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## Avion 1993-07-21

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# THE AVION

An award-winning newspaper by students for students

Volume 76, Issue 5

July 21, 1993

## ERAU student killed over the weekend

➤ A student leader is killed in front of a local pizzeria, the result of a gunshot wound received during an argument.

Rainges then pulled a small caliber handgun and shot twice, striking Love once in the chest, said Malek.

An off-duty Port Orange police officer saw Rainges and a companion leave the scene, enter a public bathroom next to the restaurant and shortly afterwards walk to Atlantic Avenue where they separated.

According to police, a small handgun, which apparently had jammed, was found in one of the bathrooms.

Rainges was arrested shortly after by a Volusia County Beach Ranger near the auditorium, after noticing that the suspect matched the description given by officers at the scene.

Two witnesses later identified Rainges



Love



Rainges

as the gunman, according to the police report.

Rainges told police that he and Love had had an ongoing argument.

Love was transported to Halifax Medical Center by paramedics and pronounced dead shortly after.

Rainges has been charged with second degree murder and was still in jail Monday.

Love, 26, of Dayton, Ohio was a senior studying Aviation Maintenance Management. He worked for the records & registration office, and was the president of the Kappa Alpha Psi fraternity.

According to Chris Amenechi, the fraternity's faculty adviser, Kappa Alpha Psi had been self sufficient under Love's leadership.

Love is survived by his parents, two brothers, and an infant daughter. Memorial services for Love will be held tonight at 7 p.m. at the Thompson Herbert Funeral Home on 901 Second Avenue, Daytona Beach.

Funeral services will take place this Saturday at the Summit Christian Church on Denlinger Road in Dayton, Ohio at 1 p.m.

Flags at the University were flying at half mast Monday and yesterday in memory of Love.



A confrontation between an Embry-Riddle student and another man in front of Antoine's Pizzeria ended with the death of the student.

By Bill De Brauwler  
Managing Editor

An Embry-Riddle student was shot in the chest early Saturday morning and later died of his gunshot wound at Halifax Medical Center, according to police.

The victim, Leonard Jeffrey Love, was shot once in the chest at close range following a confrontation with Darrel Rainges, 23, of Daytona Beach, in front of Antoine's Pizzeria on the Boardwalk, said Daytona Beach police spokesperson Clem Malek.

According to witnesses, Love and Rainges were standing nose to nose in the doorway of the restaurant, apparently having an argument. Love then swung his left fist, hitting Rainges under the eye.

## Ridder named new athletic director

By David Gass  
Editor in Chief

Recently, head basketball coach Steve Ridder was named the new athletic director here at Embry-Riddle. Ridder's first day as the new athletic director took place on July 12.

He came to Embry-Riddle in 1989 as the head coach of the basketball team to bring the Eagles to new heights.

Ridder has led the Eagles to three consecutive 20 game winning seasons starting in 1990-91 with 22-8, 1991-92 with 25-7, and 1992-93 with 28-8 which included a trip to the NAIA National Tournament in Nampa, Idaho.

At Berea College he served as an assistant coach for eight years as well as Head Baseball Coach his last year. His other experiences included Residence Hall Director, instructor and Chief Accountant.

One of Ridder's impressive qualities has been his work ethics. He credits his deceased father as a major inspiration to his life as well as his former college coach and mentor Roland Wierwille. Their direction and leadership were a major influence in his life.

When asked about his job as athletic director, Ridder was quick to point out how much he has enjoyed his last four years working for Embry-Riddle.

He feels fortunate to work with so many quality people and is looking forward to the new academic year with even more excitement, anticipation, and greater expectations.

Coach Ridder is anxious to work with his present coaches and is committed to provide the necessary assistance and leadership to help achieve the entire Athletic Program's goals.

One of Coach Ridder's initial goals as Athletic Director is to develop a plan that incorporates a team approach to building a quality Athletic Program. He feels strongly that all of the intercollegiate sports can help each other in building these quality programs.

Ridder is committed to improving better awareness about ERAU and wants to continue to enhance a first class image of the Athletic Program. His philosophy will be to continue striving to build an Athletic Program that emphasizes the critical balance of academics and athletics.

He has high expectations of recruiting student-athletes that are positive representatives of ERAU and who can perform successfully in the classroom as well as the on the athletic field.

Ridder will strive to build an Athletic Program



Coach Steve Ridder, just recently promoted to Athletic director, shows his enthusiasm and commitment to the Eagles during the heat of a game.

along the same academic and athletic principles as such prestigious schools as Stanford and Vanderbilt Universities.

Besides having been a successful basketball coach to the Eagles, he has been in charge of the Steve Ridder Basketball Camp for the past three years. He says it has been very satisfying to see the growth of the camp.

In 1991 there were 70 campers for a one week camp. Since 1991, the amount of campers have tripled. Ridder says that the kids are not coming because of the facility, but for the high caliber coaches and their teaching abilities.

Coach Ridder added that the parents enjoy having their kids learning more than just basketball and the camp brings about a better visibility to ERAU as well as the basketball program.

Ridder will remain the head basketball coach but says his priorities have obviously changed to focus on all sports. Ridder is excited about the upcoming basketball season.

He says that there have been two new players signed onto the team: Jason Hursey, a 6'8" forward transfer from Florida Atlantic and Rob Padgett, a 6'2" All-State guard from Elsemere, Kentucky who scored over 2400 points in high school with a 3.9 GPA.

Ridder will have a busy year ahead of him due to this new position, and the recent arrival of his fourth child, Reed. With his wife, his other three children, Ryan, Rachel, and Rob, Ridder says that family is a major priority in his life. He looks forward to the exciting years ahead as the athletic director.

## General Dynamics breathes sigh of relief with successful launch

By Joshua Mussaf  
Production Editor

With back to back failures behind them, the General Dynamics Corporation successfully launched an Atlas II medium launch vehicle Monday evening. Liftoff occurred at 6:04 p.m., at the beginning of the launch window, from Complex 36 at Cape Canaveral Air Force Station.

