

### Digging in

Tons of toxic waste will soon fill this big pit being carved out of the red dirt landfill area here. Initially, two pits are being constructed by the Army to receive DDT waste that will be dug up in various places on the arsenal and re-buried. The pits, lined with

hard-packed clay and tested to make sure they are water-tight, will provide an environmentally-safe disposal area for DDT left on the arsenal by Oli. Chemical Co. when it vacated a leased factory here several years ago.

## No plea bargaining for drunk drivers

It's going to get tougher for those who drink and drive on Redstone.

Specifically, those who get busted and charged with drunk driving are going to be tried for drunk driving and sentenced for it too, if convicted.

R. Macy Taylor, U.S. Magistrate, cleared that point up in a recent official notice sent to federal activities within his jurisdiction.

A regular tactic of attorneys representing individuals in Drunk Driving cases is to attempt to plead guilty to an offense carrying a less severe penalty.

Taylor's notice dated Aug. 30, says this:

"If a defendant is charged with Driving While Intoxicated and the evidence supports that charge, the defendant will be convicted of Driving While Intoxicated. It is the policy of this Court that such a conviction not be modified by attendance at any school."

Also included in the notice: new arrangements for court at Redstone.

Effective Oct. 1, magistrate's court will be held but once a month on the Tuesday following the second Monday beginning at 9 a.m.

# The Redstone Rocket

Vol. XXVIII; No. 19

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September 26, 1979

## Health official says lice fears unfounded

BY DEBBIE GEHLBACH

With school back in session, parents may breathe a sigh of relief — that is, if they're not worrying about their kids contracting a case of head lice.

The fear of head lice has been known to send even the most cool-headed parents into frenzy. And rumors have flourished in the military community about an epidemic of that dreaded infestation. But a check with several schools last week turned up only two reported cases of head lice. The children were both from an arsenal family. School officials said that all other children in their classes were checked, that no other cases were discovered, and that both affected children were treated by their doctor.

Winnie Brown, coordinator of Health Services for Huntsville schools, said this was not cause for alarm for local families.

"It happens every year," Brown said. "At this point, I'm not worried about it."

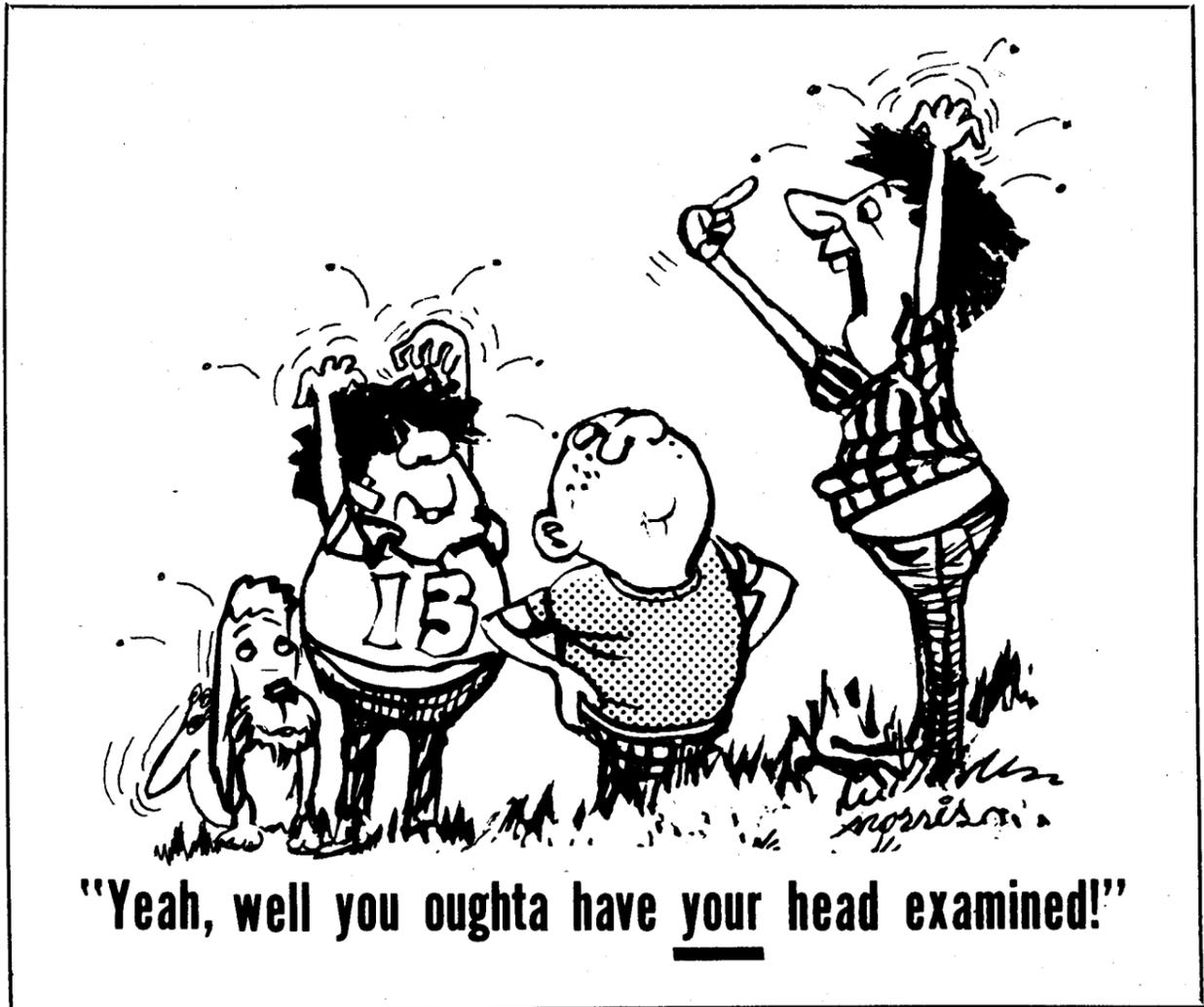
However, Brown urged parents to check their children's heads at home and not depend on the schools to discover the presence of head lice.

"Look in the warm spots on the head — at the nape of the neck and over the ears," Brown said. "That's where they will appear first."

"The lice will resemble very tiny grains of rice and will be attached to the hair follicle," she said. The growth begins on the scalp and grows outward on the hair shaft.

A crawling insect, lice have a life cycle of

(Continued on page 8)



"Yeah, well you oughta have your head examined!"

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not to be considered an official expression by the Department of the Army. The appearance of advertisements in this publication does not constitute an endorsement by the Department of the Army of the products or services advertised.

# Opinion

## On the road to Catch 23

The gas shortage is taking the Army and all its people down a road to a place we've never been before. The future can only be glimpsed, but enough is visible to at least indicate we may have some interesting times ahead.

Consider Catch 23.

Everyone involved with operating an official vehicle can tell you about Catch 22. DA and DARCOM say that you must drive an administrative vehicle a specified number of miles within a specified number of days to justify the car.

Now comes DA and DARCOM with directed cuts in the use of gas for official vehicles.

No gas, no drive.  
No drive, no miles.  
Not enough miles, no car.  
Catch 22.

Further cuts in gas are expected. Soon we may be down to shuttle buses and taxis alone, then perhaps no government transportation at all.

The cuts already in effect have caused a good deal of grumbling and inconvenience to people who must travel on the arsenal to do their jobs. Some offices have resorted to buying the extra gas they need to keep their Army cars.

Bad business, according to the man who called the other day. Self defeating, he said.

Our friend is looking forward with absolute glee to the day when gas for government vehicles dries up completely. He has been using his own car to do his job for some time now and he has been reading Army regulations, specifically the one that covers local transportation for official business.

He has discovered that when government transportation is not available, it may be possible to use his own car for official trips on the arsenal and get paid for it.

That time has not yet come, but it may. He's counting the days.

Catch 23.

—Dave Harris

# Letters

## Too demanding

Editor:

I question the growing practice of local merchants requiring your office telephone number in addition to all other identification for cashing personal checks. I have habitually declined to give the Arsenal number when requested, without incident until Thursday night.

At a discount store in southeast Huntsville, I wrote a check for the amount of purchase and submitted my driver's license and a major credit card as requested. The clerk also asked where I worked and the office number. I responded, as usual, that I worked for the Missile Command but the office phone was for official business and referred her to my home number which was printed on the check. Apparently it was her supervisor who then brought the check back to me and "demanded" the office telephone number. My personal check was refused without the arsenal telephone number.

I have two questions: (1) Is there an official policy that covers this type situation,

or are arsenal employees at liberty to release their office phone number to anyone who asks for it and use it for any personal purpose that is convenient?

(2) How much identification-information can a merchant legally demand before accepting a check in the amount of purchase?

Mary J. Hearn  
Maintenance & Engineering

Technically, it is against regulations to use a work phone number for purposes described in the letter, but the practice is tolerated since there is no practical way to keep people from doing it. As for how much identification can be demanded, it would seem that merchants have a right to demand whatever amount they see fit, just as patrons have a right to refuse to buy from merchants whose demands they find objectionable.

—Editor



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The Rocket is published weekly, on Wednesday. The publisher will receive editorial content for publication in the Rocket through the Information Office, Army Missile Command, Redstone Arsenal, Ala. 35809, Bldg. 5250, Room A-134, Extension 876-1400 or 876-1500.

All advertising copy and payments therefore are received by Mrs. Vergie Robinson, P. O. Box 5351, Huntsville, Ala., 35805, telephone 533-2703, as representative of the publisher. The advertising office of The Rocket is located at 2400 Bob Wallace Avenue, Suite 210. Advertising deadline — both display and wanteds — is 10 a.m. Monday before publication.

