

Chancellor Duffey in an attempt to show their intentions of negotiating in good faith for the reinstatement of students. They received a response on Saturday which they understood promised the reversal of all disciplinary actions against protestors. A meeting was set with members of the Administration for Monday morning to begin the process of reinstating the students. The hunger strike was ended believing that the goals had been met.

Many of the hunger striking students discovered that their parents had received calls from Chancellor Duffey Friday night. He told the students' parents that their sons and daughters' safety against right-wing backlash could not be guaranteed.

When the students who had been involved in the hunger strike met with Vice Chancellor Jim Langly Monday morning, they were advised by him not to sign any agreement with the University Administration that stated that they would perform community service in retribution for their actions. Any statement of this kind could be used as an admission of guilt in the students' trials scheduled for the fall. The students then met with Dean of Students Jo-Anne Vanin who presented them with a contract which they were told they would have to sign to be reinstated. The contract stated that the students must perform community service and/or pay fines in retribution for their actions. The student maintained their innocence and refused.

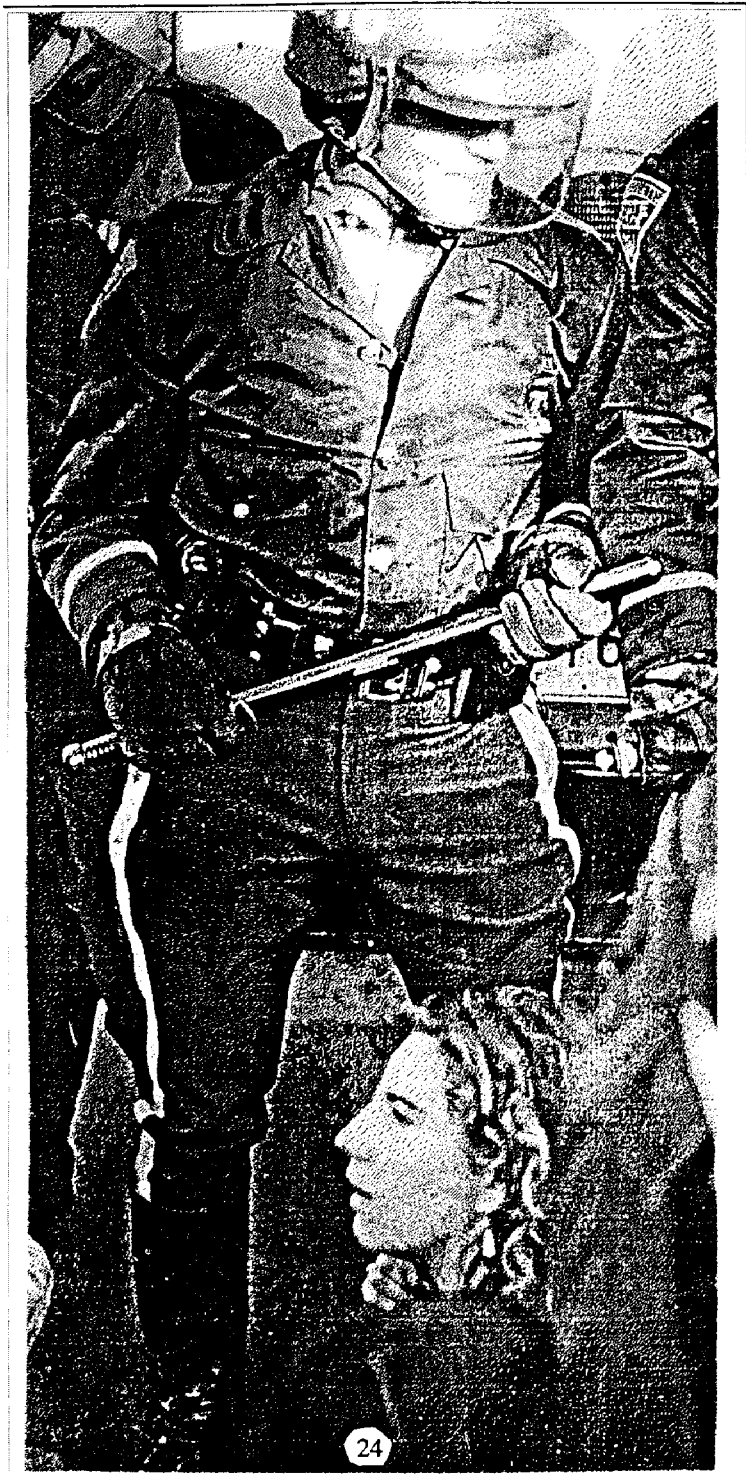
A rally against Department of Defense funding and research at the University is planned for noon on Wednesday, May 17 at the Student Union steps. A second rally to support Tim Savegeau, the political prisoner being held on \$10,000 bond for trespassing charges, is scheduled for 2 p.m. in front of the County Court House in Northampton.