The Atlas vehicle carried a Defense Satellite Communications System (DSCS) III satellite for the U.S. Air Force. This launch resulted in the first complete constellation of the more advanced DSCS III satellites that make up a worldwide

network that supports Department of Defense, (DoD), State Department and other U.S. government agencies with secure voice and high-data rate, super high frequency communications. This system was used extensively in Operation Desert Storm, handling approximately 80 percent of the defense communications in and out of the Gulf region.

"This launch is an especially important event for the entire Department of Defense. For the first time we have a complete Defense Satellite Communications System III constellation. It also

see Atlas, page 8



An Atlas II rocket blasts past "Old Glory" on its way to deploy a DSCS III communication satellite.

### Inside this week:

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Airlines debate revolutionary changes to compete with newly reorganized and no-frill carriers.

see Aeronautica, page 6

### News in brief...

#### Movie of the Week

Touch 'n Go Productions will be showing *Leap of Faith* starring Steve Martin Friday at 8:45 p.m. in the student center.

#### Volunteers needed

The Telecommunications Department would like your assistance!

Students, faculty, and staff throughout the University are needed to volunteer to be a part of the Pilot Group for the initial trial of the voice mail system.

Volunteers will be among the first

to try the full use of the telephone answering capabilities as well as sending colleagues withing the pilot group messages.

There is one catch: you must be available for a training session on August 6th from 10:30 to 12:30 in SH-5.

If interested, please contact Missy Cregar at ext. 6025.

#### Summer soaker party

There will be a Summer soaker party sponsored by Touch 'n Go Productions this Friday at the pool. Free admission with student I.D.



The Safety department has recently installed new emergency telephone poles.

see Campus News, page 4



**THE AVION**  
Embry-Riddle Aeronautical University

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Newspaper

Editor in Chief  
David C. Gass

Production Editor  
Joshua Mussaf

Managing Editor  
Bill De Brauwer

Copy Editor  
Kerwin McKenzie

Business/Ad Manager  
Garrett Taylor

Space Technology Editor  
Mike Dienhart

Aeronautics Editor  
Ron Hess

Photography Editor  
Kaj Tuunanen

Classifieds Editor  
Malissa Wolfe

Adviser  
Dr. J. Roger Osterholm

This week's staff: Scott Augustus, Silvin Blackstock, Bob Davison.

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Correspondence may be addressed to: The Avion Newspaper, Embry-Riddle Aeronautical University, 600 South Clyde Morris Blvd., Daytona Beach, Florida 32114. Phone: (904) 226-6048. Fax: (904) 226-6085.

**Letters to the Editor:**

**Goodbye ERAU**

To the Editor:  
Today, I leave Daytona Beach. After five years of school, a Master's Degree and one year of fooling around, I leave the campus area. I would like to thank everyone who helped make my life here worthwhile. Thanks to Mary Kammerman, Joe Cambron, Greg Naccarato, Dr. Bruce Chadbourne, Dr. Obi, Jack Pollard, Beth Allen, the entire Avion and Phoenix staffs for five years running, Jack Slaven (keep my resume moving! Thanks!) Most of all, thanks to my parents for putting me through school and putting up with me! I love you lots!  
The University has changed much in the past six years. Most students won't remember when the library was one story or when the post office was next to student activities, not to mention the fact that the bookstore was where student activities was!  
As I leave, I must look back and say that my experience was mostly good. I have had a good time and I will miss the experience I have had here. However, you may still see editorials in my name!

Goodbye!  
Jason Simon.

**Bird problems**

To the Editor:  
Recently I have had some problems with birds. Of all the problems a regular college student should have, birds should not be one of them. The problem is, my life has been in jeopardy due to a nest of birds here at Embry-Riddle. A killer mother bird and her young have caused my path from the library to the student center to be a dangerous and annoying one. I will be walking down the sidewalk minding my own business and this mother bird will swoop out of the tree to attack me

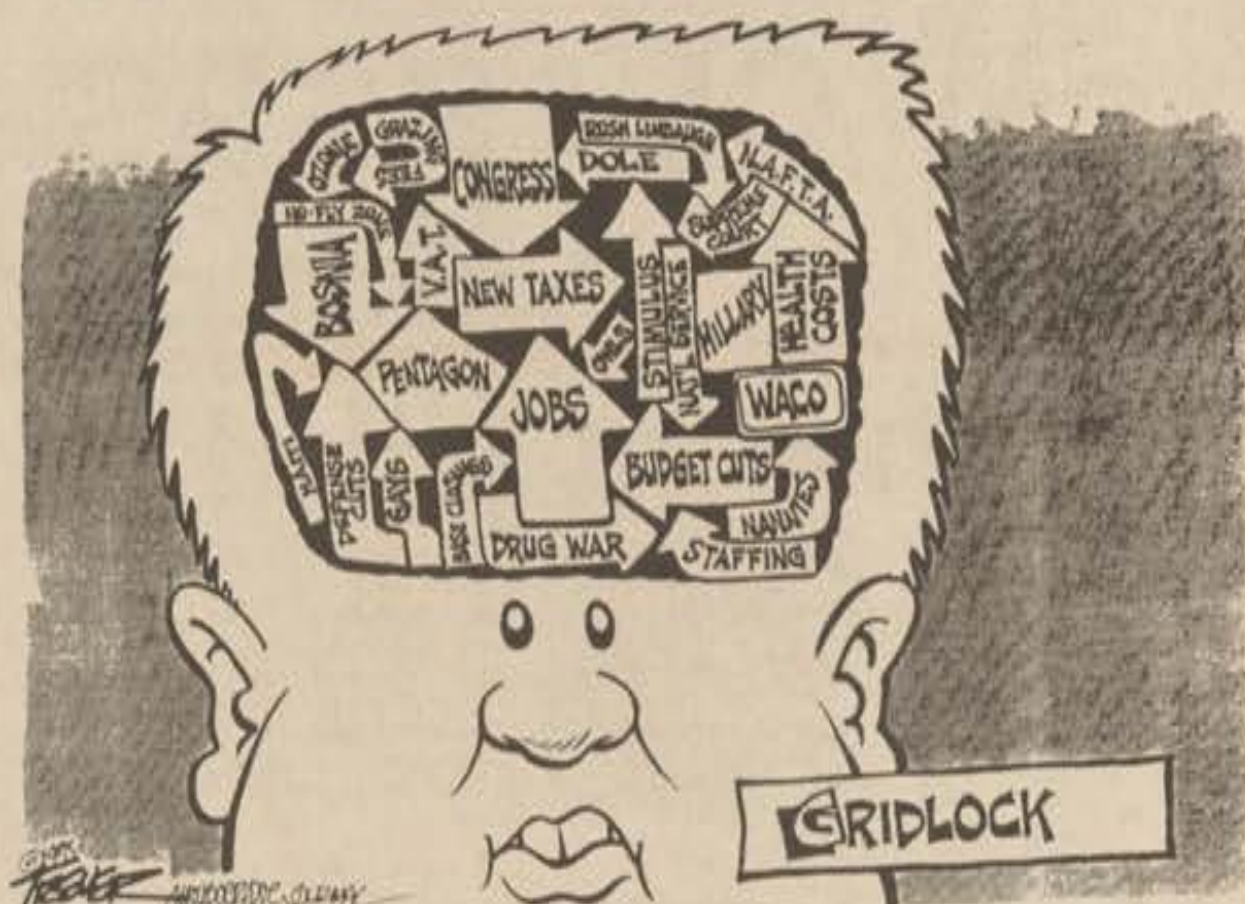
and peck at my head. I then attempt to swat the bird away and defend myself, but the bird is relenting. It will continue to attack until one of us is slain. I realize I have met my match with this mother bird and retreat to the student center. The funny thing is that I am not the only person this mother bird loves to pick on. I have seen others suffer the same fate as this psycho bird takes no prisoners. I ask that the safety department either find a way to move the nest elsewhere or find the terminator or the marines to solve the situation.

