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Embry-Riddle Aeronautical University

Welcome new ERAU President Steven Sliwa

Embry-Riddle Aeronautical University

THE AVION

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Problems with Piper mean changes for flight line

Latest problems with both the Piper and Mooney aircraft bedevil Embry-Riddle's flight department

*by **Brian Gerk***
Managing Editor

The Embry-Riddle flight department is once again faced with the need to replace the majority of its aircraft, as well as battle recurrent electrical problems within its present fleet of Mooney 20Js.

New Training Aircraft

Since Piper Aircraft officially filed chapter 11 last week, and has all but closed their doors for good, Embry-Riddle must again reckon with a decision for its primary training aircraft. In all likelihood, ERAU's current fleet of both Piper Cadets and Cessna Skyhawks will be completely replaced. The reason for selling the relatively new Cadets is necessitated by an almost certain lack of steady hardware and parts support that a high-volume flight operation such as Embry-Riddle's demands. The aging Cessna 172 fleet has been milked along for the last 18 months while ERAU attempted to take delivery of more new Cadets.

". . .we cannot give your flight IFR clearance due to the restrictions on your aircraft."

Under current scrutiny for possible new replacements are the American General Tiger and the Aerospatiale Tampico. Each plane offers numerous advantages over the current fleet of Cadets and 172's, but both aircraft present certain draw-backs that must be weighed by the flight technology department.

Two weeks ago the flight technology staff began evaluating the Tiger in a series of test flights. Paul McDuffee, chairman of the flight technology department stated that nothing conclusive had been decided during the flights but that the Tiger is certainly a viable alternative to the Cadet.

Apparently, some reservations exist about the need for the extra 20HP that comes with the standard O-360 within the Tiger. This increase in power will also mean upwards of $250,000 more in fuel prices per year compared to the smaller O-320, which powers the Cadet, Skyhawk and Tampico. The Tiger itself dates back to the early seventies, when it was constructed by Grumman. The tried and true design of the Tiger has proven itself as trainer at the Prescott campus (where increased horsepower was a necessity, due to the higher elevations) but looks somewhat antiquated compared to some of todays sleek aircraft.

The Aeropatiale Tampico's most obvious drawback is cost. With its delivery price some $20,000 greater than the American General Tiger, the Tampico must prove itself to be both worthy in performance and long term maintenance.

One of the most impressive features of any Aerospatiale design is the attention to ergonomic detail which immediately sets the pilot at ease. The throttle quadrant is within easy reach and the cabin is wider than any other training aircraft. The flight instruments in the Tampico are angled towards the left seat, and the rear seats are raised to improve visibility, a feature especially valuable when considering Embry-Riddle's Gemini learning philosophy. Aerospatiale also claims that the Tampico incorporates many new design features which increase ease of maintenance.

Another factor that ERAU must consider with any new aircraft acquisition is the stability of the parent company that will supply the aircraft and support them for at least the next 6-10 years. Obviously, the experience that the flight department has learned since dealing with Piper has caused a great deal of caution in any future dealings with aircraft manufacturers. Though the Tiger itself is fairly old, the company producing it, American General, is very new.

Aerospatiale on the other hand is well established, but headquartered in France. All of Aerospatiale's aircraft destined for North America are un-crated and assembled in Grand Prairie, Texas. Grand Prairie will also be the sight of a future construction site for Aerospatiale, but that will be some years down the line.

The bottom line facing the Board of Trustees and Flight Technology when they make their decision is what will best serve the interests of the students? Continued use of the hybrid Cessna-Piper combination is almost certainly ruled out. There are next to no choices aside from the Aerospatiale and American General proposals. Within the next few months a decision will definitely be made, thus ushering in yet one more new era for Embry-Riddle.

Stuck . . .
Due to electrical malfunctions, this high-performance Mooney 20J cannot enter instrument weather. To compound problems, Daytona ATC temporarily stopped accepting IFR plans..

Mooney Electrical Woes

A week ago, both upper-level flight students and instructors were confounded by air traffic control as they

*see **Mooney**, page 6*

New president Sliwa arrives

Entrepreneur, former NASA manager takes ERAU's top spot

*by **Jon Osterholm***
Editor-in-Chief

Dr. Steven Sliwa, Embry-Riddle's new President, drove across the United States to get here. Many people may do such a thing out of a fear for flying. No need for Embry-Riddle students to worry, however. He drove not because he is afraid to fly, as he is a pilot himself; he drove only to do some sight-seeing along the way with his daughter, Tabitha. He also brought his dog on the long trip.