Civil suits are being prepared against the University of Massachusetts for its use of the interim suspensions. This case is being prepared by several lawyers, including lawyers from the Center for Constitutional Rights. This summer PSRU will be continuing its research into the military contracts at the University, and they will be working with experts on economic conversion to create a feasible plan for shifting to civilian funding sources.

A national conference on these issues is also being planned for the fall.

Chapter 2

Beginnings



24

Whatever did they hope to accomplish?

Owen Broadhurst

I

Young policemen in riot gear
Clutch your baton
And grimace in fear

Three hundred are mobilized
Fear me

Your phallus is
Power
Security
Rub it and swing it
As students scream

You're nervous
And damn well ought to be

You're just another demon to me

25

II

So many demons
In my head

I can no longer sort one from another

Walking back from a hearing
On anthrax in town one night
I'm scared of my shadow
Leap at every noise
In fright

A SERIES OF CALLS
People know that I'm involved
"I'll tear you limb from limb."
"...get your damn head shot off."

Some women called
To laugh and laugh
And then hang up

I'm freaking out
I'm losing my mind

I need a friend I can
Hold or just talk to

I can't even sleep
I
Need
Somebody, please, that I can talk to

III

Feels so good
I wish that it wouldn't end
But one can only hug
Or rub your back so long
And then you're scared again

She was tired yet wired
Her duties meant she couldn't sleep

Everyone was a nervous wreck
After that evening's
Confrontation with the police

So many chanting, singing
Playing games
Ignoring the lies
And policemen's mind games

Everybody cared and
Was family
There was always a friend
Always there for me

Tired and cold
Nervous and scared
She talked to me then rubbed my back
And I momentarily
Forgot my fears

IV

I wonder what "public safety" means?
To beat or scare the shit out of me

Broke down on three people's shoulders
That day
When I heard someone was clubbed in the head

Madson's secretary said all were
Horrified
But it was Madson
Among others, who reeled them in

Financial, imperialist interests
That's all
Was the sole concern of UMass in bringing in the cops
And the cops no less brutal
Than people
Who won't even talk to us

V

What was it
I wonder
They were trying to prove?

Whatever did they
Hope it could
Accomplish?

Suspensions as a
Tactic
Backfired on them

Conti's office will not be the last

It is a scared
Oligarchy
That overreacts
When confronted with the student movement

In a nuclear war there can be only one mistake

Jack Beatty

In a nuclear war there can be only one mistake. There is no time for two. If to err is human, what does this possibility mean to our humanity and our human-ness?

Since 1981 the USA has spent \$2 trillion on defense. That works out to \$743 million per day, \$31 million per hour, \$516,000 per minute and almost \$9,000 per second. They have spent \$27 billion on the B-1 bomber; \$16 billion on the MX missile; \$19 billion on the Aegis cruiser; \$13 billion on the Trident II missile; \$13 billion on Star Wars research. The average American household has contributed \$21,000 over the past seven years to the defense budget.



THE CIA IS COMING TO SPRINGFIELD!

RALLY:
DIRECT ACTION: Monday, November 9
Tuesday, November 10

Say **NO!** To the C.I.A.

After being chased off the University of Massachusetts campus and out of the Pioneer Valley last year, the Central Intelligence Agency (CIA) is coming to recruit 5-college students to assist them in their policy of rape, torture and murder in Central America, Southern Africa and around the world.

This past summer's Congressional Iran/Contra hearings, feeble as they were, clearly demonstrated what we in the Valley learned from the CIA on TRIAL in Northampton last April: that the CIA is responsible for the murder of thousands of innocent people, their policies are illegal under domestic and international law, and they are unaccountable to Congress and the American people.