Name withheld by request

**Soggy Chicken**

To the Editor:  
I walked into the cafeteria last week for lunch. I was really hungry and anticipated a good meal.  
On the menu was some spaghetti stuff, and barbecued chicken. Since the chicken looked a little more appetizing than the spaghetti thing, I opted for that. Boy, was I in for a treat.  
I took the food back to my office, where the aroma was overwhelming. Everyone commented on it. I opened my package, and took a bite from the chicken. Ouch! I was ready to return it.  
The chicken was soggy and tasted nothing like the inclinations of its aroma. I was tempted to return it, but instead I only ate the portion of corn that I had purchased because there was no rice available.  
Sir, this is only one of my "great" experiences with the cafeteria, during the Summer.  
I think the campus population deserve a little more for their bucks. I agree that the cost of operating a campus cafeteria is indeed expensive, but, where do we draw the line.  
These days, I opt for a chicken sandwich. These are expertly

see Letters, page 8



**Staff Commentary:**

**Humans: Survival of the invulnerable**



Garrett Taylor  
Business Manager

We are invulnerable. At least on a species level. We are the 'super-predator.' We have no known species that preys on us with any regularity. We, however, prey on any species that suits our fancy at the moment. Whales that weigh hundreds of times more than us are hunted for their oil and meat. Rhinos and elephants are slaughtered for horns and tusks for folk medicine and decoration. We fear no animal, for our claws are of steel and the natural order places us above all else.  
Our culture of the Western Hemisphere has been dominated by the Judeo-Christian system of belief. As such our society works on the assumption that Nature, animals and all, are here for us to profit from, as we are above them.

Not quite.  
The river is there to pull power from and place toxins in. It 'misbehaves' when it floods on a cyclical basis. Images of downpours and flooding along the Mississippi River are a mainstay of the evening news. No thought is given that the river has flooded and subsided for millennia before man settled its banks. Or that so long as the rains fall and the winds blow it will continue this cycle of flooding and subsiding.  
The world is ours, there to be conquered and tamed. In a state park, we allow our youngsters to play in the water, for it is a 'managed' area, even though Florida is the alligator capital of the U.S. Under our assumptions of control, it seems a tragedy that an alligator would kill a child. We talk, over a steak dinner, about how wrong the alligator was in attacking the child.  
There is nothing that we cannot overcome. Gravity is but a toy when used in conjunction a bungee cord or a parachute. Once again, Death is so easily cheated.  
The idea of invincibility is

enforced, as skydiving or bungee jumping is a 'safe' danger. People jump with the knowledge that they will return to their home and continue their life, unutilated. You are more likely to die in a car crash on the way home. If cheating Death is of such great importance, jump without the benefit of a safety line, be it cord or chute. Sound stupid or insane? Exactly.  
Long ago, as our ancestors grouped together and viewed one of their fellows, slain during a hunt, realization dawned on them like a new day.  
We live by the same laws that govern each and every animal on this planet.  
We are more, simply by knowing that we are just another animal. This is what makes humans so different. Not the hands or the stance.  
But by placing ourselves above and not just another, we have lost sight that we are a part of what we have thrust ourselves above. We scorn or simply refuse to acknowledge that which may harm us, saving our imagined armor of invulner-

ability from shattering.  
It becomes 'wrong' for the river to rise, the alligator to hunt or accidents to happen. We become determined that these things will not happen again, because they will be controlled. And when the river floods again and the animal hunts again, it should be apparent that they will continue as they have for untold years, with or without humans roaming around, declaring what is right and what isn't.  
Yes, I have lost loved ones. Yes, I have lost massive amounts of property. I can empathize with the emotional loads these people are carrying. But I should also expect these things to happen, and take steps to avoid them.  
Move away from the river, or don't let your child swim with alligators around. Recognizing that we are not invulnerable is our best defense in a harsh world and using our foresight to avoid hazards is our greatest strength for survival.  
Survival, that's what it's all about.

**Will the airline industry ever grow up?**



Bill De Brauwer  
Managing Editor

It appears that the airline industry has added another sad chapter to its checkered history.  
Three airlines are currently in court, Northwest and Continental airlines accusing American Airlines of illegal competition practices. The sad part of this whole case is that there will be no winners, except for the lawyers and their companies, who stand to make millions of dollars in legal fees.  
This all stems from last summer's infamous fare wars, a move that cost airlines record losses into the millions of dollars. American had restructured its fares and cut many

airlines fares in half. To stay competitive, all the other airlines followed suit.  
Unfortunately, this move severely hurt financially weak carriers. Yes, carriers like Northwest and Continental. They have charged, initially in two separate lawsuits, and now in a joint lawsuit, that American's decision to slash fares was designed to put weaker airlines out of business. American has denied these allegations.  
Well, let's look at this a little closer. I am not a business major (what I have to say in this editorial will probably prove that), but I always thought that it was a business' goal to put its competitor out of business.  
Webster's Ninth New Collegiate Dictionary defines competition as "a contest between rivals," and it defines rivals as "one of two or more striving to reach or obtain something that only one can possess."

