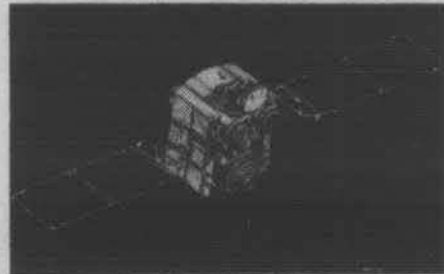
PROJECT RESPONSIBILITY COMES EARLY IN THE AIR FORCE



Air Force mechanical engineer inspecting aircraft jet engine turbine.

Most Air Force engineers have complete project responsibility early in their careers. For example, a first lieutenant directed work on a new airborne electronic system to pinpoint radiating targets. Another engineer tested the jet engines for advanced tanker and cargo aircraft.

OPPORTUNITIES IN THE NEW USAF SPACE COMMAND



Artist's concept of the DSCS III Defense Satellite Communications System satellite. (USAF photo.)

Recently, the Air Force formed a new Space Command. Its role is to pull together space operations and research and development efforts, focusing on the unique technological needs of space systems. This can be your opportunity to join the team that develops superior space systems as the Air Force moves into the twenty-first century.

To learn more about how you can be part of the team, see your Air Force recruiter or call our Engineer Hotline toll free 1-800-531-5826 (in Texas call 1-800-292-5366). There's no obligation.

AIM HIGH AIR FORCE

classifieds

SALES REPS WANTED — Need extra cash? Self-motivated? Want to set your own hours? Be your own boss. Become a sales representative for ARK Student Bedding, Inc. Income potential is up to you. Must have own phone. For further information, write: ARK Student Bedding, Inc. P.O. Box 534, Wenham, MA 01984.

TYPING — Reasonable rates. Mrs. Cahill, 755-8551.

THERE WILL BE A MEETING of the CAP on Dec. 13 at 4 P.M. in Kinnicutt to get student and faculty input of changes in the Plan.

IQP/MQP OPPORTUNITY — I am looking for a sophomore or junior who would be interested in starting a project on Multinational Corporations in C-Term. Cathy, Box 2276.

SAVE \$15 — Get your skis professionally tuned for only \$10. It only takes a phone call. Contact Scott Bishop 791-7911.

CAMERA FOR SALE: Pentar 200 mm, 85 mm, & 25mm, full assortment of filters, Vivitar 285 flash, steel case, tripod, more. Call John, 755-4672. \$750.00.

FOR SALE: Tenor saxophone, approximately four years old, kept in fantastic condition. \$400 or best offer. Write Box 1891 for further details.

FOR SALE: 1966 Bel Air, looks like XXXX but runs well. Best offer. Write Box 1891 for details.

MY B.E.T.B.: I miss you already! — Your F.D.B.E.T.B.

WHAT ABOUT "GEEK OF THE WEEK?"

CLASS OF '85 MORGAN 4th RADICALS, where are you? Let's invade a frat party soon. Contact Led Zeppelin. P.S. Where's Gas?

ATTENTION WPI WOMEN: do you like to stay up until 4 in the morning being bored? If you do then consider SNAP as a fun way to make money! We need more women on our staff.

NEED A PRESENT for someone who has everything — get them a PEA-BRAIN!!!

RED: I'm serious! Are you serious also? Jack

HEY SQUISH! Hope you had a very Happy Birthday, however don't you think Jeff should have been invited to the October the 16th reunion?!?!?!?!?

IT SURE LOOKS like E.T., but in the movie he didn't have the glasses, backpack, and Walkman.

HI WARREN! What a surprise! Where are you? We thought you moved, Hope you're doing well. Also warmly — Dan and Roberta.

WATCH OUT PEGEMMA is looking to perform a function on m² and that could result in m³.

\$200-\$400 WORKING PART TIME OR FULL TIME at home. No experience. National company. For information, send a stamped self-addressed envelope to : D.S., Dept. H, P.O. Box 5, Cherry Valley, MA 10524.