The CIA's role in forming, training and arming the Contras in Nicaragua is only the most visible aspect of a policy of death and destruction that reaches to the farthest corners of the earth. The CIA is presently arming and training two "contra" armies aligned with the apartheid government of South Africa in their attempts to overthrow the governments in Angola and Mozambique.

Because of the massive mobilization of students, faculty and community members last year the CIA has chosen to avoid the 5-college campuses. They will conduct their recruitment sessions twenty miles away in Springfield. They think they will be free from our scrutiny there. **THEY ARE WRONG!** We will follow them wherever they go until they end the death and destruction and respect our constitution!

(4/3)
FOR MORE INFORMATION: Marc 253-7109

(4/3)
Apple 367-9352



Quiet year follows takeover at UMass

By GARY FRANK

AMHERST — Student occupation of the New Africa House at the University of Massachusetts ended a year ago this past Friday with university officials agreeing to address, more vigorously, the issue of racial tensions.

Although the passing of a single year may be too soon to judge what progress has been made, the campus appears to have avoided the sort of violent racial incidents which prompted the takeover.

But the extent to which the goals agreed upon by UMass Chancellor Joseph Duffey and the student protesters have been implemented, is a matter of some disagreement.

"Right now, you can't see much change," said Lori Edmonds, president of the Afrik-Am Society.

Edmonds, a senior majoring in political science, was among the 100 black and Hispanic students who occupied the four-story brick building in the university's central residential area on Feb. 12, 1988, in protest of two incidents from the week before.

In the most serious incident, two black men accompanying a white woman were assaulted by six white men.

The day before that incident, it was reported that UMass police randomly selected blacks for a line-up after receiving reports that some black men had been making racial and sexual remarks in a campus dormitory.

In the aftermath of these events, the students issued a list of demands to Duffey, which the protesters said were aimed at guaranteeing that minority students would be protected from harassment and violence.

The takeover, evocative of campus protests during the 1960s, drew national media attention to the state of race relations on the campus of the commonwealth's largest public university for the second year in a row.

In October 1986, Yancey Robinson, a student from Springfield, was beaten unconscious by white students during a fight after the

Continued on Page 4

Changes at UMass sparked by protest

Continued from Page 1
World Series.

According to terms of the settlement which ended the occupation, university officials promised to:

- Modify the student conduct code allowing for the immediate suspension from the university of students accused of racial violence or harassment.

- Provide space for student clubs, a computer center and cultural-events funding for the New Africa House, which would also receive top priority for renovations and repairs.

- Ensure that classes dealing with multi-culturalism have priority at the New Africa House, where other humanities courses are also being taught.

- Lobby for more state funds to strengthen student, staff and faculty recruitment and minority support services, and to raise the salaries of minority teaching assistants.

- Seek private funding to support a scholarship fund in honor of the late author James Baldwin, who was a visiting Five College professor in creative writing before his death in 1987.

Edmonds said more minority students had applied for admission to the university this year than ever before. Even so, she said, a smaller number actually wound up attending, a fact which was corroborated by university officials.

According to Timm Rinehart, director of undergraduate admissions, the number of minority students applying to UMass last year increased by 40 percent over the previous year. Of that number, the university accepted about 25 percent more minority students than the year before, but the number who wound up attending actu-

ally decreased by one to 367, or about 9 percent of this year's freshmen class of 4,050.

Edmonds said the publicity surrounding racial tensions on campus likely played a large role in keeping those students away.

"It probably scared a lot of people," she said, "And they decided to avoid the turmoil."

Rinehart said a survey of those minority students accepted who decided not to attend UMass indicated that was true, but he also felt other factors had an effect on minority enrollment.

"It would be easy to use it (racial tension) as an excuse," said Rinehart.

* * *

There is an incredible competition for minority students among colleges and universities, said Rinehart, and UMass "doesn't do as much to support minority students" as other centers of higher education. The admissions director said the university has consciously increased academic standards for minority students in the past few years because it was felt too many were failing to graduate. As a consequence, there is increased competition for more gifted minority students, resulting in a lower yield of students choosing UMass.

"We want to attract as many minority students as we can," Rinehart said. "We are certainly not satisfied with the numbers we have now."

John H. Brace, associate professor in Afro-American studies, said he does not detect anything to cheer about in the university's stance towards minorities since the occupation.