So, thinking in a purely business-like sense, American didn't really do anything wrong. What this case really amounts to is the fact that Northwest and Continental are getting beaten up by what can be called an "airline bully" and are now running to the play ground monitor and crying about how life isn't fair.  
The ultimate loser, however, will be the customer. If American wins, it will probably signal the demise of airlines like Northwest, TWA, and maybe even Continental. That would just leave American, United, Delta and perhaps USAir as the only major airlines in the U.S. With such a small group, the rate wars will probably stop, and an unofficial understanding or alliance will form. The end result? Perhaps higher ticket prices and a return to the pre-deregulation way of doing things.  
And what if Continental and Northwest win? American would

have to pay millions, maybe billions, in damages. This would give a short term cash influx in many of the debt ridden weaker airlines, and drain much of the cash of the country's largest airline. The result will remain the same, however. The industry will continue to be financially anemic, airlines will continue in its losing ways, and the list of eventual survivors will be less clear.  
Perhaps, if the airlines stopped beating each other up, and concentrate on running the business, things will turn around. They can all take a page out of Southwest Airlines' book. The carrier is the only airline to have made money in the last several years.  
It is just sad to see a once proud industry resort to such tactics and behavior. In a business that is designed to service the people, it will be the people that eventually will suffer.

**Student Forum**

**The Avion Asks: Do you think the airline industry is rebounding?**



George Csima  
Aviation Technology



David Dutcher  
Aeronautical Science



Todd Traugher  
Aeronautical Science



Bill Juliar  
Aerospace Engineering



Tom Glasgow  
Aviation Business



Tom Cronin  
Aviation Technology

"It is hard to say, with the current mergers and buy-outs, the industry seems to be a lot tighter."

"No, it is not rebounding, if it were I would not be here."

"I think it is rebounding, but not nearly as fast as predicted."

"Some aspects of the aviation industry are rebounding, but some are still on the way down."

"Yes, but it is going to be slow. I feel it will be at least five years before a significant improvement."

"It has to be more restructured and personally, I feel with the current administration it may be sluggish."



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Mountain of concrete

New emergency phones now available

By Bob Davison  
Staff Reporter

Crime in any form can only be bad. The Security Staff here at Embry-Riddle is determined to prevent or even deter crime from happening at any level.

To facilitate such a goal, the safety office has installed four new hands-free emergency telephone poles and placed them strategically throughout the campus. The core idea of these blue colored emergency poles is simple.

"If you're in need of help, or in an emergency outdoors by one of these blue poles, just push the button" says Michael Sanzano, Shift Supervisor and Crime Prevention Section of the Safety Department.

"Once someone has pushed for help, your call is immediately linked to the University Safety Department at the communication center day or night," said Sanzano. He further adds, "The caller does not need to continue to hold the "PUSH" button down because the system has already been activated when it was

first pushed."

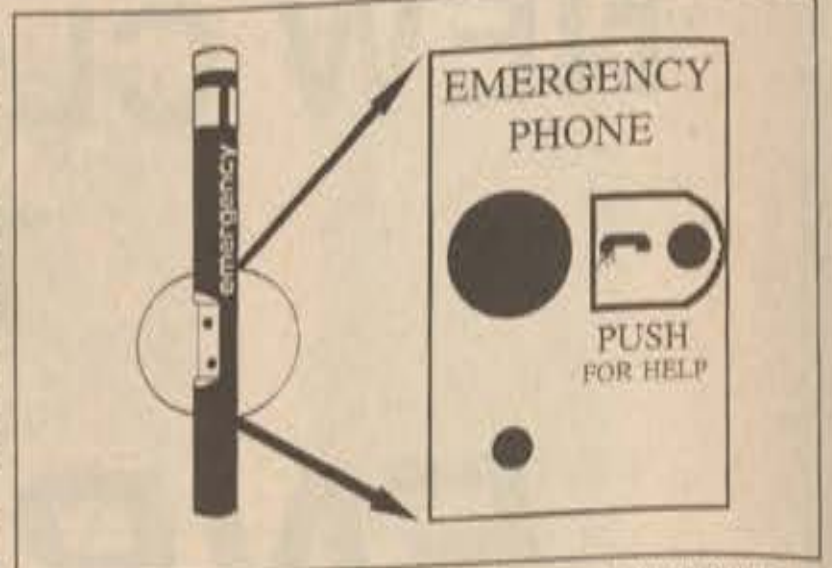
The blue emergency pole are designed to listen up to 10 feet away, so the caller does not have to talk directly into the microphones.

The caller's location is instantly known to the safety department, as each emergency pole has a separate line to pinpoint which pole is activated. There are four of these emergency blue poles already installed on campus. Their locations are: basketball court area, auxiliary parking lot #1 off Richard Petty Blvd., the "T" parking lot near the flight line, and the new parking lot at the Airway Science Simulation Laboratory.

The poles at the basketball courts and in the Auxiliary parking lot off Richard Petty Blvd. are the only ones that are completely ready for service.

The Safety Department is installing two more emergency poles next month in the "M" parking lot, and the Chanute complex on Beville Road.

There is another special feature of these pole that enhances the prevention of crime; they are easily accessible to people, reports Mr. Mannix,



graphic courtesy of Michael Sanzano

The blue light emergency telephone poles works on a telephonic system which requires limited maintenance.

Director of the Safety Department. "If a crime is about to happen, someone can easily get to the blue poles to call it in, and prevent a crime from happening."

Once the pole is activated, a 1.5 million candle powered strobe light

will illuminate the location of the pole both night or day.

This is for drawing attention to the area with a vivid blue police light signaling an individual is in a distress situation and needs assistance.



photo by Neil Tompkins

The mountain of concrete located near Doolittle Hall is meant to shore up the banks of the nearby creek. Soil erosion over time is causing drainage problems.