ROOM AVAILABLE for male foreign student. Quiet room in family home. 51 1/2 Howland Terrace, off Newton Square. 757-4028. \$175 rent, includes everything (telephone, utilities, kitchen privileges, etc.) Available January, 1983.

DEAR RAW VEGGIE SPORTS, INC. You have annoyed Dr. Death for the last time. Apparently a single nuke was not enough. He is now preparing for your total annihilation. I wish I could help you.

ATTENTION, There will be a meeting of the Royal Order of the Cube at the Corner of Institute and Trowbridge some night every soon. Be there, or be a cube.

AVON PRODUCTS FOR YOURSELF or Christmas gifts for everyone on your list. Please see Lorraine Corey, WPI Mall Room, Boynton Hall, Lower Level.

TO ALL MY PHI SIGMA SIGMA PALS, Thanks for the good time the other night! — Kermit the Frog. P.S. And I won't forget the Mohawk Trail either!

DEAR STEPHEN, Guess who? Its us again and its been a very boring week w/o you know what. Anxiously awaiting your speedy reply, We're the Distraught Freshmen.

FOR SALE — Contact Box 330, \$475, TRS-80 Model I computer, 16K RAM, Level II BASIC, Series I — Editor/Assembler. Complete with video, monitor and cassette recorder.



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Christmas vespers to be performed

On this Friday at 4:30 in the afternoon the annual tradition of Christmas Vespers will be performed in Alden Hall. This year the WPI Men's Chorus will be aided by the Regis College Glee Club in making this a memorable event for all.

Christmas Vespers is an annual non-denominated celebration in which the WPI community is gathered together in unison in remembrance of this joyous season. During this concert, members of the faculty and student body will read excerpts from the Bible. This year the music will be Ringwald's "The Songs of Christmas." This piece is an inspiring collection of excerpts from all the different carols of the season.

The Men's Chorus looks forward to having all of you there as we celebrate the Coming of the Lord.

CAP open meeting

The Committee on Academic Policy will hold an informational meeting to discuss possible changes in the undergraduate academic program on Monday, December 13 at 5:30 p.m. in Kinnicutt Hall. This meeting is open to all faculty and students at WPI. CAP will briefly review its work to date, but the major purpose of the meeting is to provide an opportunity for the WPI community to exchange comments and suggestions which will assist CAP in formulating its recommendations.

As announced at the close of the last academic year, CAP is conducting a broad review of the WPI Plan. Initial emphasis has been on the natural science education of our students, but essentially all other aspects of our program have been discussed, or no doubt will be brought up in the future.

We expect that the implementation of some sort of natural science requirement will very likely be integrated with other major or minor educational changes, all of which must be considered together. To date the only formal action taken by CAP is an internal resolution that CAP considers the natural sciences to be "important enough and currently neglected enough to merit a place in the requirements in the programs of all students."

In addition to comments at the meeting, written suggestions to any CAP member before or after the meeting are welcome. CAP members are: V. Blue-mel, R. Bolz, W. Grogan, J. O'Connor, J. Orr (chairman), R. Pryputniewicz, P. Skerker, R. Thompson, D. Weinshenker, D. Woods.

OGCP WORKSHOPS

Tuesday, December 14
Kinnicutt Hall

Juniors

5:00-6:00
will cover resumes
and summer job
search

Seniors

6:00-7:00
general question
and answer
period will
be conducted

CALENDAR

Here is a calendar of upcoming events important to the Plan re-evaluation process. They are opportunities to become more aware of current discussions concerning this issue and to present your input. These are not all the events that will be going on — see the CCS bulletin board for additional dates and information.