"There hasn't been a big enough shift to say there's been a break-



ANNIVERSARY OF PROTEST — Sabu Barron of New York speaks outside the New Africa House of the University of Massachusetts after protesters took over the building a little more than a year ago. The demonstration ended with the university promising changes.

through," Bracey said. "It's hard to see any change."

Some of the terms of the settlement agreement, such as maintaining the integrity of the New Africa House as a cultural center, are easy to accomplish, Bracey said.

"It's a matter of scheduling really. A simple return to the status quo," he said.

But as far as implementing the other provisions of the settlement, particularly to hire more minority faculty members and to strengthen support services for minority students, Bracey was not optimistic.

"I suspect they'll hide behind the budget," Bracey said.

University officials are grappling with proposed spending cuts because of the state's \$600 million-plus budget deficit. Bracey said the university was "running to hide behind" the deficit excuse, but funding for minority student organizations was being cut before the budget situation worsened.

Edmonds supported Bracey's contention, saying that funding for the Afrik-Am Society had been cut in half over the past four years.

Both Edmonds and Bracey saw some positive changes on the part of at least a segment of the campus' white student population.

"There are more people aware of the seriousness of the racial problems on campus than before," said Edmonds.

Edmonds said a campus "Civility Week" held in late October helped raise the awareness of many white students. One event during the Civility Week, "Hands Across UMass," where several thousand students joined hands from one end of campus to another, showed "how far we've come."

Bracey said the event was a "good sign" that had symbolic value, but much still depended on the priorities of the university administration.

"Preparing students to work for some high-tech company is not the same as teaching to live and work in a multi-cultural environment," Bracey said.

Addressed to the University;

You teach us morality, but we can only apply it when you say it's alright.

You ask us to regulate our behavior, yet when we ask you to do the same, you punish us for it.

You ask us to think for ourselves, and when we do you label us 'radicals' saying we have no right to do what we do.

So now we students, we faculty, and we taxpayers rise in protest, the way you teach us to do. Using the methods you've left us and those we create out of frustration. We tried your 'research and report' techniques, you ignored them. Your 'write letters to the editor' hardly gained us your attention and none of your action. What is left but the active protest, by word of mouth, by song and by peaceful revolution?

Will you continue to respond in anger, and in violence?

Understand that what you do will determine how all of us see you. Will police brutality and cruelty become the normal operating procedure against those who disagree with you? Those who believed you the 'benevolent, paternalistic institution' and those who never questioned the 'rightness' of your decisions, their faith is shaken. They rise with us in protest.

You are not the university. You are individuals. Each of you must now examine your own choices you make. I address this to you, not as an institution but as a conglomeration of people. Each of you is singly responsible for what happens here, today and tomorrow.

Clarinda Rose-Turner

April 30th, 1989

WE SPEAK

600,000 WOMEN FOR CHOICE

A GROUP SHOW OF BLACK AND WHITE PRINTS



An exhibition of Photography with commentary documenting the April 9, 1989 March for Women's Rights in Washington D.C.

Reception will be held between 1:00-4:00
Monday, May 8th UMass/Amherst Student
Union Building, Commuter Area Lounge.

*Refreshments served

A Project of the Feminist Image Action Group (FIAG)
Sponsored by The Commuter Area Government



Pro-Choice March on Washington



Pro-Choice March on Washington

Independent Action

A concerned student

Recently some facts have come to my attention that you may find interesting. I hope that you will spend the time to read and think about these facts.

- During the 1980's there has been a 2000% increase of direct Department of Defense funding to the university.....
...and in the next ten years?
- 20% of all grants received in 1988 by the university were from the Department of Defense to fund research in the following areas:
 - * Nerve Gas (Chemistry Department)
 - * Infectious Biological Warfare Agents (Dengue-Bio Chem, Anthrax-Microbiology)
 - * Radar Target Detection (MIRSL, Electrical-Computer Engineering)
 - * SDI Research (Polymer Science, COINS)
 - * Computer Guided Battlefield Management (COINS)
 - * Automated Tanks (COINS)
- As funds for higher education are cut and weapons research contracts are increased, faculty and students will encounter increasing pressure to study those topics funded by the Department of Defense.
- A trend is developing to cut non-militarily funded departments as a result of cutbacks in higher education and increases in the "Defense" budget.

Public education is increasingly being funded by the military. At this rate of growth (2000% per decade), our public education will quickly become an instrument of the military.