Before reaching Embry-Riddle in Daytona Beach, Sliwa made a stop at Embry-Riddle in Prescott, Arizona. There was a parent's weekend happening there, and he was able to meet some students and their parents, as well as ERAU employees. He dined with Embry-Riddle's Chancellor during his one day stop in Prescott.

Sliwa, his daughter, and his dog arrived in Daytona on the afternoon of Wednesday, July 3. He attended "race festivities" at the end of that week, and saw the Firecracker 400 on July 6.

Sliwa's wife works for NASA, as he once did (in fact, Sliwa was their youngest manager). He said she will be visiting to supervise moving in to their new home. "I think she doesn't trust me," he quipped.

Mrs. Sliwa will be here full time by the Fall, transferring to Kennedy Space Center. At the present, she is a manager in the artificial intelligence field for NASA in California.

Sliwa mentioned that he will be going to Oshkosh this month, for the EAA convention. While

*see **Sliwa**, page 11*

Settling in . . .
In the President's Office, Dr. Steven Sliwa contemplates the role he has taken on. He is looking forward to helping mold Embry-Riddle's future.

Moving on . . .
Former President Tallman was roasted, days before retiring, on June 28. He now plans to do consulting work in the aviation industry.

Kenneth Tallman retires after active six-year term

*by **David Fekke***
Production Editor

Faculty, staff, and the Administration got a final chance to say goodbye to President Kenneth Tallman, at the roast they held in hos honor Friday, June 28.

Tallman was president of Embry-Riddle from 1985 until June 30 of this year. Tallman announced his retirement last year, which began the search for a new president.

He is credited for many things as the president of ERAU. Many new buildings have been contructed on campus since he was president, such as the A.S.S.L. and A.W.S.C. complex, the library expansion, Spruance Hall, and the expansions to the John Paul Riddle Student Center.

He is acknowledged for the addition of new academic programs. Some of the new programs that have been added are the Aviation Business, Engineering Physics, and Computer Science programs.

Before President Tallman came to the University, very little was being done in the area of research. This has changed to a large extent since his arrival, especially with the addition of the Airway Science Simulation Laboratory.

Tallman is also credited with the upscaling of admission standards and academic standards. Last year's freshmen SAT scores are 100 points higher on average than when Tallman arrived in 1985.

Tallman was also responsible for

*see **Tallman**, page 11*

WERU radio takes second first step

*by **C. Adam Cerny***
Campus News Editor

As a service to the Embry-Riddle students, an organization was formed to improve their campus life in general and their listening pleasure in detail. It's quest is a radio station; it's name is The Broadcast Club.

In Fall of 1989 the club was chartered and its members set out to build a radio station that would weather the eons. Unfortunately, the complete and utter failure of ERAU's first radio station ten years previous had erected a major wall in the path of progress. The powers-that-be who witnessed the fall of that station have since appeared to have washed their hands of the whole affair; they have seemingly pledged to never let anything even closely resembling a radio station evolve. The Student Government Association recognizes an attitude like that cannot last at a university that is experiencing such rapid growth as ours. With the future in mind, the SGA has approved the first step.

Today marks the arrival of an engineering consultant who is a specialist in broadcasting. Hailing from a New York-based firm known as LPB, his mission will be to explore the feasibility and cost of installing an A.M. carrier current radio station on the Daytona Beach campus.(Similar to the closed circuit system at the Prescott campus.) A.M. carrier currents work by coupling an A.M. signal onto a building's AC wiring through the transformer. The consultant will be surveying the campus with the approval and encouragement of Physical Plant and Data Processing, who must guard against any possible signal interference, however unlikely it may be. At the culmination of the consultant's visit, the SGA's Radio Station Committee will have an accurate study on the equipment needed and its cost.

At the end of the Spring '91 semester a survey was taken by The Broadcast Club to

*see **WERU**, page 6*

Inside this week

Aeronautica . . .
The new Learjet 60 brings significant improvements in efficiency. ***See story, page 6 . . .***

News in brief . . .

Two **new courses** designed to help elementary and secondary school teachers motivate students through aerospace education will begin this fall at Embry-Riddle. The courses will provide methods of instruction and demonstrations on how to adapt material to their students' grade level. . .

James B. Busey, Administrator of the FAA, presented the "Excellence in Aviation Education" award to **Patricia J. Fleener-Ryan**. She received the award for her work directing aerospace education at the FAA's Aviation Education Teacher Resource Center at ERAU. . .

At the **EEA Convention in Oshkosh, Wisconsin**, a GAMA director and ERAU alumnus said, the association will offer a time and place for alumni to meet during the convention and fly-in. Call **Tom Arnold**, ERAU alumni office, at 1-800-643-0799 for more information.