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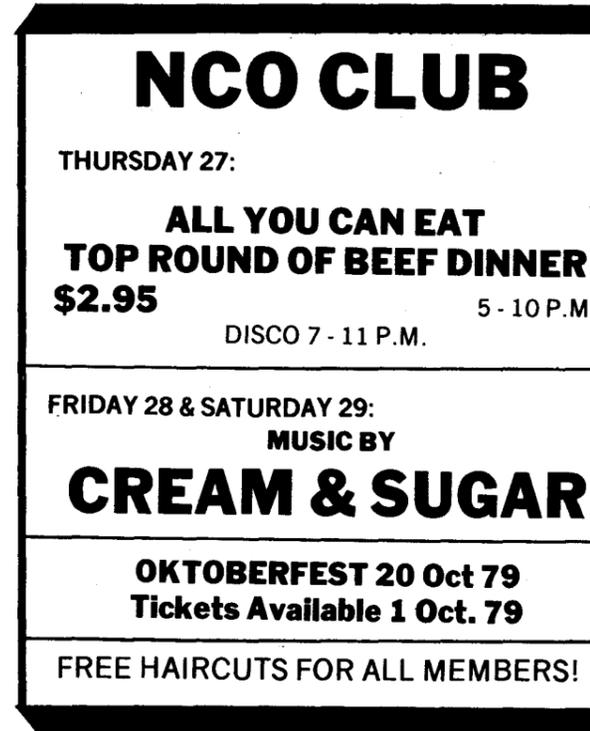
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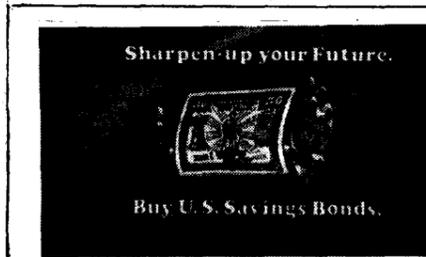
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# 'Psych game'

BY DEBBIE GEHLBACH

"Let's go, let's go, let's go!"

"Move, move, move!"

He sounded like a football coach. Occasionally, he even cupped a megaphone to his mouth. But instead of clenching a playbook in his hand, he carried a billy club. And his players were equipped with a small arsenal of menacing weapons — M-16's, flame throwers, 38's and 45's.

This was no football practice. It was a drill in riot training, part of an annual exercise for the 291st Military Police Company.

The drill lasted for two hours in the warm morning sun as the MP's repeatedly practiced the correct response to commands. In one exercise, they formed a menacing line and, brandishing their weapons, stomped forward by moving one foot and pulling the other to it. They shouted 'Hut!' with each step and left no doubt that they meant business.

"The larger and louder our show of force is, the more tendency it has to suppress a civil disturbance," said Capt. John Long, commander of the 291st MP Company.

"The big thing is discipline and control," Long explained. "It's all a psych game."

Riot training is part of the MP's mission to control civil disturbance on the arsenal. It also included classroom instruction about riot control.



He means business.

# Downgrades go to 27 workers

Approximately 27 individuals at Redstone are receiving notices that their positions have been downgraded due to classification errors or application of new classification standards for their jobs.

Twenty-five of these employees had been notified previously that their jobs were overgraded, but the downgrade action was deferred by a DoD moratorium on downgrades.

Persons who are downgraded normally are entitled to retain grades for two years, followed by indefinite pay retention as long as they stay in the same job. But there are exceptions.

One exception is when the position has been classified at the higher grade level for less than a year. The other is when the person downgraded hasn't served at least a year in higher graded positions. In both exceptions, the person is not entitled to retained grade, but may be entitled to retained pay.

The pay of a person in retained grade is adjusted after two years. If their pay exceeds the maximum amount for their new grade, then they will receive the lesser of (1) their retained pay or (2) a salary of 150 percent of that specified for the position they were demoted to and 50 percent of subsequent comparability raises.

If or when their pay is lower than or equal to the maximum rate of their new grades, pay retention is terminated and they will receive the full comparability increases.

All downgraded employees have been registered in the Priority Placement Program so they can be given priority placement for vacancies at their saved grades. According to MICOM civilian personnel officials, if employees meet the qualifications, both minimum and specialized for a position, they must be placed in the vacancies. If they decline even one equivalent job offer, their priority rights are terminated, as well as their retained grade and pay.

# Army's first black woman general takes command of Nurse Corps

WASHINGTON — Brigadier General Hazel W. Johnson became the first black woman general officer in the history of the U. S. Army during recent Pentagon ceremonies.

Following the promotion, she was sworn in as the 16th chief of the Army Nurse Corps. During the ceremony, Johnson remarked, "As the sixteenth chief of the Army Nurse Corps, the fourth chief to hold the rank of brigadier general, and the first black woman general in the United States Army, I hold my own and the corps' future reputation in my hands and pray that I will be given wisdom, foresight, knowledge and an understanding heart as we accomplish the task before us."

She added, "With deep humility, professional pride and a sense of this moment in history, I accept the challenges and responsibilities inherent in the position and role of chief of the Army Nurse Corps."

Outlining her objectives for the future, the new chief stressed her desire to continue

moving the Army Nurse Corps toward the goal of significant achievements in service by:

- Promoting, supporting and contributing to the highest possible nursing standards, with emphasis on nurses' role in the field units while adding to the distinguished heritage of the corps.

- Continuing to support fully the recruitment efforts for professional nurses for both active and reserve components of the Army Nurse corps.

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on page 18

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# KROOP TALK



**PFC Brain Wolfe, Co. B** — "I think it's good that the standards are equalized for men and women. More people should enter the Army with the drop in the educational requirements."



**SP5 Jerry W. Bishop, 7th S.C.** — "I don't totally agree with it. I think the minimum requirement for both sexes should be a 12th grade education level. There are many MOS's which require a good education in order to go through the training and apply the knowledge proficiently in the field. This school is demanding, and many of the students need a good educational background to be trained correctly here."



**SFC Charles Dickerson, Co. A** — "I don't think it's making the Army any better. For the most part, it seems like they're trying to turn the Army into a basic education institution. Supposedly, the aim of the All-Volunteer Army is to have a high quality volunteer force, but they keep lowering the standards. So, how can they expect to have high quality with such low standards?"



**PFC Jeff Smith, Co. B** — "I think the requirements should be a lot tougher than they are. I think everyone who enters the service should have a high school diploma and that the AFQT scores should be raised back to 50 for both men and women."



**Pvt. 2 Diane Sewell, 4th S.C.** — "Whether you're in first grade or in college, the Army wants your mind. The mind is the most precious part of us, and the Army wants to use to their advantage. I don't think you should sell yourself so cheap, the mind is a most valuable commodity."

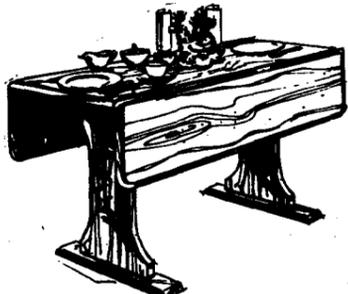


**SFC John S. Balog, Pulse Acquisition Radar Team** — "I think it's good that the requirements for males and females are equal. But, I think the standards are too low already for certain fields."

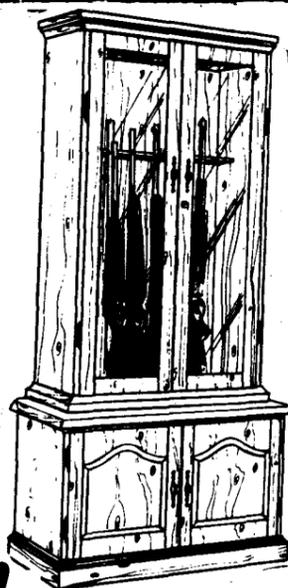
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# Army chief calls recruiting, modernizing major obstacles

WASHINGTON — Recruiting for the total force, and modernization are two main obstacles facing the Army today, said General E. C. Meyer at his first press conference as Army Chief of Staff last week.

"It looks as though at . . . the end of the fiscal year, we are going to end up somewhere around 13,000 to 15,000 short", Meyer said of recruiting. The impact, he added, will be felt primarily in mainland U.S. units not on high priority for deployment. "We will maintain our units overseas at 100 percent strength. We will maintain our early deploying units as close to 100 percent as we can."

The Chief said, "A modernization era or period unlike any we've seen in the past except perhaps World War II" is a second major obstacle the Army faces.

Meyer said his two basic goals for the Army are "To insure that we have an Army capable of going to war today and tomorrow . . . that we have the kind of Army that's responsive to the 1990s" and, second, "To create a climate within the Army that permits each individual to have the opportunity to fulfill themselves to their total capability."

Asked about a draft, he said "I don't believe a soldier should be the one who decides whether or not we have a draft. I think that's a national decision. But registration is another issue, said Meyer. "I am on record on registration and I continue to believe that way. Registration has solely to do with mobilization and our ability to go to war if we are called upon to do so . . . that's prudent deterrence on the part of a nation."

A question about wearing berets brought this response from Meyer: "I have two basic policies as far as the beret — as far as any accouterments are concerned. One, soldiers won't wear anything they have to pay for out of their own pocket. If a guy is going to wear it, it is going to be issued to him. Second, any unit that decides to come in with a request for a change in the uniform as far as their particular unit is concerned, I will run it through the uniform board and make an independent assessment of it."

(ARNEWS)



Before the new Madison County Vehicle License Office moves in, building 3658 received a facelift from veteran facilities engineering painters Virgil Stanfield and Roy Mears (on ladder).

## Treaty affects soldiers calling Panama home

WASHINGTON — The Panama Canal Treaty of 1977 will have several effects on Army personnel who claim the Panama canal zone as their home of record or legal residence.

The Canal Zone became part of the Republic of Panama when the treaty took effect Oct. 1.

Personnel who claimed the Canal Zone as their legal residence were automatically changed to a Republic of Panama home of record as of Oct. 1, unless the individual opted to changed his home of record under Joint Travel Regulations to a location in the continental U.S.

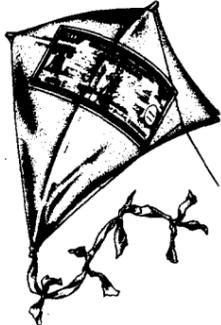
Also as of Oct. 1, personnel whose legal residence is Republic of Panama will not be entitled to foreign duty pay while serving there.