I can understand that the university is facing severe cutback (and why is that?), but I have a fear that our university is literally being bought by the Department of Defense. One can only wonder where this will lead to if the current trend is not brought to public attention. I hope you will think about this and discuss it with others.

A Concerned Student

The dog wags the tail

UMass Alumni Office Fundraisers

POTENTIAL CAMPAIGN PROJECTS

Science and Technology Components

1. Polymer Science Building, \$2-4M
Prospective donors: General Electric Company, Monsanto, duPont, Shell, Exxon, Westinghouse, Atlantic Richfield, American Cyanamid, Dow, Allied-Signal, others
Prospective corporate advocates include Joe Wirth (G.E.), Frank Silver (Monsanto), Lou Kaminsky (duPont)
2. Microwave Engineering Building, \$1-3M
(Engineering Resource Building/Marcus Connector)
Prospective donors: Digital, AT&T, Hewlett-Packard, Raytheon, Analog Devices, GTE
3. Upgrade of Studios and Control Room for Video Instructional Program, \$900,000
Prospective donors: Scientific Atlanta, M/A-COM, Hewlett-Packard, Tektronix, AT&T, Digital, National Semiconductor, General Motors, IBM, Raytheon, Prime Computer, General Electric, Mitre, Polaroid, Monsanto, Honeywell/Bull, Lockheed, ITT, GenRad
4. Minority Engineering Program
Prospective donors: AT&T, Raytheon, Mitre, Monsanto, General Electric, Digital, Kodak, Northeast Utilities, United Technologies, duPont, IBM, Polaroid, Prime Computer, GTE Labs, Raytheon
5. Renovations or new construction for COINS
Prospective donors: Amoco Production Company, Avco Research Laboratory, Inc., Digital, FMC Corporation, General Electric Company, GTE Labs, IBM Corporation, Lockheed Georgia, Monsanto, Texas Instruments, United Technologies/Hamilton Standard, United Technologies Research Center, Sanders Associates, Honda Motors of North America

2

6. Fellowships in the sciences and technology field
Prospective donors: firms that recruit or sponsor research
Other prospective donors: David Beaubien '57 (100K)
Benedict Galas '51 (50K)
and other affluent alumni
7. Visiting Lecturers
Prospective donors: firms that recruit or sponsor research
Other prospective donors: Joseph S. Jorczak '32 (50K)
Marie B. Kelleher '42 (25K)
and other affluent alumni
8. Faculty Development
Prospective donors: Nicholas A. Boraski '50 (25K)
Donald A. Parks '60 (100K)

Other Potential Campaign Projects

1. Stockbridge School Administration building, \$750,000 est.
Prospective lead gifts: John Davis (10K)
James Mulcahy (10K)
and other unidentified Stockbridge alumni
Other donors: Stockbridge alumni
2. School of Management renovations and computer center, \$1.7M
Prospective lead gifts: Robert J. Crowell '77 (1M)
Richard P. Dieter '66 (15K)
Melisande Flavin (100K)
David Ganz '55 (1M)
William T. Golden (50K)
Francis J. Guiliano '59 (50K)
David G. Hunter '68 (15K)
Frank Nesvet '65 (50K)
Gordon N. Oakes, Jr. '63 (50K)
Ralph H. O'Brien '52 (100K)
Frank R. O'Keefe '51 (50K)
William W. Smith '76 (100K)
other SOM alumni
Other prospective donors: firms that recruit or sponsor research

3. Minority Business Program

Prospective donors: firms that recruit or sponsor research

4. Institute for North American Trade and Economics, \$1M+

Prospective donors: Business Fund for Canadian Studies in the United States, William H. Donner Foundation, McConnell Foundation, Hydro-Quebec, other corporations and foundations in U.S. and Canada

5. Fellowships in other fields

Prospective donors: James Carlin (1M)
William H. Cosby, Jr. '72 (1M)
Paul F. Cronin '55 (100K)
Michael K. Flanagan '75 (100K)
John P. Flavin '59 (15K)
Robert D. Gordon '48 (100K)
Stephen J. Paris '60 (50K)
Richard E. Scarafoni '55 (100K)
and other affluent alumni and select corporations