Date	Time	Place	Event
12-13-82	4:00 PM	TBA	CAP Open Forum
12-16-82	4:05 PM	Kinnicutt Hall	Faculty Meeting
1-25-83	—	—	—
2-8-83	—	—	Student proposals in the final stages
2-17-83	4:05 PM	Kinnicutt Hall	Faculty Meeting
3-10-83	4:05 PM	Kinnicutt Hall	Faculty Meeting
5-19-83	4:05 PM	Kinnicutt Hall	Faculty Meeting

*All data subject to change, see CCS bulletin board for updates.

Fiddes get tourney MVP Philpot 6th player to hit 1000 points

Clark recaptures city tourney

by David P. Tormey
Newspeak Staff

The WPI Engineers bowed to the Clark Cougars 88-76 in the final round of the second annual Home Federal Savings Worcester Four Tipoff Tournament held at Clark University on Saturday night. The Engineers, who are now 2-2 on the season, were keyed by the play of sophomore guard Gregg Fiddes and

second half, but the Bisons from Nichols wouldn't give in. With just seconds remaining in the game the Bisons moved within 3 points of WPI and were threatening to score again when Fiddes made a key steal and put Nichols away for good.

Earlier in the week WPI split two games as they lost their opener at Yale

SPORTS

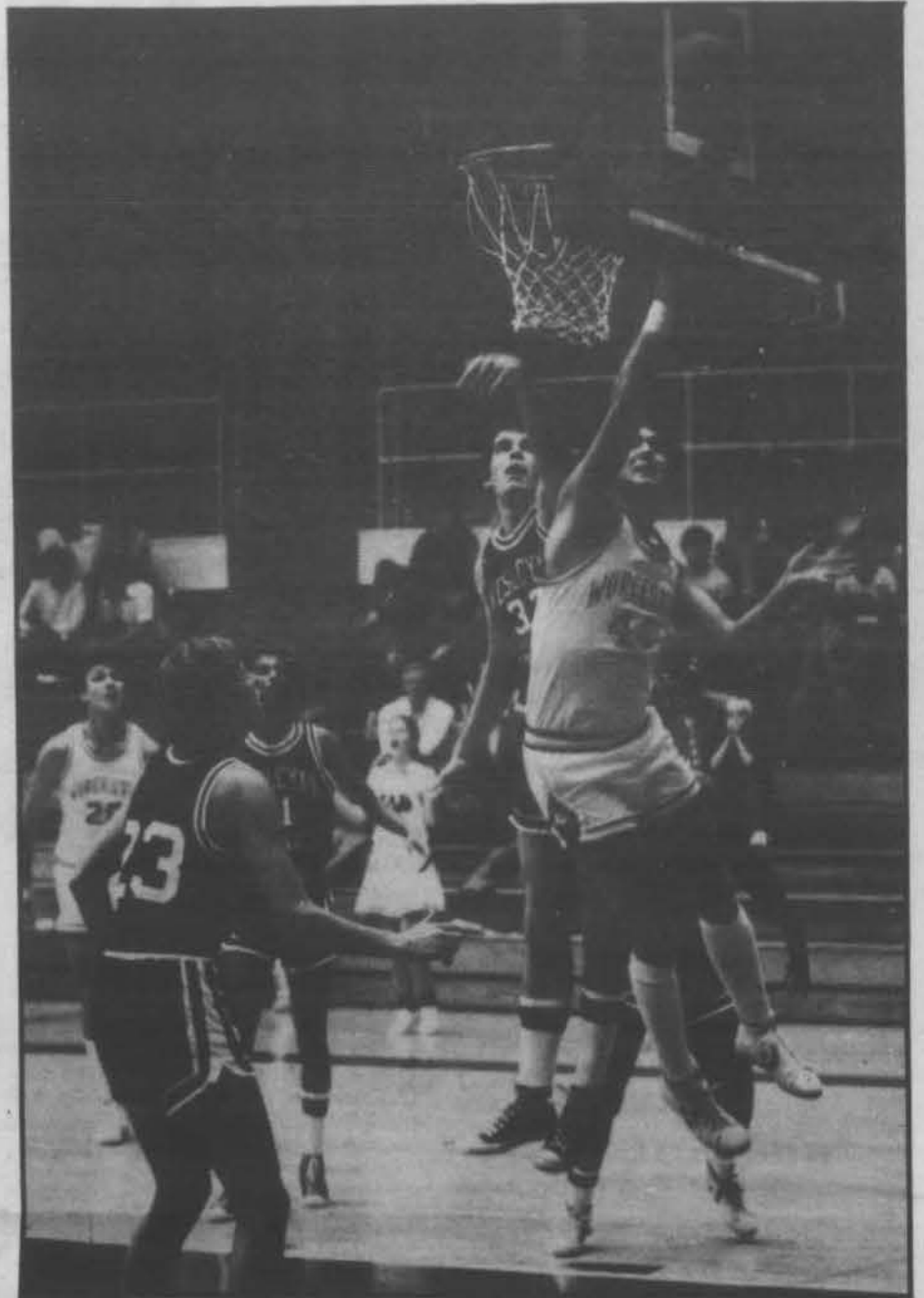
maintained a small lead until Clark took charge at 9:48 in the first half. At this point the Cougars powered past WPI and at the half Clark was up by 11 points. In the second half WPI staged a small comeback on an offensive attack led by Fiddes, Orville Bailey, and Tri-Captain Jim Petropulos, but Clark only let the Engineers come within seven as they stole the tourney title from last year's winners. The difference in the game proved to be Clark's ability to handle the barrage of fouls (60 in all) called against both teams. Clark's tremendous strength on the bench allowed them to substitute liberally and avoid individual foul trouble while five WPI players fouled out in the game. Fiddes led all WPI scorers with 20 points and captured the tournament MVP award. Bailey and Petropulos contributed 16 and 13 points respectively to the Engineer's cause.