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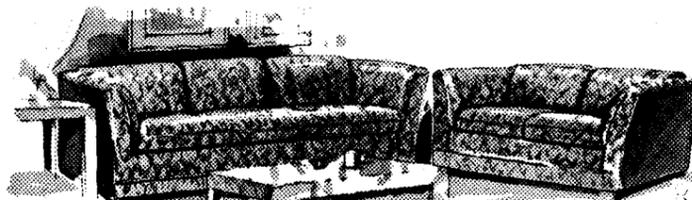
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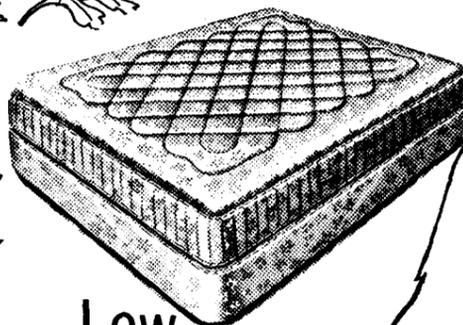


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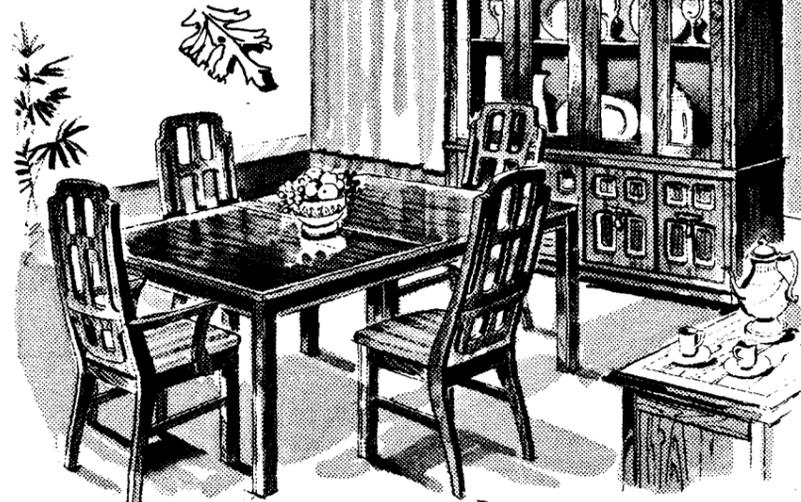
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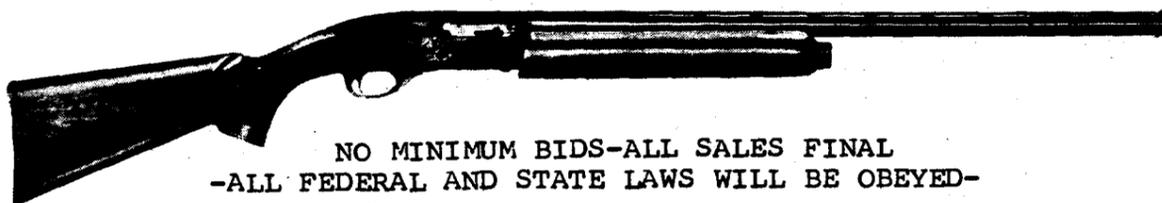
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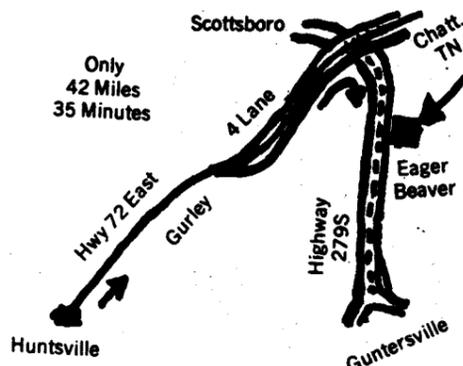
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# High flight leaves passenger low

BY DEBBIE GEHLBACH

They say the quickest way to learn flying is to take an introductory trial flight. Redstone's Flying Club is offering trial lessons this Sunday from 11 to 5 at RSA Airfield. My chance to do that came last Saturday morning.

Since this was a working trip, I dutifully jotted down the details about my particular plane. It was a six-passenger Cherokee 6, with a 260 hp engine and an 84 gallon gas capacity. It weighs about the same as a small car, 3400 pounds and can reach a top speed of 155 mph.

After what seemed like endless pre-flight checks, we were ready. The small plane barreled down the runway and lifted easily into the hazy sky, dipping and bobbing as it climbed to the height it was to maintain, 2000 feet.

We swung over parts of Huntsville and circled the arsenal, sighting landmarks along the way. They asked me if I'd ever horizoned. I hadn't. The plane rolled over on its side for a long, slow turn and the ground and sky traded places.

We approached the runway and began our descent. A nice flight, I thought. The plane touched down, speeded up and lefted into the air again.

"That's called touch and go," one of the pilots explained.

Oh no. My stomach, which had only felt twinges of uneasiness before, was headed for full-scale queasiness. We did touch and go two more times as I fought the impulse to bail out.

Finally, the flight was over. I asked the pilot why I felt so sleepy.

"Oh it's the tension," he said. "Really wears some people out." He glanced at my face and motioning, said, "There's a trash-can over there..."

No, I didn't have to use it. As I hastily retreated, several flying club members shouted, "You going to join us?"

I'm not, but now it's your chance to decide. This Sunday, as part of it's Open House, from 11 to 5, the RSA Flying Club instructors will offer introductory lessons, similar to a first flight lesson, for \$5. The club will also offer rides over Huntsville for \$3. All flights will last approximately one-half hour.

The flights are offered to all those eligible to be club members, which includes a wide range of military personnel and their dependents, and DoD civilians and dependents.

Appointments for flight time can be made by calling 881-3980 or 837-4960 weekday

mornings from 8:30 until 12:30 but "they're not necessary. It can also be a spur of the moment thing," said Laura Sisterman, manager of the Flying Club. Flying Club headquarters are located at the RSA Airfield off Hale Road west of Rideout Road.

## Lice

(From front page)

about 30 days during which the female will lay about 90 eggs. The visible eggs or nits attach themselves to hair shafts, hatch in about seven days, and mature in eight or nine days. Since they do not transmit disease, the only consequence of head lice is persistent itching.

One school principal said that children don't necessarily get this plague only from school. It could be picked up from various sources — even from pets. However, it can be passed along through contact with other students. Children should be instructed not to swap combs, wear each other's caps or come into close contact with other children.

Lice can even be transmitted to a child laying his head on a desk where another student recently laid his.

Once the lice are detected, Brown recommends contacting a pharmacy or clinic for treatment. Treatment usually involves the use of an insecticide called pediculicide, which comes in both over the counter and prescription form and is available as a dust, shampoo, lotion or cream. It's also necessary to wash infested clothing and bed clothes in hot water and detergent and dry them at high heat. Combs and hairbrushes must be soaked in two percent Lysol for one hour, or boiled for five to ten minutes.

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## Tennis tournament finals played tonight

The 1979 Commander's Cup Tennis Tournament got underway Sept. 10 with 10 teams representing the various units here. As of Friday, four teams remained to vie for first place honors.

In the winners bracket of the tournament are MICOM and Co. B, with the 6th and 7th Student Companies playing in the losers bracket.

To be in the top brackets the teams had to win 3 out of 5 matches during the beginning of the tournament. As the tournament winds down, it is a toss-up as to who will win tonight.

At press time, the final games were tentatively scheduled for tonight at 5:45 and 8 p.m. at the courts behind the main post gym, Bldg. 3474. The games will be delayed a day in the event of a rain out.

Both the MICOM and Co. B teams had no tournament losses, while the 6th and 7th S.C.s each had one loss to their record. The final games should provide some excitement for the avid tennis spectator.

## Bowling scores

### AMC League

#### Standings

Team	Pts
Patriots	9
Rolling Rocks	9
Spares	7
Hughes Acft	7
Van Atta Const.	6
The Devils	6
T-Birds	5
King Pins	4
Cadillacs	4
Cactus Jack	3

#### Last Wednesday

Devils - 4 - Cactus Jack - 0  
 Hughes - 4 - King Pins - 0  
 Patriots - 3 - T-Birds - 1  
 R. Rocks - 3 - Cadillacs - 1  
 Van Atta - 3 - Spares - 1

#### High Rollers

John Ricketts, 649 (226, 210, 213); Charley Owens, 572 (213); Johnny Vann, 557 (212); Gene Ashley, 557; Dick Gill, 551 (209); Joe Bodner, 531.

## MICOM moves reenlistment office

The Missile Command's Reenlistment Office is being moved to make it more convenient to MICOM personnel.

As of Monday, Oct. 1, MICOM troops can go to Bldg 3437, Special Troops Headquarters, where SFC Ben Cole, reenlistment NCO, will have his office set up.

The MICOM office had been located with the MMCS Reenlistment Office at 1st Battalion Headquarters. The MMCS office will remain in Bldg 3440.

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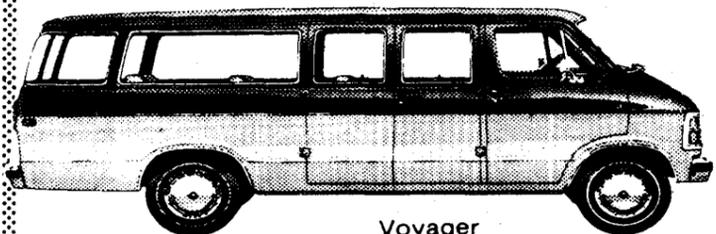


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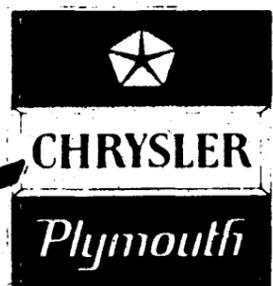


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# It's been a good rocket



**AH-64 firing 2.75 inch rocket**

**BY BOB HUBBARD**

Early next month, nearly 14 years and 35,000,000 rockets after its birth on a blustery December day in 1965, the Army's 2.75 project office fades into oblivion.