6. Visiting Lecturers

Prospective donors: Paul F. Cronin '55 (100K)
William G. Dunn '50 (100K)
Robert D. Gordon '48 (100K)
Richard J. Mahoney '55 (1M)
Edward M. Swartz '55 (100K)
Arthur M. Winn '61 (100K)
and other affluent alumni and select corporations

7. Chapel Restoration

Prospective donors: Dorothy D. Gavin '43 (50K)
and primarily older reunion classes and some affluent alumni

8. Faculty development

Prospective donors: Lynn A. Benoliel (100K)
Dr. Edward P. Marram '59 (1M)
Barbara Richmond (50K)
Karen F. Stone '74 (100K)
Catherine Tremaine '71 (50K)

August, 1988

Death Research at UMass

US Department of Defense

-1-

The following pages highlight a small part of U.MASS research funded by the Defense Department. We attempted to make this document as readable as possible, although the complexity of the D.O.D. language made this nearly impossible. The information is organized by department and provides the researcher's name, title of the project, stated objectives and military applications. All information obtained through Pentagon "work unit summaries" and various funding proposals initiated by U.MASS researchers.

ELECTRICAL AND COMPUTER ENGINEERING

Professor Conner, W.C. Project - "Infraband Laser Assisted OMVPE" [organometallic vapor phase epitaxy] growth of III-V semiconductors.

Relevance-millimeter wave radiators for high-speed signal processing, missile seekers, mini-radars, and secure communications. Mission Areas-communications, fire support, aviation.

Professors Stephan, K.D. and Jackson, R.W. Project - "Inter-Injection-Locked Phased Arrays for Monolithic Integration"

Relevance - the munitions/submunitions tracking systems particularly in smart munitions and seeker systems such as AIFS, MLRS-TGW, CSWS, AFSCORS and the MTAS Tank Radar.

Professors McIntosh, R.E., Schaubert, D.H. and Swift, C.T. Project - "Normalized Radar Cross Sections of Natural Surfaces at Millimeter Wavelengths"

Objective-To obtain a scientific database of backscattering of near millimeter waves from snow-covered and vegetation-covered surfaces. Relevance-The clutter problem is the critical remaining problem limiting the use of NMMW [near millimeter waves] to brilliant munitions. The program is highly-relevant to Top Attack and Fire and Forget Systems.

NOTE: Database of terrain to be used as long term memory for artificially intelligent attack system which receives data from microwave scattering. Brilliant munitions mimics the term used in SDI research, "brilliant pebbles," (see New York Times, Science Times, 4/25/89). These are artificially intelligent missiles approx. three feet long which will determine their own attack strategy. Special Note: This research could be linked with research conducted in polymer science (for missile fins and casings as well as vehicle parts), COINS [Computer and Information Sciences] (which develops the processes for artificial intelligence for object recognition, position and trajectory determination, and best possible courses of action through techniques involving hierarchical and parallel programing and cased based reasoning techniques; as well as the autonomous vehicle project, which is envisioned as what the name implies, an vehicle which fights on its own, presumably to be used for intervention in jungle areas (vegetation-covered terrain) and to fight over the rich resources of antarctica and in the northern parts of the Soviet Union (snow-covered terrain).

Professors McIntosh, R.E. and Swift, C.T. Project - "Normalized..."

Objective - Measure the elements of the scattering matrix (of millimeter waves)."

Relevance - This subject is relevant to future Army systems employing M/MW [millimeter wave] radars to detect targets in clutter. NOTE: clutter can be anything which causes microwaves to scatter and ruin the "picture."

Professors Schaubert, D.H. and McIntosh, R.E. - Project "Optimum Radiation of Short-Time

Duration Signals.

Objective - Establish synthesis and design procedures for optimum antennas for the transmission and reception of pulsed signals. Relevance-Army needs in areas of high resolution radar, target identification and high data rate communication. Furthermore, applications are seen in the special areas of high-directed high power microwave beams and electromagnetic heating, E.G., of the ionosphere.

Professor Defonzo, A.P. Project - "Optical Generation of Millimeter Waves."

Objective - research the generation of millimeterwaves with new optical techniques and devices. Relevance - have important applications in command and control and guided weaponry.

Professor Defonzo, A.P. Project - "Ultra-Wide Band Width Modulation of Semiconductor Lasers."

Objective-to develop ultra-wide band optical transmitting technology above 20 GHZ. WHY?-further development of phase locking of radar arrays (a technology which makes the stealth bomber a lot less stealthy); generation and control of MMW [millimeter waves]; ultraband width communication.