The **SGA/*Avion*** is expecting shipment of a new computer publishing system before the end of the month. Long-running problems with the existing system inspired the purchase. The new system is a Macintosh, chosen by popular vote by the *Avion* Summer "A" staff . . .

The **SGA** and **Dean of Students Bob Rocket** are still interested in receiving filled-out surveys (in *Avion* issue no. 3 from this summer) from Eagle Flight customers/employees. Bring them to the *Avion* office, SGA office, or the Dean's office. Get copies in the *Avion* office. . .

An apple for the editor . . .
The *Avion* will be receiving new Macintosh equipment this month. ***See story, page 5 . . .***

THE AVION
Embry-Riddle Aeronautical University

Letters to the Editor

Parking changes cause grief

I am so damn tired of those occasional "modifications" that the staff of this university enact while busily looking the other way, whistling and scuffing their feet, hoping that the casual or apathetic observer won't notice what just happened.

You might assume that I have an example of this type of occurance, and I do. Nothing dramatic, but just the same, affecting the student in a decidedly negative way.

Sure, parking is an issue that has been beaten to death in the past, and I certainly would not bring it up if things had remained *status quo*, but I just watched another spot get swallowed by the university.

And it just so happens that this was the choicest spot on campus to park if you were lucky enough to get it. The spot of which I speak is just to the right of the parking circle for the S.C. mailroom.

Its not as if ERAU did not have enough parking spots outside the S.C. (there are three "University Parking" spots adjacent to the newest casualty), but they seem to feel obligated to take this last great spot away from us too. I guess it just bothered them that the spot was sort of in limbo, it didn't really have any markings or parking stripes, so they did the prudent and responsible thing -boom- UNIVERSITY PARKING.

No one asked whether the students might like to keep parking there. Forget the fact that it would have been an ideal spot for a Student Government division head (who works for free, and whose office is in the S.C.) no, the ERAU paint-truck might need to park there real bad.

Come on you guys, give us a break and let us keep those little things that make the day go just a little bit smoother.

Name and address
with-held by request.

Editorial

Embry-Riddle must land to survive

Looking at this campus, Embry-Riddle's main campus, there seems to be little space-- geographically-- for the University to grow here. Events of the past few weeks brought about in me a recognition that Embry-Riddle needs to attain more land-- property for a new campus extension-- very soon.

I hope I can depict the University's property plight clearly for students to understand. It is vital for students to recognize.

Especially in the case of new students and graduate students, growth at ERAU will be crucial to their education. New graduate programs need a place to exist. Freshmen may be here for six years or even more, and six years is a long time when considering ERAU's expansion trend, believe it or not.

Let me tell you how my realization came about, and, I hope, you too will see where ERAU's future may lie.

Last week, the *Avion* received a time capsule through the mail. A former *Avion* Editor-in-Chief, Tim Ewell, sent us a collection of campus newspapers from the period of July through December 1973. He said in a note that he thought we "might get a kick out of" the old papers. I got more than a kick out of them, I got a shock. Even the University Center, now named the J. Paul Riddle Student Center, was still an Administration dream then. That was only 18 years ago.

Dr. Jeffrey Ledewitz, Embry-Riddle's Executive Vice-President, was profiled in one of the old editions, so I thought he'd enjoy seeing that copy. Ledewitz, who was only a "Mister" then, was the Director of Counseling and Guidance in 1973. He's come a long way at Embry-Riddle in 17 years, and in those 17 years, ERAU too has come a long way. Ironically, Ledewitz is presently handling a bid to purchase land for the University.

He had several pictures of the campus laid out on a coffee table, and showed them to *Avion* Production Editor Dave Fekke and me. One picture was taken around 1972, when the only things on campus were the existing Academic complex (buildings A, B, C, E, and W) and Dorm I. Yes, the *only* things on campus-- nothing more was here. The Flight Department was located off-campus, on the other side of the airport.

Back then, there was a large expanse of open land between the dormitory and the other buildings, and the parking lot for the Academic Complex was the end of an old Daytona Beach Regional Airport runway. Embry-Riddle still looked like a little flight school.

The other two pictures were from around 1980 and 1990. In just the ten years between these pictures, the library, Spruance Hall, and the new flight buildings were built. And that was just the new buildings I could see in a glance at the pictures. The Air Science Simulation Laboratory (ASSL) across Clyde Morris Blvd. was also enlarged in that decade. Mind you, that's saying *nothing* of the growth between 1972 and 1980. No longer would Embry-Riddle be the name of a mere flight school, though some may still think so.