After the riots: African-American student groups flourish

College Press Service

African-American student unions throughout the country report an upsurge in membership since the fiery Los Angeles riots of last April, and many say that while race relations are still strained, the black voice on campus is stronger than ever.

There are 1.3 million black college students on U.S. campuses and, according to a recent U.S. News & World Report survey of college students, half the respondents reported that campus race relations today can be characterized only as "fair" or "poor."

"The riots were a spark that initiated the immediate consciousness. They (the riots) said: 'The problem has not left us, it is only camouflaged. It can still sneak up on you,'" said Carter, who is a criminal justice major.

The year has not been easy for the campus. In November, 70 students staged a two-day sit-in and successfully demanded an African-American studies department.

"We fought for seven and a half years to get an African-American Studies Department," Carter said. "Atlanta is the heart of the civil rights struggle. Seventy percent of this school is black. If there is anywhere that should have an African-American Studies Department, it is here."

"Initially, we received resistance from white students. They thought we were silly, militant. Now they have no problem that we stuck our necks out. It was reality. We started making the administration become accountable," Carter said.

In the fall of 1991, Fabiola Narcisse, a sophomore majoring in English, received a hate flier in her University of Massachusetts at Amherst mailbox. That's when she

and a handful of friends got angry and formed the school's first Black Student Union. "We had to create a voice for ourselves," she said.

About six months later, she said, they were a group to be reckoned with as the televised Los Angeles rioting brought their cause to a head.

"There was a lot of interest in the union due to the Rodney King verdict. People had a lot of enthusiasm," she said. "We got ourselves together and asked for more scholarships, which we got, and asked to be put on committees, like search committees, which we have."

"We got our voice heard definitely. We met with the president and top officials and we were heard, loud and clear. They took us seriously. We put pressure on them. We told them we would take things into our own hands," Narcisse added.

At Kent State University in Ohio, the Black United Students has been a strong presence on campus since

1968, when a group of African-American students banded together and demanded one of the first black studies department in the country.

Last year's riots made a strong organization even stronger, according to Nikki Marchion, president of Black United Students (BUS) and a senior majoring in social studies. The group will celebrate its 25th anniversary May 21, she said.

Marchion reported that membership consists of "nearly every black student on the campus" and a core group of about 100 students.

"The riots were a wake-up call," she said, noting that the group acted as an outlet for black students to express their emotions at the time of the Rodney King verdict.

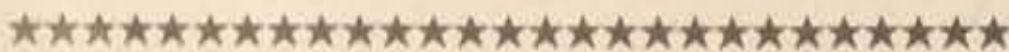
None of the black students desired violence on the KSU campus like they were watching on television, she said, and they went out of their way to see that it did not occur.



photo courtesy of College Press Service

Over the past year, many student groups have thrived since last year's Los Angeles riots last year.

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## NASA, FAA develop air traffic control aid

By Mike Dienhart  
Space Technology Editor

NASA and the Federal Aviation Administration (FAA) held a briefing for aviation industry representatives regarding a NASA-developed air traffic control tool that may save airlines hundreds of millions of dollars.

The briefing took place July 19 and 20 at NASA's Ames Research Center, Mountain View, Calif., and was held to describe how the Center/TRACON Automation System (CTAS) works. The CTAS aids air traffic controllers by helping to schedule incoming aircraft more effectively, starting when planes are 200 miles out from the airport.

The FAA predicts that bringing the system on-line at 12 selected airports will save the aviation industry nearly \$600 million in operating costs and reduced delays by the year 2000.

"CTAS is a prime example of how the combined strength of research, operations and manufac-

turing organizations, leveraged together, will help the United States prevail in the global marketplace," said Wesley L. Harris, NASA's Associate Administrator for Aeronautics.

Airport arrival delays are often created by inefficient and inconsistent spacing between incoming planes.

While the FAA has regulations covering the spacing of arrivals, air traffic controllers often add a "buffer" to that distance based on individual judgement.

CTAS will help controllers to accurately space the aircraft by monitoring airplanes during the last 20 minutes of flight and presenting information on displays that pop up on the screen controllers normally use.

The program has three integrated parts:

- The Traffic Management Advisor develops a plan to handle incoming aircraft while they are still 200-300 miles from the airport.

see ATC, page 8

## Shuttle launch scrubbed

By Mike Dienhart  
Space Technology Editor

Launch of the Space Shuttle *Discovery* on its 17th flight was scrubbed Saturday morning due to a premature arming of the explosive bolts that hold the Solid Rocket Boosters to the pad. The decision to scrub the launch was made by launch managers during the T



Photo by Kaj Tanskanen

*Discovery* sits on the pad after a faulty circuit prematurely armed a lock down bolt.

minus 20 minute hold at 8:52 a.m.

Though it was originally believed that only two of the explosive bolts armed early it was determined after further analysis that all eight of the bolts were armed prematurely due to faulty circuitry.

The shuttle's on-board computers normally send the command for the first priming current to the circuitry that control the bolts at T minus 18 seconds in the countdown. Then, at T minus 0 the bolts detonate, freeing the shuttle to leave the launch pad.

During Saturday's launch attempt the circuits malfunctioned and charged the bolts two and a half hours early, said Bruce Buckingham, a Kennedy Space Center public information official.

Due to a lack of experience with the problem the launch manager made the decision to halt the countdown and reschedule the launch.

The major concern was whether the Ground Launch computers would detect the malfunction, and consequently scrub the launch attempt.

An attempt to duplicate the problem on the suspect circuit card was successful during a launch simulation at the Kennedy Space Center's malfunction laboratory. It was later determined that a thermally unstable circuit caused the problem, and subsequently the scrubbed launch attempt.

A new launch date for *Discovery* has not been set as of press time. Officials have stated that the new launch date will not be before this coming Saturday, July 24.

The five members of the astronaut crew returned to their homes in Houston, Texas, Saturday afternoon after the decision to scrub the launch.

## Orbiter Update

**Discovery** - Launch of STS-51 was scrubbed on July 17 due to an explosive bolt that was armed prematurely. Though a new launch date has not been set, officials have stated that it will not be before Saturday, July 24.