Production of rockets has been drastically reduced and intensive management of the 2.75 program is no longer justified, the Army has determined, so the staff and remaining program missions are transferring into the MICOM Weapon Systems Management Directorate.

2.75 isn't dead, however, although the project office is going.

The Army's only aerial rocket existed long before the project office was born and, thanks to improvements already made or planned by MICOM, figures to be around for years to come.

Old by modern standards, the 2.75 rocket continues to be the standard against which aircraft armaments are compared and, paradoxically, defies the traditional newer-is-better-syndrome. Why?

"It's available. It's cheap. It works!" said John Harrity, acting project manager for 2.75 which was developed by the Navy in 1948 and saw action during the Korean War as the Mighty Mouse air-to-air rocket.

"We compare 2.75 to the Model A Ford," said Harrity, who with Don Askins, Robert Vayda and Manfred Klein are the only charter members of the project office still with the program today. They got together recently to reminisce about where they had been and talk about where they are going.

The basic design was good, the price was good, and the Army made improvements making it even better they agreed.

"When you make a product more reliable and cost effective than anything else, available, you've got a winner, and that's why the J.C. Whitney catalog still devotes a section to spare parts for the Model A," Harrity said.

## Cost decreased

Noting that the price of a standard rocket in 1965 was \$88.27, including the motor, 10-pound warhead, and point detonating fuze, Harrity said the Army made 'a thousand changes' yet brought the price down by 1971 to just under \$40.

"While making the rocket more effective, we improved the design and production processes making it less expensive to produce," Harrity said.

Whatever the reason, 2.75, the Model A of rocketry, is the most widely used air-to-ground rocket in the armed services.

Although MICOM did not become home to the 2.75 project office until 1973, Redstone researchers began looking at aircraft ar-

maments and doing homework in rockets, missiles and launchers in 1951, when many critics thought helicopters nothing more than potential ambulance ships, much too light, unstable, slow and vulnerable for combat.

During the mid fifties, MICOM and Fort Rucker teamed to keep the idea of more firepower and mobility for the Army alive, when Air Force jets began flying faster and higher, making the Army's need for close air support more pronounced. Not until 1961, however, was MICOM officially funded to demonstrate the feasibility of arming helicopters.

2.75 jumped into the picture because it was available, and its size, weight and cost made it attractive for Army helicopters and light aircraft.

MICOM first used the H-13 observation helicopter to mount rockets, develop and demonstrate helicopter tactics. Later, MICOM developed and mated the M3 subsystem, a rectangular launcher carrying 24 rockets, to the Army's UH1B. The M3, the granddaddy of all helicopter launchers for the 2.75, was deployed to Vietnam in 1963, the first MICOM-developed weapon system to be used in combat.

Interestingly, as the Army worked feverishly to adapt missiles and rockets to helicopters in 1963, the Defense Department announced that there were more 2.75 rockets in the inventory than could be fired in the foreseeable future. But scarcely two years later, fueled by the massive buildup in Vietnam, the rocket supply was running dangerously low and projected needs of the Army, Navy and Air Force far outstripped industry's capacity to deliver.

## Picatinny

So on Dec. 17, 1965, the 2.75 project office was established at Picatinny Arsenal, Dover, N.J., under Col. R. S. Crossman, former project manager there for selected ammunition. Since it was a Navy rocket, the Navy had the expertise and retained control of the rocket motors initially, while the Army focused on fuzes and warheads. By 1969, however, the Army had assumed the reins for total program management, including motor, launchers, fuzes and warheads.

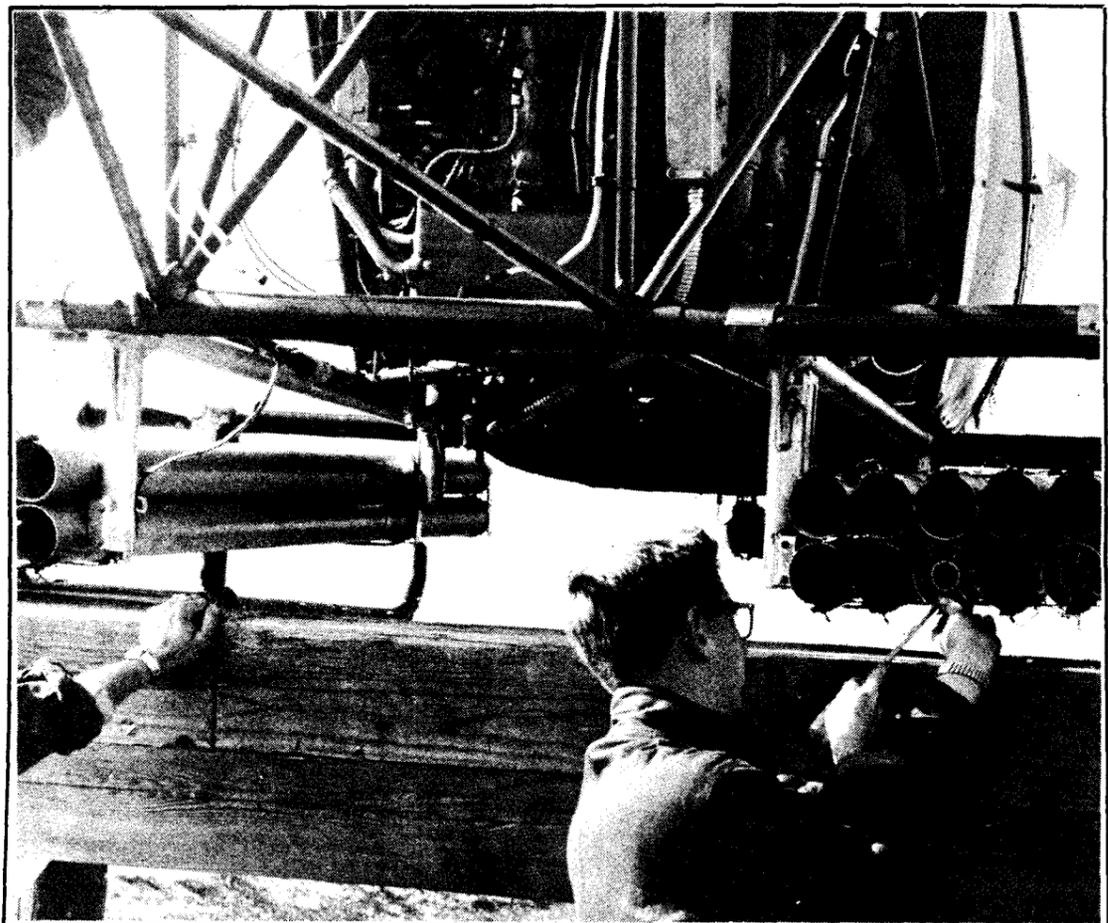
Harrity started as the chief engineer, later became the first civilian deputy project manager in 1967; Askins was an industrial specialist and troubleshooter of production lines and equipment in government and contractor plants; Vayda, program analyst for research and development and production reviews; and Klein, the lead warhead and fuze engineer.

Well-meaning friends warned the four they were "...jumping into a can of worms."

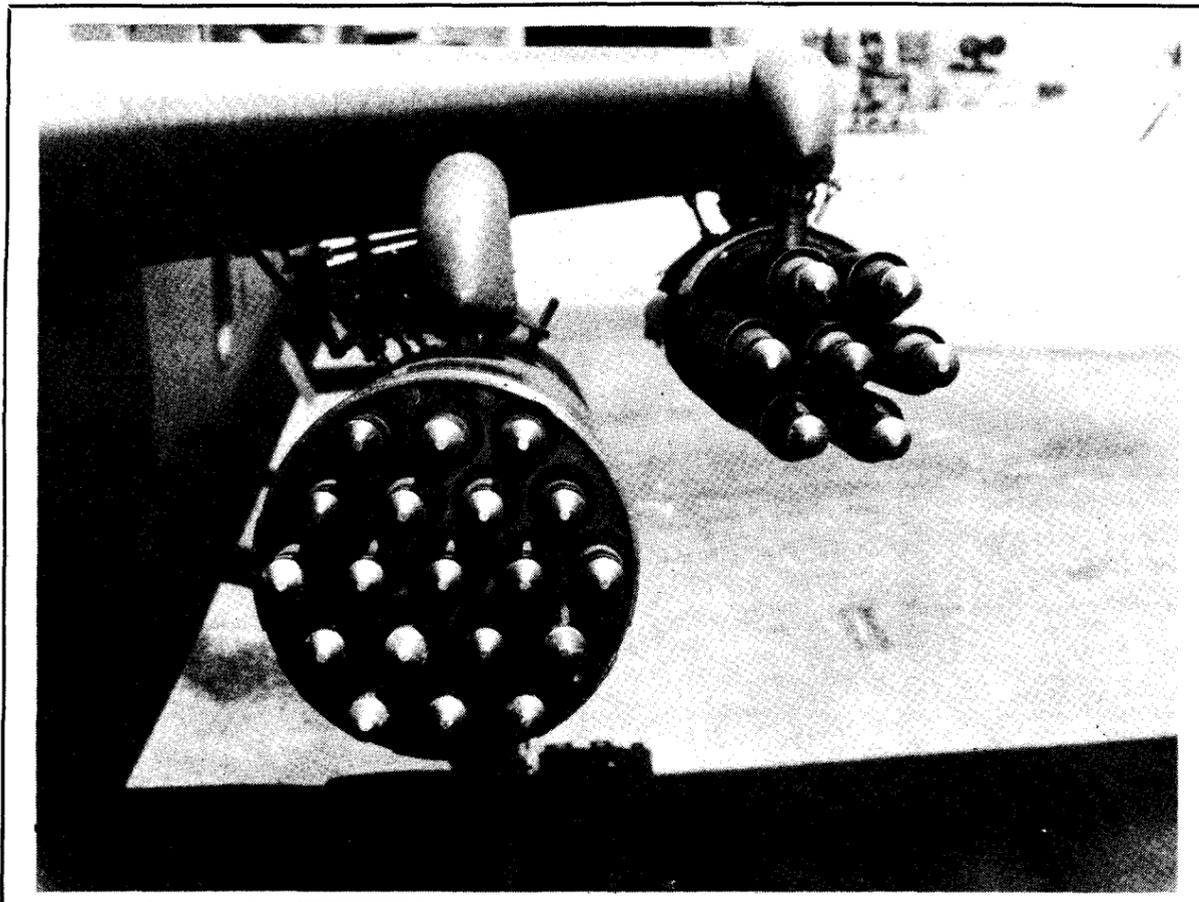
"I was told that I was crazy coming with the program," Askins recalled, "that in six months I would be out on the street looking for another job."