On Friday night WPI beat Nichols College 75-72 to make their way to the finals of the tournament. Greg Fiddes' 27 points, Russ Philpot's 16 (to make him the 6th player in WPI history to hit the 1000 points in a career mark) and Chris Roche's 12 paved the way for WPI's win. The Engineers looked as though they would win as easily as expected as they led by as many as 12 points in the

but came back to Worcester to take their first win from Wesleyan in Harrington Auditorium on Wednesday night. The Engineers were supposed to have a tough time with Division I Yale, and they did, but despite the 99-81 score WPI played fairly well. Orville Bailey (24 pts.) and Russ Philpot (16 pts.) were the leading scorers for WPI while reserve center Reynold Dodson scored 10 points and grabbed 10 rebounds all in 14 minutes of playing time.

In the Wesleyan game WPI led almost all the way as they won a hard fought battle 65-54. The Engineers' full court press forced many Wesleyan turnovers and probably made the difference in the game. As for individual leaders, Orville Bailey and Russ Philpot each had 15 points followed by Greg Fiddes who had 11 total points. It was an exciting 3 point game until Wesleyan began to panic in the last minute of play and began to intentionally foul in hopes of getting the ball. The Engineers connected on most of their foul shots in the last minute to account for their 11 point win margin.

Overall it wasn't a bad start for WPI, and the team hopes to get another NCAA bid like they did last year. The next game is this Wednesday at 8:00 p.m. against Babson at home.



Jim Petropulos slips in for the layup.

— Mike Roush.

...WPI journal summary

(continued from page 11)

tion to a more traditional approach and that it was worth the extra work. Outside observers noticed a maturing of the faculty above that of most other institutions. Recruiting personnel from industry noticed that WPI students were better educated, more aware of the world, and in general better prepared for their career than students from other schools.

During the first three years of the Plan, a blue-ribbon National Science Foundation Panel monitored the implementation of the Plan. All the members praised the Plan for the education it was giving both the students and the faculty. They were also amazed at all the effort put in making the Plan a success.