Jon Osterholm
Editor-in-Chief

In the years that President Tallman was here (and to his credit), from 1985 until June 30, 1991, most if not all of the mentioned development occurred. Let me re-word that: a large part of this University's growth occurred in only six years, the amount of time it takes a large number of undergraduate students to complete their degree at ERAU.

In 18 years, the floor space in campus buildings has quadrupled-- at least. And, as anyone can see, Embry-Riddle is running out of space. In the next six years, what can be constructed without additional land? Nothing, really.

There is hope for more land nearby. But it is simply not the University's for the taking.

Embry-Riddle administrators recently requested that the County of Volusia sell the University a tract of land across the street from ERAU's main entrance. In total, this land covers 70 acres. But half of it is part of a 1985 county resolution that gives the community on the other side of the acreage a 500-foot buffer zone. Some members of that community are vehemently fighting to keep development out.

The 35-acre buffer zone is intended to "prevent development from encroaching upon the neighborhood," a *News-Journal* article on the conflict stated.

I respect the community's desire to keep their standard of living the way they have enjoyed. But I also see, as I've expressed, that Embry-Riddle needs that land to expand. Ledewitz explained to me that there is no other direction for the University to move, regardless of how desolate some areas to the north may be.

How a portion of a community could think that a private University next door would lower their standard of living and the worth of their neighborhood's land is confusing to me. Would t'ey prefer to have some other organization change the county's mind in ten or less years? With the rapid growth that Central Florida is experiencing, let's face it, it's going to happen. But there will be no toxic fumes coming out of a graduate program building (a very likely part of the new campus area); no machinery will be whining through the night; and the only thing rising into the air would be softballs and baseballs from parks (which, if the blueprint I saw is accurate, will be much too far away to cause any broken windows in the community.)

In reaction to some residents' concerns, controls should be put in place to prevent students from parking on the neighborhood's streets and crossing neighborhood lawns to get to classes. I hope this will be done.

Ledewitz made it a point to mention that Embry-Riddle would not charge into the land with bulldozers blindly blazing. A master plan would be created in cooperation with an expert in propeny development, forecasting the best layout for the campus for the next 25 years. Ledewitz stressed that the University wants the respect of its neighbors (i.e., it would not put dormitories or concert grounds at the back yards of the community). He also said that the University will take what it can, but the 35 acres alone would cover Embry-Riddle's growth for only 5-10 years at best.

If we don't get enough of the land, certainly more than 35 acres, graduate programs will have to go elsewhere, say, the Prescott campus.

Dr. Steven Sliwa replaced Lt. Gen. Kenneth Tallman (USAF, ret.) as Embry-Riddle's president on July 1. President Sliwa is young-- 36 years old-- and, having a history as a successful entrepreneur and NASA manager, will most likely be full of ideas for improving the University. But if Embry-Riddle cannot expand its property, his ideas may be limited-- in Daytona Beach, anyway. If his ideas are held back, what will happen to educational offerings here in Daytona?

Some residents in the community think it would be bad for the land to be developed, which I think could be true-- in some cases. Most awful of all, in my eyes, would be the end of the expansion of the one of the area's educational institutions and major employers (one of the area's top employers). There's always the Prescott campus, which has a lot of space, but the thought of ERAU's growth in Daytona Beach being cut short has a saddening tone to it.

In essence, if ERAU students want more on campus, like a gymnasium, more recreational facilities (by the way, the airport took four of our rented ball fields for their expansion), and graduate studies buildings, they better hope ERAU can attain much of the 70 acres.

And if we should attain the land, let us show our neighbors what kind of neighbors we should be-- respectful ones.

Student Forum

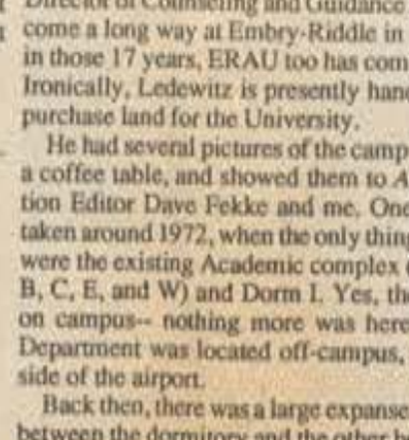
The *Avion* Asks: What kind of planes would you like to see on the flight line to replace the old ones?

Jackie Boenau
Air Sci.

"I think they're doing fine with the Mooneys."

Lisa Fahey
Air Sci.

"I've just started, but the planes they have now seem fine to me."