MICROBIOLOGY

Professor Thorne, C. Project - "Genetic and Physiological Studies of Bacillus Anthracis." Objective - isolation of a vaccine which can be quickly produced for Anthrax, funded by the Biological Weapons Defense Research Program.

NOTE: Anthrax is a rare disease for which stockpiles of the vaccine already exist. Anthrax is horribly disfiguring and lethal, killing over 90% of those who come into contact with it and its spores can survive in soil for over twenty years. This microbiology lab is supposedly working with "non-infectious" strains of the bacteria one generation removed from the deadly form. Ambiguous knowledge of the environmental impact statement suggests that there is a chance of two of the strains coming together to produce the deadly strain, with no systems set up to deal with escape of the agent from this low security research area.

Special Note:This research is conducted in conjunction with research in agriculture, animal husbandry, and health sciences at the national level which is developing a huge database for use in developing biological agents which target specific plants, animals, and people. The DOD's stated purpose for the research is contradicted when one considers the rarity of the disease and the existing stockpiles of vaccines. Furthermore, there would be virtually no way to inoculate a population against every possible strain of Anthrax which could be developed through gene splicing techniques, as the number of such strains approaches infinity. This means that the only benefit this research has is for the development of a vaccine for a strain which the U.S. plans to use for intervention, inoculating its own troops beforehand.

POLYMER SCIENCE AND ENGINEERING

Professor Thomas, E.L. HSU, S. Project - "Phase Transformation and Formation of Rigid-Rod Polymer Solutions."

Objective - To develop environmentally stable structural materials [materials that maintain their properties over time in given conditions] for use in advanced Airforce aeronautical and

space systems. Must have high strength and stiffness and tailored dielectric properties. Research on the formation of the solid state microstructures in rigid rod polymers [polymers in rod like formations can give the materials desirable structural properties] and their relationship to properties achievable in these emerging high performance engineering materials. NOTE:Such properties include high strength, light weight, high/low conductivity, rapid heat dissipation and low-hysteresis [does not magnetize easily].

Professor Porter, R.S. Project - "Planar deformation of Thermoplastics."

Relevance-can mold thermoplastic missile fins, plastic guns, or wide application in a number of armament systems where heat must be transformed or dissipated rapidly and efficiently.

Professor McKnight, W.J. Project - "Structural Organization and Hysteresis Behavior of Polyurethanes."

Objective - Study the structure-property relationship in polyurethane polymer. Relevance-Army's need for polymeric applications as lightweight structures for aircraft, ground vehicles, and personnel protection. Concerned with the issues of:Aviation (light-strong material), mobility (light), vulnerability (strength, thermal/electrical/hysteresis properties), lethality. NOTE:Magnetic field properties apply to anything which encases electrical components such as tactical radar for guided or artificially intelligent missiles or other autonomous weapon systems, including land vehicles vulnerable to magnetic mines.

Professors McKnight, W.J., Farris, R.J., Hsu, S.L. Project - "Synthesis, Structure, and Properties of Model Segmented Polyurethanes."

Objective-To prepare and characterize a new series of Amorphous [easily molded] polyurethanes which contain monodisperse hard segments [for strength]. Research will lead to an understanding of the relationship between the molecular architecture and physical properties of elastomers.

Relevance-to several military problems including the lens for Army protective Mask [biological/chemical warfare?] and potential use in a similar Airforce model, and understanding of low-hysteresis materials as candidate tank track pad material [defense against magnetized mines].

PHYSICS AND ASTRONOMY

Professors Tirrel DA, Hsu SL, Langley, KH Project - "Micromolecular Control or Structural Organization Within Molecular Film."

Implication for chemical and optical switching. Objective to carry out a comprehensive multidisciplinary investigation of the changes in the structural organization accompany chemical and optical switching processes in mixed molecular films.

Relevance: The research has clear and direct relevance to the NRDEC mission to study the prospects of reactive BioPolymer films. Cited relevance is given to Decon application through information gained on vesicles which can be related to catalytic effects important with micro emulsions. In addition, CRDEC relates the proposal strongly to the NBC [Nuclear-Biological-Chemical] program with sensing and detection.