Up until 1968, WPI was a traditional

engineering school. The movement of creating the Plan started with a drive for faculty tenure in 1968. This was the first major accomplishment initiated by the faculty in the history of the college. Later a committee to modernize the freshman curriculum was formed, and they recommended major changes for freshmen and sophomores. Dissatisfaction of the faculty with the educational process led to several other committees being formed to look at engineering education in general. These committees produced four reports, The Future of Two Towers Volumes I-IV. These reports investigated the educational system, and volume IV provided the base for what is now called the WPI Plan. A brief summary of these four reports are included in this newspaper issue.



NUMBER TWELVE!!
TECHNICAL FOUL!!!



When you're discussing something as important as your future, it's urgent that you get the straight facts . . . and that you understand them. Air Force ROTC can be an important part of your future. We would like to outline some of the facts and invite you to look into gathering more.

It's a fact: the Air Force needs highly-qualified, dedicated officers . . . men and women. It's a fact: we need people in all kinds of educational disciplines. It's a fact: we're prepared to offer financial help to those who can qualify for an Air Force ROTC scholarship.

Get together with an AFROTC representative and discuss the program. We'll give you all the facts. It could be one of the most important talks you've ever had with anyone about your educational plans.

Contact: Major Joe Pollicastro 793-3343

AIR FORCE

ROTC

Gateway to a great way of life.

WPI wrestlers dominate season's opener

by Joe Grimes
Sports Editor

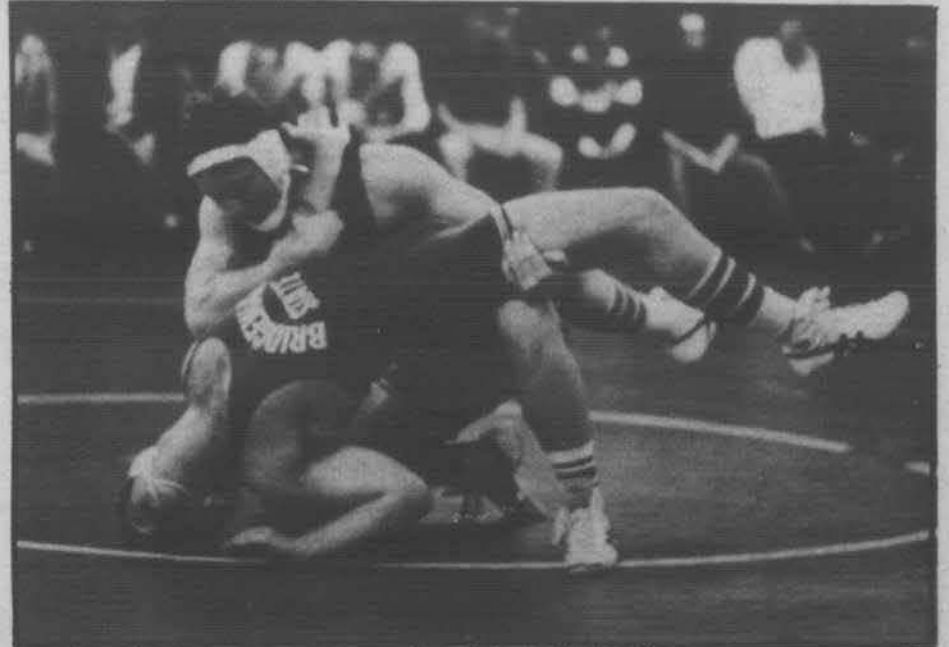
The WPI Wrestling Team had complete control as they rolled over Norwich 40-6, and shutout Bridgewater State 50-0.

Rich Testa and Roland Marquis wasted no time against Norwich as they both pinned their opponents in the first period. Jeff Horowitz won easily 13-7 and Greg Langer defeated Bryce Collins 7-2. Collins was 4th in New England last year. Paul Wyman won a close decision over Bob Goodman and Stu MacEachern returned to the WPI lineup pinning his opponent in 34 seconds. Co-captain John Atkinson returned to the lineup, after missing most of last season, and won easily 13-5. Co-Captain Mike Thorn, with his usual intensity, crunched his opponent in 2:06. Bob Schwartz won 11-7 and Rick Boosey suffered the only WPI loss.