**Columbia** - The 14 day mission is set to lift off in early to mid September with a launch window opening at 11:30 a.m. Structural x-rays and payload bay closeouts have been completed.

**Endeavour** - Work continues to prepare the orbiter for its rendezvous with the Hubble Space Telescope, scheduled for December.

**Atlantis** - The orbiter remains in Palmdale, California, under going modification.

## McDonnell Douglas to test new space transport system

By Marilyn Sheddin  
Special to the Avion

Twenty-four years ago this week, the world held its collective breath while humankind walked, for the first time, on the Moon. Since that peak experience, the American space program has been a series of peaks and valleys with little stability of goal, of technology development, or of policy.

Now we stand on the threshold of a technology which could be world changing.

Within the next three weeks, management at McDonnell Douglas Space Systems Company will know for certain whether the incredible risks they have recently taken have paid off. They'll get that piece of information on the day the space ship Delta Clipper-Experimental (DC-X) makes its first flight.

The one-third scale model of the DC-X makes its first flight July 29, in absolute private, with a public launch and media

event scheduled for August 16 at the spaceport at White Sands, New Mexico.

The DC-X is a single-stage-to-orbit (nothing falls off during launch) vertical-land/vertical-takeoff space ship which can work either within Earth's atmosphere or on low earth and polar orbits. (Polar orbit is impossible to the space shuttle, but is required for certain types of satellite launches.) The DC-X flies on liquid fuels (hydrogen, oxygen) on a set of engines designed to be run at only 80 percent of their capacity. That means, in an emergency, the Delta Clipper engines can be revved up to provide maneuverability, feathered-engine landings, or other

safety-related actions. The ability is roughly equivalent to driving a car 55 mph, but knowing it can easily attain 80 mph to move it out of an emergency situation.

The DC-X is unique in a number of ways. It resembles nothing more than the old illustrations on science fiction magazines and the space ships piloted by Buck Rogers. It is a little bit squat, but basically ballistic in its design. It takes off straight up into the air, without benefit of gantry or a huge number of personnel, nor does it need the boost of the Earth's motion to lift it to orbit.

Further, the DC-X and its follow-on

models are manufactured of materials which did not exist until recently. The ability to lift off and land vertically is a direct result of changes in the chemistry and physics of materials science - particularly new understanding of heat extraction and the development of new alloys.

Potential missions abound for the Delta Clipper. In case of catastrophe on Earth, it can go from point to point on the globe in less than two hours. Its potential for bringing medical relief personnel to disaster sites is virtually unlimited.

On orbit, it can be used to launch satellites, to carry lab facilities, or to transport supplies and personnel in the way that was widely advertised for the shuttle. Payload on the Delta Clipper is 20,000 pounds to equatorial orbit and 10,000 to polar orbit. To further broaden its potential, the Delta Clipper can fly with a crew, including a pilot, as it does not glide back to Earth like the shuttle - it flies into a



McDonnell Douglas photo

The Delta Clipper - Experimental is one-third the size of the planned orbital craft.

see DC-X, page 8

*Regardless of its ... economical mode of operation ... the Delta Clipper may die almost unformed.*

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# Airlines debate new changes as competition increases

Associated Press

NEW YORK — The country's biggest and most expensive airlines are looking at revolutionary changes so they can compete with a slew of start-up airlines, newly reorganized carriers and no-frills Southwest Airlines.

For some carriers, the answer has been to turn over a large ownership stake to employees in return for pay and benefits cuts and more flexible work rules. Analysts say the largest airlines must make drastic changes to avoid becoming over-priced dinosaurs.

Employees at debt-laden

Northwest and bankrupt TWA have agreed to help bail out the airlines with three-years worth of cuts in return for part ownership. Although United Airlines' troubles are not as dire, its unions have proposed a similar deal.

Like the Northwest unions' goal when bargaining began, United workers want a controlling interest in the company.

Northwest employees have settled for up to 37.5 percent. TWA's employees would get a 45 percent share as part of the company's bankruptcy reorganization.

"We seek to pursue a collaborative effort now with a still healthy company, to capitalize on its intrinsic strengths," the United Airlines Union Coalition said in a statement last Thursday.

Low-cost competitors and their low fares have forced many established airlines to revamp their operations.

American Airlines has chosen to avoid Southwest Airlines rather than try to compete with its low fares. American stopped operating a hub-and-spoke system out of San Jose, Calif., after Southwest entered the market.

Instead, American has turned over much of the money-losing spoke flying to start-up carrier Reno Airlines, which can feed passengers for American's longer flights.

Robert Crandall, chairman of American, the nation's largest airline, has said he is open to the idea of employees buying the company, but that proposals for pay and benefit cuts must be initiated by the workers.

Management shouldn't try to impose the austerity measures on employees who could become surly, undermining customer service, Crandall has said.

"Each airline is going to find its own solution," said Julius Maldutis, airline analyst at Salomon Brothers Inc.

For some, it will be equity-for-concession deals; for others it may be turning over some of the flying to

an airline with lower overhead.

For most of the big airlines, Southwest has been the biggest problem.

With its low-cost system, Southwest carefully picks the cities it flies to, choosing destinations that are either under served by the major airlines or are expensive because a carrier has established a hub there.

Using its cost advantage, Southwest can drastically undercut the fares charged by other airlines and fill its jets.

The Department of Transportation recently concluded that Southwest dominates the country's top 100 airline markets, carrying more passengers than each of the three largest

airlines on those routes.

Southwest recently announced it would begin flying into Baltimore-Washington International Airport, a USAir hub. USAir responded by saying it would cut fares and add more flights on routes that Southwest plans to fly.

United has been working to cut costs by contracting much of its non-flying work, such as catering and, possibly, pilot training, to other companies. United has also said it may set up a separate, lower-cost carrier to fly its money-losing, short-haul routes.

Such suggestions may have prompted United's unions to come forward with their concessions deal.

## BRAVIA awards Collins Avionics Tu-204 contract

By Ron Hess  
Aeronautics Editor

The British-Russian Aviation Corporation (BRAVIA) has awarded Collins Air Transport Division the avionics program for the Tupolev 204 (Tu-204). BRAVIA is a joint stock company formed by Tupolev Design Bureau, Aviastar, an airplane manufacturer, and Aviation Ventures.