No one thought the war would last longer than six months.

"I don't think anyone anticipated our jobs could last more than two years," Harrity said. "So far, the four of us have seen almost fifteen years and the project office average is about ten years."



**Old photo shows test engineers preparing to fire off the H-13**



**Army's Cobra gunship armed with M200 and M158**

But in 1965, they weren't concerned with longevity.

"We were projectized to establish a production base equal to the projected demands of the triple services," Harrity said. "We were shooting for a minimum of 500,000 rockets a month to a maximum of 1,200,000 a month."

In reality, actual performance leveled off a 500,000 rockets a month.

Throughout the mid and late 1960s the Army began looking for a 2.75 replacement, something new, something better. The 2.75, meanwhile, was fast becoming new and better, thanks to improvements that made the rejuvenated rocket vastly superior to the old.

"We used anything, and everything, that we thought would work," Harrity, Askins, and Vayda agreed, pointing out that ideas and facilities to improve the 2.75 came from many sources.

Improvements included: a new 17-pound warhead and fuze by Picatinny Arsenal; a flechette warhead developed at Eglin Air Force Base, Fla.; an illumination warhead rushed to Vietnam during the An Loc tank invasion, giving 2.75 a 24-hour capability (developed by Limited War Laboratories at Aberdeen Proving Ground, Md.); new tube and 19 tube launchers developed at Redstone; a fire control system enabling the pilot to select the rocket and quantities needed; and remote set fuzes to use with high explosive warheads.

### **1001 details**

The project office coordinated the thousand and one details of running the program and sent new equipment training teams from Picatinny and Redstone to Vietnam to demonstrate and train troops as improvements were introduced.

Ironically, improvements were introduced to the field without significant research and development funds, Harrity explained.

"The void sensing fuze cost about \$50,000. The illumination warhead was developed under a nine-month, \$50,000 limitation."

He continued:

"We could do that in Vietnam but not in today's environment where the paperwork along to get a release would take more than nine months and \$50,000.

A replacement for 2.75 did not emerge in

the late '60s and early '70s and the demand for rockets nosedived, then ended as the Vietnam war terminated.

But two significant events in 1973 transformed the Mighty Mouse into the Terrible Tiger.

The project office proposed a number of improvements resulting in a new generation of 2.75 rockets—improvements including a new motor, extended range and accuracy, new fuzes and warheads, and second generation remote-set fuzing concepts. And, secondly, the Army made the decision to move the project office from Dover to Huntsville.

"That opened a whole new avenue for 2.75 because we were moving to Redstone where research and development was underway to come up with the 2.75 replacement system," Harrity said.

Difficult as it was to pull up roots and move on short notice, 20 of 22 professionals and two clerical workers stayed with the program and moved.

"Moving an office like ours normally doesn't happen," Harrity reflected, "because, usually, only fifteen or twenty percent of the people are expected to move. When ninety percent move, like we did, it just blows people's minds."

There have been few, if any, regrets.

By the mid '70s, the Army decided that a new system to replace the 2.75 would cost so much that it would be better to utilize the 2.75 diameter than to build a new generation of rockets.

Since then, we have been funded by components instead of a total system development," Harrity said, explaining that the project office had gotten funds for a lightweight launcher, smoke development, multi-purpose munitions, and remote set fuzing. Funding also is expected for new warheads, including smoke and illumination.

"We are moving ahead on a piecemeal funding basis and expect to field the improved hardware in the early '80s" he said.

The 2.75 charter members are proudest of the job they did in meeting the needs of troops in the field while working under the challenges and constraints imposed by the Defense Department.

They had to be innovative and take some short cuts, sometimes, but they got the job done, they agreed to the man.

One innovative management technique

they employed was called a manufacturing float.

As the war in Vietnam changed, so did the needs of the Army, Navy and Air Force, and as they alternately changed their requirements, the 2.75 office was called upon within a 30 day period to change our configurations."

It was impossible, they explained, to stop production of a fuze body, get all new fuzes manufactured and inserted into the rocket assembly line, tested and sent overseas in 30 days.

So they maintained a float of what we considered to be the most important components, and as the configurations changed, they could draw down or increase the float and they kept balancing that as the war changed."

Another management technique they devised was the line of balance, with which they kept track of where items were being produced and assembled, all the numbers, and where they had to be shipped, schedule and time.

That kept them in a red line position because it highlighted problem areas 60 to 90 days before they occurred but the system paid off in the long run.

"We knew exactly what plants we needed to focus on to overcome a production bottleneck and meet our schedule," Harrity said.

Especially satisfying during the height of the Vietnam war was improving fuze reliability in the early days when quantity was often more important than quality.

"We watched the reliability fall from 92 percent to about 88 on our deliveries before we devised both quantity and quality incentives. Within a short time, we increased reliability to more than ninety eight percent. Since then, we no longer buy fuzes with a reliability as low as 92 percent which we started with in '65'."

They also learned to expect the unexpected.

### **Dow criticized**

Dow Chemical Company during the war was severely criticized for manufacturing napalm. Dow also manufactured a special tape for the 2.75 rocket motor to get correct burning and pressure. Because of intense public pressure, Dow elected to get out of the war materials business, which threatened to end 2.75 production in 1972.

But Askins, working closely with the division chiefs of Dow, negotiated the purchase of their manufacturing process and equipment, which the Army subsequently installed in the Radford Army Ammunition Plant.

"We now have the sole manufacturing rights to this inhibiting material and we sell the product to every other country manufacturing 2.75 rockets, or planning to," Harrity said.

Another time, the sole supplier of containers to pack the rockets in burned to the ground but the project office improvised a special pack and never missed a shipment.

"Looking back, that's what pleased us the most, getting the job done in spite of the environment and the challenges," they agreed.

On October 7 the project office will lose its charter and transfer into Weapons Systems Management Directorate. Harrity will become the civilian deputy to Col. Theodore Baker. Frank Fleming, currently the chief engineer, will head the 2.75 division.

But the 2.75 rocket isn't dead. It's still there, it's still cheap and it works.

"Coupled with the Army's new helicopters and fire control equipment, the effectiveness of 2.75 in the '80s will increase twenty to one over the old rocket," Harrity said.

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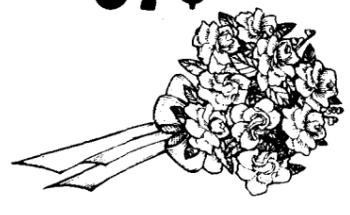
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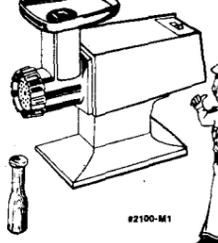
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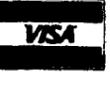
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# Inventor's burner nozzle saves a lot of fuel

BY KATHY HOUSE

"A five degree angle made all the difference," Bill Robinson said. He was describing the burner tip he invented two years ago — an invention that earned him \$900 in suggestion award money, plus a presidential letter.

Robinson who is now assigned to Hawk, worked with Facilities Engineering. "It was one of my jobs," he said. "I was assigned to one of the power houses for a period of time to look for ways to make it more efficient."

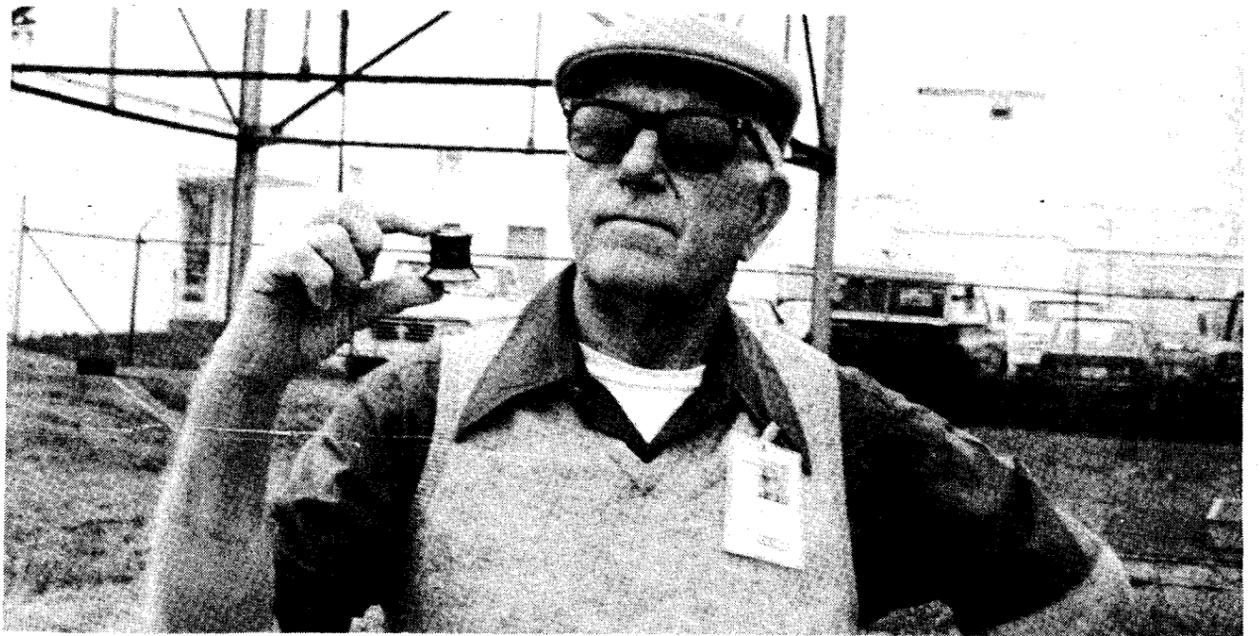
The efficiency problem, he discovered, was due to a poor fuel-air ratio. If the fuel and air could only mix better, the boiler would run more efficiently.