Against Bridgewater State there was no letting up and WPI continued their domination. Freshmen Bob Soares and Lance Hall both won superior decisions winning 15-0 and 17-5 respectively. Jeff Horowitz pinned Chris DeSantos one minute and 27 seconds into the first period. Freshman John Dahill and sophomore Paul Wyman both won easily. Stu MacEachern finished a tough day receiving a forfeit. John Atkinson collected his first pin of the season posting another first period pin. Mike Thorn won 10-4 and George Duane and Rick Boosey finished the match in a hurry with pins.

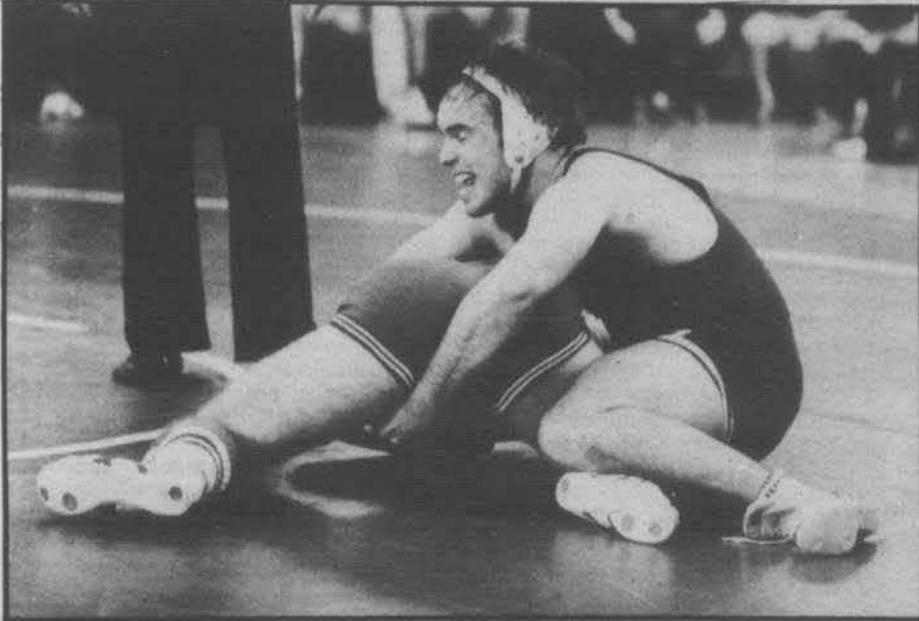
The return of John Atkinson and Stu MacEachern has helped solidify the WPI attack, along with a good crop of talented freshmen. It looks like another fine year for the WPI matmen.

The next home match will be on Wednesday, December 15 at 7:00 in Alumni Gym against Brown University.



Co-captain John Atkinson works for the pin.

— Eric Soederberg.



Co-Captain Mike Thorn controls his opponent.

— Eric Soederberg.

Shot put record broken

Scott Farber, a Junior from Randolph, Ma., broke his existing WPI Shot Put record with a toss of 51' 1.25" at the Tufts meet Dec. 1. The old record was set by Mark Dupuis at 49' 3.5" in 1972.