The Tu-204 is a 214-passenger, narrow body airplane. Two Rolls Royce engines provide the aircraft with medium range capabilities. Collins Avionics will be the systems integrator.

Collins will supply the entire Western avionics suite. This includes a digital autopilot flight control system with Category III capability. Category III refers to an automated landing all the way to touchdown.

The Tupolev's flight deck has been configured with an integrated display system comprising of six eight-inch square cathode ray tubes. Four of the CRT displays are dedicated to primary flight and navigation. The remaining two display engine indication and crew alerting systems.

Triple redundant flight management systems with worldwide navigation and performance management functions and stability augmentation systems are included. The autopilot flight director system is full-operational. Three flight control computers allow full automatic landings in Category III conditions.



Bravia has contracted Collins Air Transport Division, of Rockwell International, to provide all Western avionics and integration for the new Tupolev aircraft.

The Tu-204 also includes a comprehensive on-board maintenance system, an integrated air data, inertial reference and global positioning system.

Collins Series 700 communication and navigation radios, weather radar and collision avoidance systems are also standard equipment to be provided by Collins. The Tu-204 will be equipped with

The new Tupolev is expected to be certified by the Commonwealth of Independent States in early 1996. Deliveries of the Tu-204 are projected for late 1996. FAA certification is scheduled for in 1997.

## United workers seek contract concessions

Associated Press

CHICAGO — United Airlines' employee unions said last Thursday they will offer contract concessions in exchange for control of the airline, marking the fifth employee bid for control of the nation's No. 2 airline since 1987.

The three unions, which represent pilots, machinists and flight attendants, didn't specify the size of the equity stake they are seeking in the company.

"The coalition's proposal will include significant employee cost savings. It will also include significant employee participation in the governance of United," said a statement released by the United Airlines Union Coalition.

"The long-term viability of United and the job security of United's employees require bold, innovative action. We seek to pursue a collaborative effort now with a still healthy company," the statement said.

A recorded message on the Air Line Pilots Association's member telephone hotline said the unions would try "to obtain majority employee ownership of our airline."

A spokesman for the coalition, consisting of the Air Line Pilots Association, Machinists union and Association of Flight Attendants unions, said last Thursday no time frame for developing the proposal had been set. Spokesman Peter Rosenthal said there would be no further comment.

"United Airlines will be in a position to respond after receiving and evaluating a direct and specific communication from the United Airlines Union Coalition," UAL said in a statement issued today.

UAL Corp. rose \$6.75 per share to close at \$133 on the New York Stock Exchange last Wednesday on falling oil prices and a rumor late last Wednesday that pilots were trying to buy the company. As of early the next day, the company's stock was up 75 cents at \$133.75.

Employee wage and benefit cuts in exchange for ownership stakes are central to financial reorganizations under negotiation at Northwest and Trans World Airlines.

Four employee efforts to buy United since 1987 have failed. The most recent was a \$201 per share offer by United's three major unions that was rejected by the company's board in 1990.

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Calvin and Hobbes

by Bill Waterson



Far Side

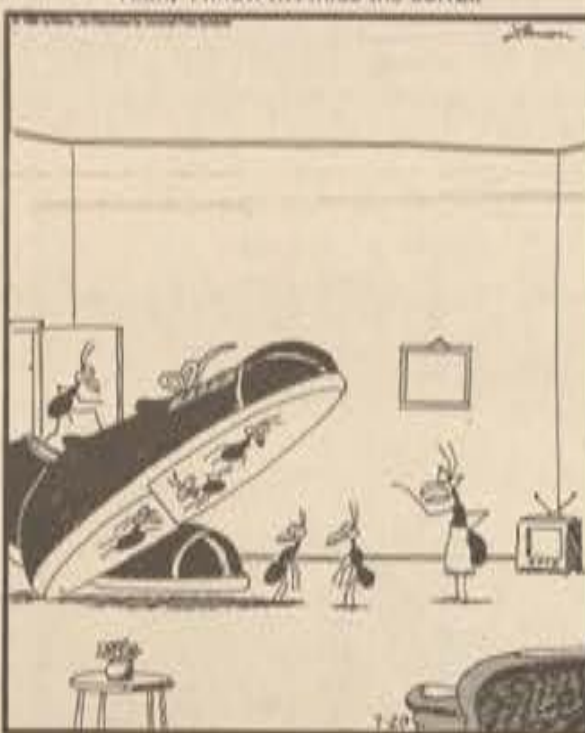
by Gary Larson



"Listen, Mom... I just wanted you to know I'm OK and the stampede seems 'bout over — although everyone's still a little spooked. Yeah, I know... I miss the corral."



"For God's sake, hurry, driver! ... She's dropping babies all over the place!"



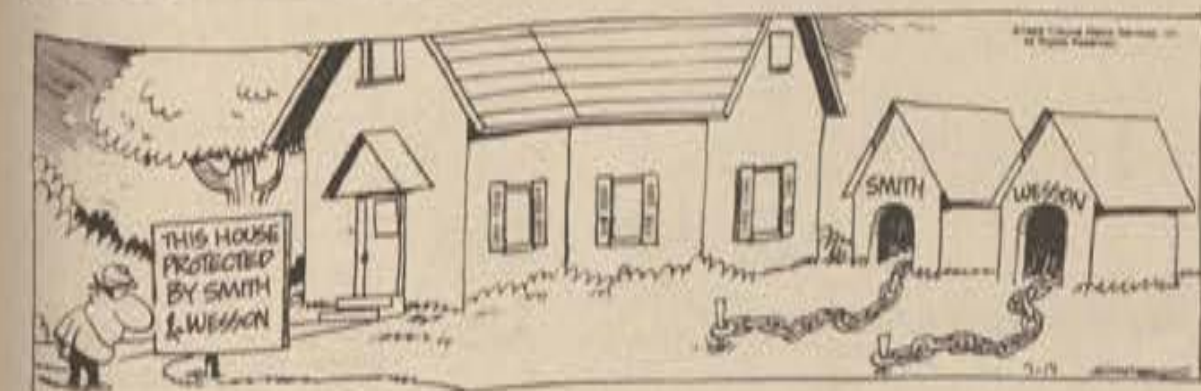
"Ernie! Look what you're doing — take those shoes off!"