Robinson discovered that the fuel came into the boiler in a straight jet. The tip he added breaks the fuel down by sending it out through several smaller holes, each set at a five degree angle.

"The angle sort of cut the jet in half and played it out," Robinson said. "It breaks the fuel up, vaporizes it."

The tip is used in four boilers on Redstone and makes the fuel burn about twenty percent more efficiently. But the tip could be adapted for use on any average boiler furnace.

Robinson's had a varied career as an engineer. He was born in Scotland and started working for the U.S. during the 1950s, when he worked for the Corps of



### Helpful tip

The burner tip Bill Robinson invented isn't large, but it makes Redstone's boilers burn

Engineers in Greenland. He's traveled all over with his work since then, and spent the last two years in Jordan for Hawk.

Though he likes the travel and varied work he's done on different projects, Robinson still likes the steam plants best.

"I just like to come over and sort of mooch about," he said. "I've always been fascinated by boilers and steam plants — and I guess I always will be."

fuel twenty percent more efficiently.

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Cove Rd., SE ..... 881-4000

# 'Cost price' limit lifted for some PX items

DALLAS — The House Armed Services Committee has approved a number of changes to the Armed Services Exchange Regulation list of merchandise which the Army and Air Force Exchange Service may sell in CONUS stores.

Since AAFES is an instrumentality of the Federal government, the Armed Services Committee establishes cost price limitations for some merchandise sold in AAFES stores in continental U.S. These limitations prohibit the sale of many items and, in other cases, restrict the dollar amount which the exchange can spend for the purchase of an individual item. The list is modified from time to time in consideration of inflation and other economic factors.

Effective immediately, AAFES may purchase higher-priced dinnerware (up to 6-piece place setting), additional stereo units, cameras and accessories (including lenses), power tools and garden equipment including lawn mowers, edgers and snowblowers, ladies' and men's shoes, food processors, fans and coffeemakers, automotive supplies and accessories.

Included in the list of merchandise that no longer has a cost price limit are sewing

machines, toys, cleaning and maintenance equipment and supplies, cosmetic and dresser sets, swimwear and specific women's lingerie.

The purpose of item and cost limitations

is to preclude unfair competition with commercial retailers in CONUS; these restrictions do not apply to overseas exchanges, according to an AAFES spokesman.

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Ford Alternators. . . . . \$25<sup>95</sup> Disk Pads (set of 2 wheels) . \$6<sup>95</sup>  
Brake Drums Turned . . . . . \$2<sup>50</sup> Rotors Turned . . . . . \$4<sup>00</sup>



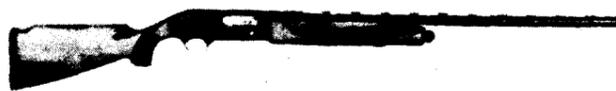
Starters Starting at ..... \$22<sup>95</sup>  
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Rem. M1100 12 ga. vent - good	149.99
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Rem. M1148 16 ga. auto shotgun - good	124.95
ITHACA 12 ga. auto - mint	134.95
Rem. Sportsman 48 12 ga. auto - exc.	139.99
Rem. Mod 870 12 ga. 30" full (3" mag)	139.99
Browning 12 ga. pump - vent rib - new	239.95
Browning 20 ga. auto 5 vent - new	357.50
Shadow (formerly High Std) 12 ga. auto (vent) new	Sale 149.95
Winchester (Sears) 12 ga pump - mint	89.99
Winchester model 59 auto shotgun - fiberglass barrel	249.95
Browning auto 5, 12 ga. shotgun (Belgian) - exc.	299.99
Winchester model 1400 12 ga. auto shotgun (adj. choke) - good	124.99
Savage 12 ga (3" mag) pump shotgun - good	74.95
Universal (like Franchi) 12 ga. auto shotgun	119.95
ITHACA M900 XL auto shotgun - excellent	149.95
European (engraved) muzzle loading shotgun	175.00
Mossberg 12 ga. 3" magnum pump - ex.	79.95
ITHACA M37 12 ga. pump - vent - exc.	144.95
S & W 8 shot 12 ga. riotgun (rifle sights) - exc.	114.95
Rem. M870 12 ga. pump - mint	134.95
Springfield 12 ga 3 shot repeater - exc.	49.99
Mossberg 20 ga. pump (adj. choke) - mint	84.95
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Rem. M870 20 ga. pump	129.95
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Savage 12 ga. Double - exc.	109.99
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Winchester 12 ga. single - good	34.95
H & R 12 ga. single - good	29.99
Stevens 20 ga. (3 shot repeater) art choke	44.95
Stevens 12 ga. single - good	29.95
Marlin 12 ga. pump - 38" full - 3" mag - new	159.50
Marlin 12 ga. (3" mag) goose gun - 36" bbl - new	74.95
Sears 12 ga. 3 shot repeater - good	34.99
Stevens 410 ga. 3 shot repeater	39.95

### — PISTOLS —

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Browning 9mm high power - good	219.99
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S & W 32-20 revolver - exc.	139.95
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S & W Model 29 - 44 mag. - new	349.99
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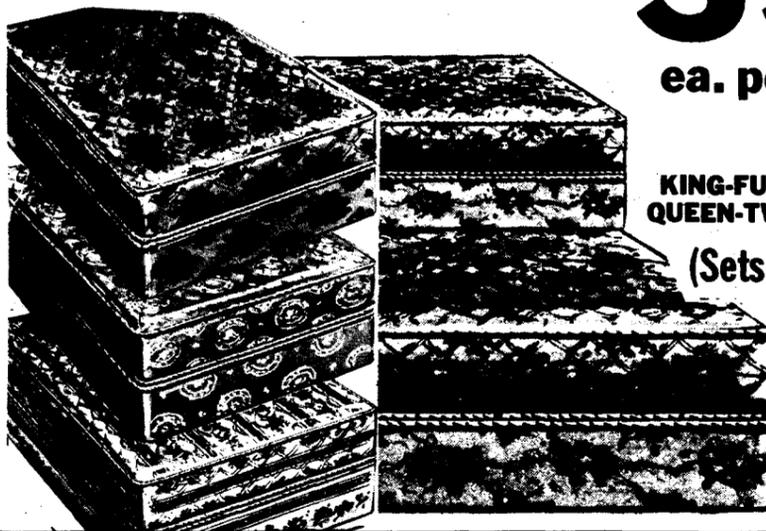
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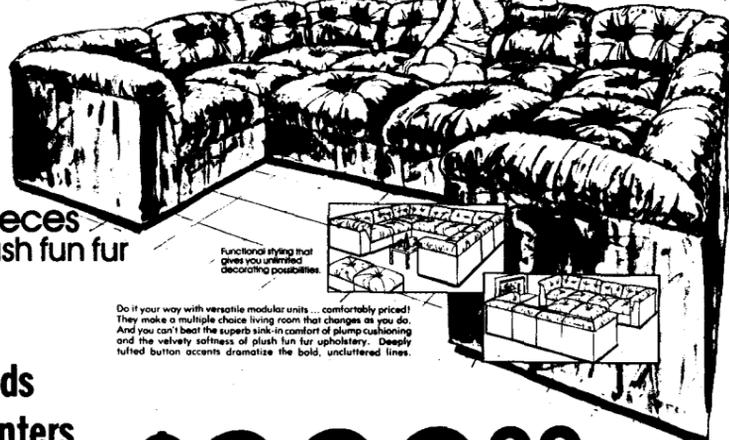
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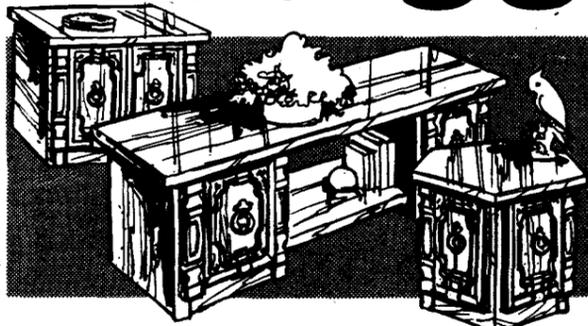
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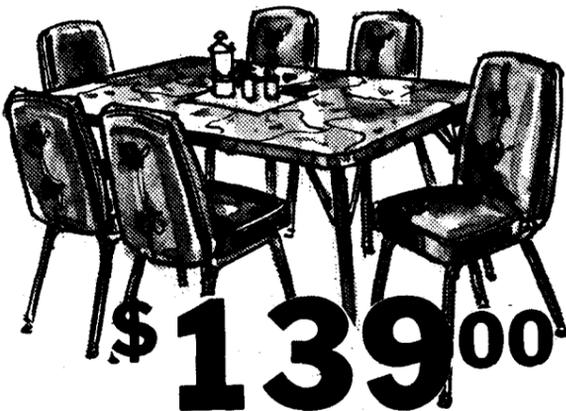
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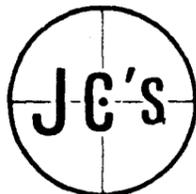
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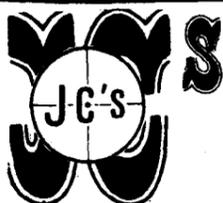
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# Announcements

## Program offered for Reserve officers

The National Security Management Seminar Program is being offered to Reserve component officers beginning November 1.

The program is designed to promote understanding of national security policy formulation and management of defense resources. The curriculum is modeled from resident courses of the National Defense University which prepares selected senior officers for positions of greater responsibility.