**CONGRATS,
SCOTT!!**

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at the new Margaritaville



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Worcester Polytechnic Institute Faculty Elected Committees 1982-1983

Secretary of the Faculty

R. F. Bourgault..... WS 305

Committee on Academic Operations

W.B. Miller..... SH 202e
G.E. Stannard..... AK 204
K. Ljungquist..... SL 14
R.A. D'Andrea..... KH 202a
J.E. Miller..... SL 330
D. Dibiasio..... GH 123
R. Long, Ex-Officio..... Registrar
W.R. Grogan, Ex-Officio..... Boynton Hall, 2nd floor

Committee on Academic Policy

R.J. Pyrputniewicz..... HL 122b
D.W. Woods..... SL 238
J.A. Orr..... AK 306
R.W. Thompson..... GH 119
V. Bluemel
J.T. O'Connor
R.E. Bolz, Ex-Officio..... Boynton Hall, 2nd floor
W.R. Grogan, Ex-Officio..... Boynton Hall, 2nd floor

Committee on Student Advising

M.M. Hardell..... AK 020
D.M. Wolaver..... AK 305
R.J. Austin..... WS 211
P. Jayachandran..... KH 117a
P.R. Christopher..... SH 305b
W.R. Grogan, Ex-Officio..... Boynton Hall, 2nd floor
R.F. Reeves, Ex-Officio..... Daniels Hall
J.P. van Alstyne, Ex-Officio..... Boynton Hall, 1st floor
R.R. Borden..... HL 116

WHAT'S HAPPENING

Tuesday, December 7

Happy Hour Entertainment featuring "The All Cotton Band" in the Pub, 4:30 P.M.
Cinematech Film Series presents "Diva", Alden Hall, 7:30 P.M.
Weekday Mass, Religious Center, 10:00 P.M.

Wednesday, December 8

WPI Stage band & Jazz Ensemble Concert, Wedge, 8:00 P.M.
Varsity Basketball vs. Babson, 8:00 P.M.

Thursday, December 9

Photo Sale in the Wedge, 9:00 A.M.-5:00 P.M.
Coffeeshouse Entertainment, Wedge, 9:00 P.M.

Friday, December 10

IEEE 1983 Officer Elections, AK218, 4:00 P.M.

Sunday, December 12

Evening Mass, Alden Hall, 10:00 P.M.

Monday, December 13

Women's Basketball vs. Western New England, 7:00 P.M.

Tuesday, December 14

Varsity Basketball vs. Amherst, 8:00 P.M.
Jewelry Sale in the Wedge, 9:00-4:00 P.M.
Weekday Mass, Religious Center, 10:00 P.M.
EE Dept. Holiday Party, AK south entrance, 4:15 p.m. All EE faculty and students welcome.

...NSF and the Plan

(continued from page 11)

although all visited for three days in November and April. They interviewed students, faculty, and administration, candidly or appointed. They had access to any documents they wished and they could go anywhere they wished. They attended meetings, classes, and sporting events. After each visit they submitted a report to WPI and the NSF.

Overall, everyone was very impressed by the efforts put forth by Dean Grogan, President Hazzard, Dean Bolz and the others in giving life to and implementing the Plan and expressed gratitude at being chosen to participate in "a very exciting project." Each felt the projects were an excellent tool and expressed concern that their quality might drop in later years. They felt that the workload on the faculty might increase and quality projects would be sacrificed for quantity projects.

Cost was another major obstacle to

the future of the Plan, the panel consented and warned WPI of the possibility of unconscious corner cutting due to cost.

Objective grading, with its complications inherent in the original pass-fail system was highlighted repeatedly. Again, project work was agreed upon as a built in check.

Opinions on the comp were divided. Some saw it as a viable measure of competency and feared a comprehensive exam; others felt it should combine both a broad and focused test of knowledge and reasoning. All opinions were supported well.

Can the Plan work elsewhere? All said yes, parts of it are exportable while others couldn't be. The project oriented structure was agreed to be applicable to all schools, but the calendar and comp were seen as unique to the WPI community with its extreme dedication and commitment.

...IQP defined

(continued from page 11)

individual project is highly diversified. Each student, with the aid of his academic advisor, will initiate a series of steps suited to his individual learning basis; different methods of preparation are expected for the various projects. Emphasis on the judgment of values and the integration of diverse disciplinary elements is vital.