Professor Feldman, traveling back in time, gradually succumbs to the early stages of non-culture shock.

Bound and Gagged

by Dana Summers



Dave

by David Miller





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→ Misc. for sale

For Sale or Rent: 2 bed/2 bath townhouse. Two levels, full appliances. Pool, cable TV, water and trash removal all included. Located only 2.5 miles from ERAU. Call today for more details at 788-4343.

For Sale: Pelican Bay. Perfect location for serious students or instructor who requires quiet atmosphere! 2/2 condo. Excellent condition. Close to college and shopping. Great buy! Contact Art Farja at 676-5162. Adams, Cameron & Co.

→ Miscellaneous

Cannondale 12 speed road bike for \$350; Binoz tricycle for \$45. Contact Jeff at Box # 5395.

For Sale: Pioneer rack stereo system. AM/FM, dual tape, CD. \$1000 new. Yours for \$450. Contact Jeff at Box # 5395.

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→ Personals

BIEN,  
Maybe if you quit shooting your badge at the women, you might get some. You are by far the "Fatman" of Riddle.  
BRIAN

I'm curious as to who's been sending me E-mail messages using D. Embree's account. Cheryl Box # 8677

ISIT  
Thanks for the stunt maneuvers with the Barron, I told you we would crash if you tried to land on the nose wheel. Runner has it. Pizza Hut is looking for a good blimp pilot N.Y.C.  
BRIAN

It is said that whales went back to the water after evolving on land. This is the most obvious evidence that they are a more intelligent species.  
THE BATHROOM PHILOSOPHER

KERR  
Video games are for those who have nothing else better to do...like me!

Your destiny lies along a different path from mine. The force will be with you...always!  
Obi-Wan Kenobi

You may break "The Chain" in the physical aspect, but never in spirit!  
The Chain

R.S.  
Due to your lack of human emotions for the Homo Sapiens in this world, it is my belief that God Almighty Himself shall strike you down because you are wrong.  
P.O.'d

PUSSYCAT  
Meow, Meow. I enjoyed this past weeks snuggles. I'm also glad you have a job now too. See ya when I come home and we'll play some more. Meow.  
KITTY

TONY  
Tag! Your it! Let's see who can reach the other first.  
P. S. You've got to see the FBI mobile, it's been painted.  
MAL

GARRETT  
So, how has class been?  
Apt. # 6

JOHN  
Spin any 152's lately? Or are you still drooling over the B-737?  
MAL

ERIC  
I promise we'll start flying again, soon. I think.  
MAL

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Atlas

(continued from page 1)

restores our launch ability for communication satellites and the communication capability of the DoDs space-based system to its highest point since Operation Desert Storm," remarked Brig. Gen. Leonard Kwiatkowski, program director for the Military Satellite Communications Joint Program Office, during a post launch news conference.

"This is the first in a long string of successful launches we intend to rack up as we reestablish the reliability and quality record of our Atlas vehicle," said Michael W. Wynne, president of General Dynamics Space Systems Division. The first of two recent launch failures occurred in August 1992 due to a faulty check valve. The most recent failure occurred in March of this year when an anomaly in a regulator in the Atlas stage led to a loss of performance. The Atlas launch vehicle has maintained a 70 percent success rate in the last 10 launches.

The General Dynamics Space Systems Division currently has two more launches scheduled this year. The UHF2 payload for Hughes is currently set for an early September flight while the Telstar payload for AT&T is scheduled for late November.

The first Atlas II/DSCS III mission was launched successfully from Cape Canaveral Air Force Station on February 10, 1992 and the last Atlas II/DSCS III mission was launched from the Cape on July 2, 1992.

ATC

(continued from page 5)

The Descent Advisor provides controllers with accurate, fuel efficient descent and vectoring advisories.

The Final Approach Spacing Tool lets spacing corrections be made after aircraft are within 40 miles of the airport.

With the arrival of graphics-oriented computers in the 1980s NASA researchers could take ideas from the 1970s and apply them in the field.

NASA and the FAA have been testing CTAS since May 1992 at Stapleton International Airport, Denver, and the air route traffic control center in Longmont, Colorado. NASA personnel are located in each facility and get real-time feedback from participating controllers.

Dallas/Fort Worth International Airport will also begin CTAS operations soon. That area will be an excellent test of the system believe researchers due to both the heavy traffic and the fact that the airport is surrounded by many smaller airfields.

The deployment of CTAS is a multi-million-dollar part of the FAA's Terminal Automation program, a new air traffic control system that will be in place by the end of this decade.

DC - X

(continued from page 5)

controlled landing. Or the Clipper can fly drone, using ground-based virtual cockpit flight controls.

Finally, the Delta Clipper is the first spacecraft designed solely with an aviation mentality. That is, it is modular, so that repairs and maintenance can be done with flight-line replacements rather than factory rebuild. It is intended for manufacture on an assembly line, and is expected to penetrate the general market.

In fact, by the time the mass-produced Delta Clipper (designated the DC-3) starts coming off the assembly line, it is expected to do for the commercialization of space what the original DC-3 did for commercial aviation: make it so much a part of daily life that it will become an innate part of the American (and global) lifestyle.

Regardless of its apparent function, economical mode of operation, and ability to achieve both polar and equatorial orbits, the Delta Clipper may die almost unformed.

Although the DC-X is scheduled to fly twice within the next three weeks, there has been no funding at any level for the full scale version of the ship.

Letters

(continued from page 2)

prepared and goes well with lettuce and tomato.

I constantly hear students complain about Morrison's service, but very little is ever done about it.

I once asked why aren't real potatoes used for the mashed potatoes, the response was that we will submit that to our corporate office.

Powder is still being used. Enough said! Please, I am not a cafeteria hacker, but I like to enjoy my meals. All I ask for is a complete meal at a reasonable price.

On occasions I get very good value for my money there. However, I always seem to miss ice-cream (Thursday (one of the better services there)).

The cafeteria staff is very courteous, and by now can see me coming. Sir, I prefer not to resort to brown bagging it, or taking a lunch trip to a neighborhood fast food store, therefore, I think that Morrison's should beef up their act!

Kerwin McKenzie

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