Reserve component officers are awarded up to 150 retirement points for completing the program.

For information call Col. Walter G. Kittleson, USAR, 876-2236.

## Speaker on OWC meeting agenda

The Redstone Officers' Wives Club will hold a luncheon Oct. 9 at 11 a.m. The guest speaker, Luther Kramer, will speak on "The Joy and Power of Being a Woman."

Reservations for the luncheon should be made no later than October 5. Pat Miller 837-1787 will take reservations for those whose names begin with letters A-E; Ann Holder (837-6972), for F-L; Sue Malinofsky (837-9314), M-R; and Cathy Sheppard (837-9026), no later than noon Oct. 8.

## MPs celebrate Corps birthday

Redstone's 291st MP Company will mark the 38th anniversary of the Military Police Corps with an observance today at 10:30 a.m. at the NCO Club Terrace Lounge. The Military Police Corps was activated Sept. 26, 1941. Before that military police duties were performed by soldiers detailed from various branches of the Army.

## Redstone Riders slate three trips

The Redstone Riders, the arsenal motorcycle club, plans three more trips for this year: to Franklin, Tenn. on Sept. 30, to the Birmingham Zoo on Oct. 7 and an overnight trip to Six Flags in Georgia on Oct. 27-28. Also, an "annual tour" for next year is now in the planning stage.

For further information call Ken Blackmer, 837-1719, or go by the clubhouse in Bldg 8009.

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Ride wanted from Fayetteville, Nix garage on highway 231, to Bldg. 4488. Hours 8-4:30. Freda Quick, 876-4206.

### Southeast Huntsville

Carpool or ride wanted from Curtis Drive SE to Bldg. 4762, hours flexible. Leland Lambert, 876-4748.

### Hot Rock, Cold Water, Taft, Bobo, Toney

Want riders from Hot Rock, Cold Water, Taft, Bobo and Toney to Bldgs. 4488, 5678, 7172, 7101, 5681. Hours 7:30-4, can't change. Marvin Throneberry, 6-3816.

### Northwest Huntsville

Ride wanted from Twin Oak Apartments to Bldg. 5250. Hours 7-3:30 or 7:30-4. Audrey White 876-7188

### Giles County

Carpool or riders wanted from Pulaski, Tenn. to CPD Bldg. 7442, hours 7:45-4:15. Sue Wells 876-4570.

### Guntersville

Carpool or ride wanted from Honeycomb Valley near Snug Harbor to Bldg. 4488. Hours 8-4:30, can't change. Nancy Law 876-1895/2450.



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Beautiful 1978 model Walnut console. AM/FM radio, 3 speed record changer, tape, player, sells for over \$450, pay \$199.95 or \$12.50 per mo. Call 536-3856.

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Four bedroom brick rancher in a lovely Southeast neighborhood. Seller has moved and must sell this home. Only \$43,900. Call Jim McWhorter 883-6924 or 881-4900 Landmark Gallery of Homes. M312. 1-tp  
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**LUXURY 4-PLEXES**  
Energy efficient, VA approved, extra income plus inflation hedge and tax shelter. 881-9589.

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Near UAH and Redstone Arsenal. Beautiful 4 bedroom Rancher, features large living room & family room with bay window, new carpets, 20'x36' inground heated & lighted pool with 5' deck. Lot is landscaped for privacy.  
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881-4900 or 883-7532.

**MEETING NOTICE**

Huntsville - Madison Co. Chapter for St. Jude Children's Research Hospital meets Thursday night - September 27 at 7:30 p.m. at The Mental Health Center Board Room. Everyone is invited to attend - plans under way for telethon.

Jilda Gilmore, President

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**MONDAY, October 1**

**Tutorials**

- DISTRIBUTED SYSTEM DESIGN  
M. P. Mariani, TRW and  
D. F. Palmer, General Research Corporation
- COMMUNICATION PROTOCOLS  
J. M. McQuillan, Bolt Beranek and Newman
- PRINCIPLES OF DISTRIBUTED DATA BASE DESIGN  
P. D. Chen and W. W. Chu, UCLA

**TUESDAY, October 2**

**Plenary Session (9 a.m. -12 noon)**

- Opening Remarks
- Announcements
- Maurice Wilkes
- Outstanding Paper Presentations

**Lunch (12 noon-1:30 p.m.)**

**Session T-I-3 (1:30 p.m.-3 p.m.)**

DESIGN AND REQUIREMENTS SPECIFICATION METHODOLOGY — I  
Chairperson: Dan Siewiorek, Carnegie-Mellon University

*Requirements for Distributed Data Processing Design* — M. Alford, TRW

*A Model for a Combined Communication Network Design and File Allocation for Distributed Data Bases* — K. B. Irani and N. G. Khabbaz, University of Michigan System Eng. Lab

*Distributed Computing System Design at the Network Level* — D. F. Palmer, General Research Corporation

*An Approach to Distributed Computing System Software Design* — S. S. Yau and C. C. Yang, Northwestern University

**Session T-II-3 (1:30 p.m.-3 p.m.)**

**TESTING AND EVALUATION — I**

Chairperson: Richard Merwin, George Washington University

*Multilevel Specification and Validation of the Control in a Communication System* — M. Devy and M. Diaz, du Centre National de la Recherche Scientifique

*Interprocessor Communication in TRAC* — U. V. Premkumar, et al., University of Texas at Austin

*A Hierarchical Multicomputer for Problem-Solving Decomposition* — R. B. Kiebertz, SUNY-Stony Brook

**Session T-III-3 (1:30 p.m.-3 p.m.)**

**NETWORK DESIGN FOR DISTRIBUTED SYSTEMS**

Chairperson: Philip S. Enslow, Georgia Institute of Technology

*Load-Sensitive Software Distribution in Satellite Graphics Systems* — N. Cullmann, Technische Hochschule Darmstadt

*A Formal Definition of the ISOANSI Open Systems Interconnection Reference Model — A Brief Overview and Proposal for a State-Oriented Systems Approach* — T. F. Piatkowski, Iowa State University

*System Design of the Distributed Double-Loop Computer Network (DDLCCN)* — M. T. Liu, et al., Ohio State University

**Break (3 p.m.-3:30 p.m.)**

**Session T-I-4 (3:30 p.m.-5:30 p.m.)**

**DISTRIBUTED ARCHITECTURES — I**

Chairperson: Michael J. Flynn, Stanford University

*Architecture, Communication Procedures and Performance Evaluation of the  $\mu^*$  Multicomputer System* — M. Ajmone, et al., Istituto di Elettronica e Telecommezzazioni

*Scheduling on a Light Pipe Simplex Ring* — A. Goyal and J. Lipovski, University of Texas at Austin

*Parallelism, Architecture and Representation Problems in Computer Systems* — M. J. Flynn and J. Hennessy, Stanford University

*Architecture Considerations for Local Computer Networks* — K. J. Thurber and Harvey A. Freeman, Sperry-Univac

**Session T-II-4 (3:30 p.m.-5:30 p.m.)**

**TESTING AND EVALUATION — II**

Chairperson: Stephen S. Yau, Northwestern University

*The Analysis of Distributed Computer Networks Using M/D/Y and M/M/1 Queues* — N. K. Samari and G. M. Schneider, University of Minnesota

*A Framework for the Quantitative Evaluation of Distributed Computer Systems* — M. J. Gonzalez, et al., University of Texas at San Antonio

*BUCS-I: A Reconfigurable Software Emulator System for DDP Development and Algorithm Evaluation* — T. McConnell, et al., Carnegie-Mellon Institute of Research

*A Reconfigurable Distributed Computing System* — P. Hsia, University of Alabama in Huntsville

**Session T-III-4 (3:30 p.m.-5:30 p.m.)**

**COMMUNICATIONS PROTOCOLS FOR DISTRIBUTED COMPUTING SYSTEMS**

Chairperson: Robert Lucky, Bell Telephone Labs

*Performance of Protocols in the Satellite Channel* — E. Gelenbe and C. Poulain, Université de Paris-Sud

*The Contract Net Protocol: High-Level Communication and Control in a Distributed Problem Solver* — R. G. Smith, Defense Research Establishment Atlantic

*An Introduction to Echo Algorithms* — E. Chang, University of Waterloo

*On Some Issues in Communication Between Distributed Processes* — Y. Yemini and D. Cohen, USC/Information Sciences Institute

**(TUESDAY Cont'd)**

**Tours**

Tour 1 — Alabama Space and Rocket Center (\$2.75 per person)  
Enter a command module, flip the switches, and let your imagination soar. Touch the charred shield of the APOLLO 16 capsule. Ride the zero-G machine. Try on a space helmet and gloves and much more.

**Reception (5:30 p.m.-7 p.m.)**

**Mini Tutorial (7 p.m.-10 p.m.)**

DISTRIBUTED PROCESSING OVERVIEW

Burt H. Liebowitz, International Computing

This tutorial, excluding textbook, is free of charge to all conference registrants. Attendees may purchase a text if they desire.

**WEDNESDAY, October 3**

**Session W-I-1 (9 a.m.-10:30 a.m.)**

**DESIGN AND REQUIREMENTS SPECIFICATION METHODOLOGY — II**

Chairperson: C. V. Ramamoorthy, University of California at Berkeley

*A Distributed Computing Architecture for Real Time System Control and Information Processing* — Donald R. Mott, Syracuse Research Corporation

*A Formal Methodology for the Specification of Distributed Processing System Design* — P. M. Lu and S. S. Yau, Northwestern University

*Which Way to Distribute?* — G. E. LeLann, IRIA/SIRIUS

**Session W-II-1 (9 a.m.-10:30 a.m.)**

**PROGRAMMING LANGUAGES FOR DISTRIBUTED SYSTEMS**

Chairperson: William Wulf, Carnegie-Mellon University

*MOD — A Language for Distributed Processing* — Robert P. Cook, University of Wisconsin at Madison

*VAL — A Data Flow Language* — James R. McGraw, Univ. Calif.