Some of the main objectives of the IQP include:

1. To create an awareness of socially related technological interaction.
2. To enable the identification of socio-technological systems, subsystems, and the linkage between them.
3. To develop and integrate the skills of evaluation and analysis in the societal, humanistic, and technological disciplines.

4. To encourage the recommendation of policy.

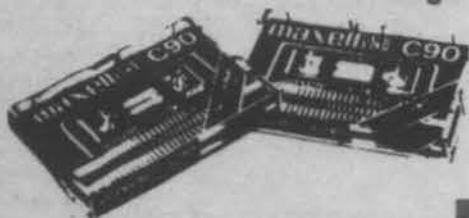
The basic types of projects include: the problem solving type, the experiential field work type, the theoretical type where students propose new models or develop existing ones, and the historical-study type which traces the interaction of scientific development. Each of these different examples will attempt to assess some or all of the objectives of the IQP.

I would like to ask all students who have yet to complete this requirement to do some further research into the basic ideas expressed, because it should be kept in mind that today engineers are being held increasingly accountable for the consequences of their decisions.

OK WORCESTER... THE JOKE'S OVER.

Now For A Real Stereo Sale!

Trolly Stereo's Warehouse Sale



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UDXL II C90
\$2.55 EACH

LOWEST PRICES ON...

AKAI . TOSHIBA . SONY . AIWA . TDK . MAXELL
AR . HITACHI . SANSUI . DISCWASHER
JVC . TECHNICS .

TAPES

Maxell UDXL II	\$9.55/each
Maxell UDXL IIc	3.45/each
TDK SA-C90	9.99/each
Maxell T190	9.75/each
Maxell HGR190	11.99/each
Fujitape T190	8.75/each includes \$2 rebate

TAPE DECKS

Hitachi DE-11	\$149.95	\$86.00
JVC KDD10	160.00	88.00
JVC KDD30 Dolby B & C	215.00	145.00
Alcal GX-F31 Dolby B&C	299.95	198.00

WALKMEN

MURA AM/FM	\$99.00
TOSHIBA KT-53 FM/CASSETTE	79.00
SONY WALKMAN III	95.00
AIWA HS-J09 AM/FM CASSETTE RECORD DOLBY AUTO-REVERSE	139.00

ACCESSORIES

DISCWASHER RECORD CLEANING SYSTEM	\$9.99
PERFECT PATH CASSETTE CLEANER	\$5.00
ALLSOP 3 TAPE HEAD CLEANER	\$7.00
MONSTER CABLE	\$.45 ft.
ALL DISCWASHER ACCESSORIES AVAILABLE	

RECEIVERS

Technics SA-104 20 watts/channel	\$190.00	\$119.00
JVC RK10 20 watts/channel	\$210.00	128.00
Sansui RT-45 watts/channel	390.00	188.00
Sony STRVX4 40 watts/channel	430.00	283.00
JVC RX280 70 watts/channel	570.00	399.00

TURNTABLES

JVC LA-10 semi auto, belt drive	\$105.00	\$68.00
Sansui FRD-25B semi auto, belt drive	180.00	79.00
Sansui FRD-35B semi auto, direct drive with cartridge	290.00	99.00
Technics SL5 linear tracking	300.00	126.00
JVC QLA51 quartz lock, direct drive	290.00	139.00

WPI

SPECIAL OFFER

Maxell UDXL II C90

\$1.49

Trolly Stereo
139 Water St.
Worcester, MA
756-2422

Limit one per customer
Unlimited quantity
at \$2.55

SPEAKERS

Acoustic Research 185 9 way	\$119.00/each	\$69.00/each
Acoustic Research 385 3 way	189.00/each	109.00
Acoustic Research 935 3 way & side firing woofer	999.00/each	185.00/each

Open
Saturday: 12/11, 12/18 9 till 9
Sunday: 12/12, 12/19 9 till 6

139 Water St., Worcester
Exit 13 off I290, off
Kelly Square
756-2422

All merchandise with full manufacturer warranty.



VISA