CHEMISTRY

Professor Holmes, R.R. Project - "Base Catalyzed Nucleophilic Displacement Reactions of Pentavalent Phosphorous."
 Relevance- Relevant to chemical defense, particularly decontamination therapeutic aspects. Studies solvolysis and alkaline cleavage reactions of acyclic and cyclic containing phosphorous esters, halophosphates and phosphonates, thiophosphoryl and phosphoryl pyrophosphate, phosphonium salts, phosphorothidates and strained cyclic phosphonates and phosphates.

Professor Quinn, LD. Project - "Generation of Phosphorous Ester, Phosphorous Amide and Phosphoric Derivatives of Low Coordination Numbers."
 Relevance- Army support of American expertise in organophosphorous chemistry that is not too distantly related to the extremely toxic nerve agents (i.e the hope here is to develop a new improved nerve agent).

Professor Stein, RS. Project - "Neutron Scattering Studies of Degree of Chain Extension of Crystalline Polymers."
 Evaluate and apply neutron scattering methodology and other techniques for the characterization of the degree of chain extension of highly oriented amorphous and crystalline polymers. Compare theory with property of polymers.

COINS (Computer and Information Sciences)

Professor Riseman EM. Project - "Dynamic Image Processing."
 Objective is to develop techniques for the recovery for the effective representation of information. Concerning the physical environment, such as surface distance, extent and orientation relevant to moving observer. Uses parallel programming techniques. Process images from moving terrestrial vehicles and airplanes.

Professor Riseman. E.M. Project - "Dynamic tactile processing."
 Objective is to develop advanced tactile sensing techniques which will significantly increase the speed and accuracy in robot manipulators in performing tasks such as material handling loading of machines. (The latter is relevant to army plan to automate the process of loading shells.) Component of autonomous vehicle project.

Professor Cohen, P. Project - "Theory of Endorsements and Reasoning With Uncertainty"
 Upgrade current experts system technology to meet the real time knowledge processing requirements for C3I systems (Command, Control and Coordinating Intelligence. Specializes in making decisions with incomplete data. Component of autonomous vehicle project.

Professor Towsley, D.F. Project - "Problems in Survivable Multi-Media Networks."
 Hierarchical programming, performing criteria for arraigning optimal flows through the network at the global decision making level and dynamic routing policies (which can change as the problem changes) which implements the flow at the local decision making level.

Professor Lesser, V. Project - "Distributed Problem Solving".
 Complex distributed problem solving will be an integral part of situation assignment system developed for the navy.

Professors Riseman, E.M and Hanson AR Project - "Dynamic Image Interpretation for Autonomous Vehicle Navigation."
 Integrate static scene systems several motion processing algorithms in order to achieve a dynamic scene interpretation system capable of navigation and object recognition. Goals include the ability of a moving robot to distinguish moving objects from the static environment and determine their motion parameters, expert navigational and spatial reasoning systems for path planning and obstacle avoidance and target motion detection and tracking.

CENTER FOR EXCELLENCE ARTIFICIAL INTELLIGENCE

The University of Massachusetts is one of two Department of Defense funded centers of excellence in the country. The Center receives 5 million dollars per annum. The center prides itself on its interdisciplinary nature as it interacts extensively with COINS researchers in Vision laboratory and the laboratory for perceptual robotics and also with the computer systems faculty, the psychology department, the school of medicine and industry labs.

The goals: Basic research in critical areas of AI, which, through collaboration, will be guided by applied problems. Transfer of technology to DOD laboratories. "The credibility of the Center will depend on ... the viability of its products beyond the prototype stage." This hardly appears to be basic research. This research is highly relevant to the army's plan to develop highly sophisticated weapons, tanks and other vehicles.

Technology Transfer- There are three components of technology transfer, Navy/U.Mass fellowships, Navy/UMass Internships and Information Exchange. Navy Fellows receive funding from the Navy in exchange for an agreement that they will work for the Navy for an unspecified period of time after graduation. Fellows are also expected to intern with the navy during their studies.

Navy/UMASS Internships- This component provides for naval personnel to oversee U.Mass projects as "visiting students". The internship also relaxes academic standards allowing students to take whatever courses they want with none of the usual department and graduate requirements. According to the Center these standards allow the interns to "operate effectively in both worlds." It appears that the center has thrown academic standards out the window and in addition is using close ties with the Navy in order to conduct defacto classified research.