*Communications Port — A Language Concept for Concurrent Programming* — Tsang William Mao and Raymond T. Yeh, University of Texas at Austin

**Break (10:30 a.m.-11 a.m.)**

**Session W-I-2 (11 a.m.-12:30 p.m.)**

**DISTRIBUTED ARCHITECTURES — II**

Chairperson: Svetlana Kartashev

*Performance of Reconfigurable Buses for Dynamic Architectures* — Svetlana P. Kartashev, University of Nebraska

*An Assessment of the Applicability of Highly Variable Computer Architectures to Radar Data Processing* — K. J. Thurber, et al., Sperry-Univac

*Error Detection, Reconfiguration and Recovery in Distributed Processing Systems* — K. H. Kim, SUNY-Binghamton

**Session W-II-2 (11 a.m.-12:30 p.m.)**

**NETWORK LANGUAGE AND SYSTEM SOFTWARE**

Chairperson: Oscar Garcia, University of South Florida

*Toward a Partitioning Compiler for a Distributed Computer System* — O. Eldessouki, et al., Illinois Institute of Technology

*A Network System Language* — Fabio Tarini, et al., CNUCE

*PCL — A Process Oriented Job Control Language* — V. R. Lesser, et al., University of Mass.

**Lunch (12:30 p.m.-1:30 p.m.)**

**Session W-I-3 (1:30 p.m.-3 p.m.)**

**SPECIFICATION AND DESIGN OF COMMUNICATION SYSTEMS**

Chairperson: Jack Goldberg, SRI

*Synchronization for Distributed Systems Using a Single Broadcast Channel* — J. S. Banino, et al., IRIA and CNAM

*Abstract Specification of Communication Systems* — Ph. Darondeau, et al., Université de Rennes

*Security and Modularity in Message Passing* — C. Hewitt, et al., MIT

**Session W-II-3 (1:30 p.m.-3 p.m.)**

**DISTRIBUTED COMPUTING, RELIABILITY AND FAULT TOLERANCE**

Chairperson: K. H. Kim, State University of New York

*RHEA — A Damage and Fault Tolerant Digital Communication Support for Distributed Avionic Processing* — D. R. Powell, Centre National de la Recherche Scientifique

*Protection Against External Errors in a Dedicated System: Test, Rollback and Recovery* — C. Bellon and G. Saucier, ENSIMAG

*Reliability Modeling of Multiprocessor Architectures* — R. Joobhani and D. P. Siewiorek, CMU

**Break (3 p.m.-3:30 p.m.)**

**Session W-I-4 (3:30 p.m.-5:30 p.m.)**

**IMPLEMENTATION SCHEMES FOR INTERPROCESS COMMUNICATIONS SYSTEMS**

Chairperson: Gerard LeLann, IRIA

*LISA: Communication Mechanism for Local Networks* — Marian Marinescu, University of Grenoble

*An Interprocess Communication Scheme for the Support of Cooperating Process Networks* — Jack A. Test, Prime Computer, Inc.

*An Inter-Module Communication System for a Distributed Computer System* — Bjarne Straestrup, Bell Laboratories

*A Unified Interface for Process Communication* — Helmut G. Stiegler, Siemens AG

**Session W-II-4 (3:30 p.m.-5:30 p.m.)**

**DATA BASE COMPUTERS**

Chairperson: Jack Lipovski, University of Texas at Austin

*The Varieties of Data Flow Computers* — Jack Dennis, MIT

*A Performance Tool for Design and Installation Support of Distributed Data Base Systems* — Joachim Bieber and S. Florek, Technische Univ. of Berlin

*A Distributed File System for a Hierarchical Multicomputer* — Jishnu Mukerji and R. B. Kiebertz, SUNY-Stony Brook

*MUFFIN: A Distributed Data Base Machine* — Michael Stonebraker, University of California at Berkeley

**Session W-III-4 (3:30 p.m.-5:30 p.m.)**

**APPLICATIONS OF DISTRIBUTED COMPUTING TO RADAR SYSTEMS**

Chairperson: E. Swartzlander, TRW

*Implementation of a Distributed Node of Radar Control* — M. J. Sarig and D. S. Bowser, G.E.

*Distributed Computer Architecture for the Discrete Address Beacon System* — C. M. Applewhite, TI

*A Distributed Processor Architecture for BMD Signal and Data Processing* — R. L. South and R. J. Purdy, MIT

*A Distributed System for Radar Tracking* — David A. Bennett and C. A. Landover, Pattern Analysis and Recognition Corp.

**(WEDNESDAY Cont'd)**

**Tours**

Tour 2 — NASA's Marshall Space Flight Center (\$1.75 per person)  
Yesterday's science fiction becomes today's science fact through the space program. Monitor what's happening now at NASA's largest facility: Spacelab Space Telescope, and giant test stands. See men and women working and training for space travel.

Tour 3 — Ballistic Missile Defense Advanced Research Center (free)  
View first hand the visual displays simulating various war games that have been featured a number of times on national television. Perhaps you can beat the computer at one of your favorite table games.

**Banquet (7 p.m.-9 p.m.)**

**THURSDAY, October 4**

**Session Th-I-1 (9 a.m.-10:30 a.m.)**

**DECENTRALIZED CONTROL — I**

Chairperson: Tom Steding, SCL

*The Modular System Control Development Model (MSCDM)* — Marshal Potter and D. J. Paulish, Def. Communications Eng. Center

*Evaluating the Trade-off Between Centralized and Distributed Computing* — I. Mitrani, University of Newcastle Upon Tyne, and K. C. Seveik, University of Toronto

*A Decentralized Control Method in a Distributed System* — J. P. Cabanel, et al., Université Paul Sabatier

**Session Th-II-1 (9 a.m.-10:30 a.m.)**

**DISTRIBUTED SYSTEMS: SIMULATION AND MODELING**

Chairperson: Sue Mitchell, GRC-Huntsville

*Distributed Emulation Control: An Algorithm with ESP* — B. P. Buckles and H. D. Fitzgibbon, GRC

*Simulation on a Distributed System* — Randal E. Bryant, MIT

*An Experiment in Distributed Interpretation* — V. R. Lesser and L. D. Erman, University of Massachusetts

**Break (10:30 a.m.-11 a.m.)**

**Session Th-I-2 (11 a.m.-12:30 p.m.)**

**DECENTRALIZED CONTROL — II**

Chairperson: Carroll Johnson, University of Alabama in Huntsville

*Foundations of Spatial Dynamic Programming* — R. E. Larson, et al., SCL

*On Decentralized Information and Data Processing Considerations for Stochastic Real Time Control Algorithms* — Jason L. Speyer, University of Texas at Austin

*Nature and Significance of "On the Performance of Dijkstra's Self-Stabilizing Algorithms in Spite of Distributed Control"* — C. Whitby-Strevens, University of Warwick

**Session Th-II-2 (11 a.m.-12:30 p.m.)**

**DISTRIBUTED DATA BASES APPLICATIONS AND TECHNIQUES**

Chairperson: Bill McDonald, System Development Corporation

*Limitations of the Use of Distributed Environment Simulation as a Means of System Testing* — David A. Spencer, MIT

*Logical Clock Synchronization Method for Duplicated Data Base Control* — A. Kaniko, et al., NEC Central Research Lab

*Setting Clocks Back in a Distributed Computing System* — Geneva G. Belford, University of Illinois

**Lunch (12:30 p.m.-1:30 p.m.)**

**Session Th-I-3 (1:30 p.m.-3 p.m.)**

**DISTRIBUTED DATA BASES PROCESSING AND CONTROL — I**

Chairperson: Leslie Lamport

*A Majority Consensus Algorithm for the Consistency of Duplicated and Distributed Information* — J. Seguin, et al., IMAG

*An Algorithm for Maintaining the Consistency of Multiple Copies* — D. Herman and J. P. Verjus, Université de Rennes

*A Posted Update Approach to Concurrency Control in Distributed Data Base Systems* — Saeed K. Rahimi and W. R. Franta, Univ. of Minn.

**Session Th-II-3 (1:30-3 p.m.)**

**DISTRIBUTED OPERATING SYSTEMS**

Chairperson: Edith Martin, Georgia Tech Experiment Station

*A Decentralized OS Model for Aramis Distributed Computer System* — J. P. Cabanel, Université Paul Sabatier

*Multiprocessor Scheduling Policies* — Richard Y. Kain, et al., University of Minnesota

*A Distributed OS for a Reconfigurable Network Computer* — Larry D. Wittie, SUNY-Buffalo

**Break (3 p.m.-3:30 p.m.)**

**Session Th-I-4 (3:30 p.m.-5:30 p.m.)**

**APPLICATION OF DISTRIBUTED COMPUTING TO MODULAR MISSILE-BORNE COMPUTERS**

Chairperson: Tony Johnson, BMDATC

*MMBC Architecture* — R. G. Arnold, et al., Honeywell

*MMBC Software Structures and Implementation* — H. L. Applewhite and R. G. Arnold, Honeywell

*MMBC Hardware Modules* — L. L. Kinney, et al., Honeywell

*An Overview of the MMBC Architecture from the Requirements and Constraints Point of View* — R. R. Ramseyer and R. G. Arnold, Honeywell

**Session Th-II-4 (3:30 p.m.-5:30 p.m.)**

**APPLICATION OF DISTRIBUTED COMPUTING TO MODULAR MISSILE-BORNE COMPUTERS**

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*MMBC Hardware Modules* — L. L. Kinney, et al., Honeywell

*An Overview of the MMBC Architecture from the Requirements and Constraints Point of View* — R. R. Ramseyer and R. G. Arnold, Honeywell

**FRIDAY, October 5**

**Tutorials**

- DISTRIBUTED PROCESSOR COMMUNICATION ARCHITECTURE  
K. J. Thurber, Sperry-Univac
- DECENTRALIZED CONTROL THEORY  
R. E. Larson, Systems Control Incorporated

\* For Information Regarding Special Government Registration Call Ms. Shirley Donaldson at 895-4176.