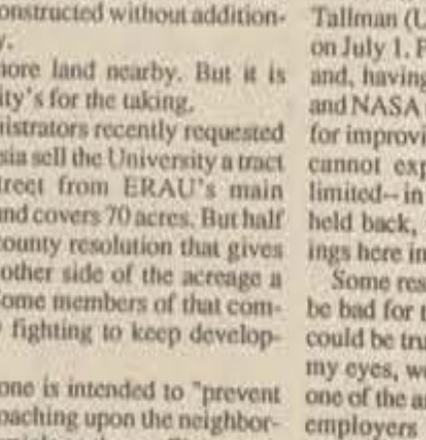


Dave Hachu
Air Sci.

"The North American Grumman looks like a nice plane."

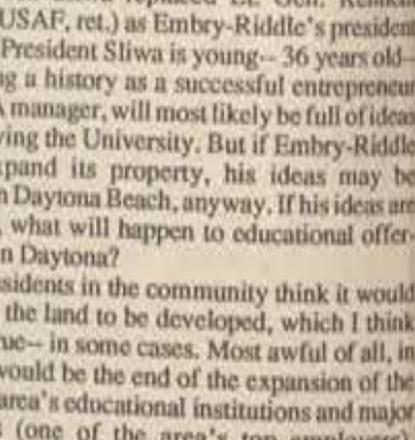
Casey Chi
Avionics

"The Trinidad, because everything is so easy to use in it."



Sergio Zritune
Air Sci.

"Tigers, because I used to fly them and they are much faster...more quite...and you can fly with the canopy open."



Dave Maloney
Air Sci.

"They should get the new Tampico. It looks a lot better."

College computing taken to new heights of education and pranks

by Jesse Gary
College Press Service

For students, it means being plugged into huge networks that let them engage in "collaborative writing."

There will be nifty new ways to study science.

And certainly not least, there is a brave new world of pranks for students to explore.

Such prospects, of course all depend on the information networks now being linked together at scores of colleges. The networks, the academicians gathered at the seventh annual Academic Computing Conference June 11-13 in Dallas seemed to agree, will remake the future of college computing.

"We'll create more interest and excitement in students and increase interaction between faculty and students," said Larry McKinney, acting vice president for IBM's Academic Information Systems business unit, formed in 1983 to help campuses enhance the quality of education through the use of technology.

At the conference, professors from around the country conducted sessions about their advances in academic computing for teaching, research and libraries.

Students around the country, they reported, now are using computers and other high-tech devices to study human anatomy, chemistry, accounting and even history writing.

New graphics and visuals are making computers even more flexible teaching tools, asserted Charles Landis, an educational media consultant with Interactive Generation in Seattle.

"A well designed, multi-media curriculum increases retention and learning," Landis said. "It will increase the quality of education students (receive)."

"For the students that have grown up (watching) MTV, they can lock onto learning through PCs, McKinney added.

However, there can be a darker side to the technological revolution.

When Pennsylvania's Mansfield University installed cable TV hookups, voice mail and connections to the university's mainframe computer system in each room in 1987, administrators noticed that many students were spending more time alone in their rooms, becoming "room rats."

Nevertheless, campuses are pushing ahead with new technology in the classroom.

University of Maryland history Prof. Chad McDaniel, for instance told of the use of color maps of the illiteracy rate in different regions of the United States in the 1850s, saying they help students learn about social trends. The screen can be split to show absolute and proportionate numbers, thus giving students two different sets of data.

"It allows you to show students that history isn't a body of facts. It allows people to explore issues their books didn't," McDaniel said. "Students find it a much more interesting way to learn history."

Good, bad or indifferent, computers have been reshaping campus life for about the last eight years.

In 1983, either Clarkson University in New York or Stevens Institute of Technology, depending on which publicist is speaking, was the first to equip all its students with personal computers.

From there, campuses around the country rushed to somehow fit computers into their curricula.

Now other campuses, including Drake and Northwest Missouri State universities have equipped their residence hall rooms with computers on campuses in 1989, up from 31 percent five years earlier, a U.S. Census Bureau report found.

Almost half the students of traditional college age: 18 to 21 years old, used the machines, the largest proportion of any age group, says the report, "Computer Use in the United States: 1989."

With the machines' spread, of course, has come high-tech pranks. At the University of Maryland at College Park, for instance, messages similar to a chain letter were sent in April to 4,000-5,000 campus residents, clogging students' computerized voice mail boxes, leaving no room for legitimate messages.

The academic uses of computers are equally far-reaching, experts at the Dallas conference maintained.

Computers on campus . . .
The future of higher education is full of networks, collaborative writing and more, attendees at a Dallas conference discovered. Here, a physics lecture comes to life on the computer's screens.

William Wresch, a professor at the University of Wisconsin Stevens Point campus, reported how he uses high speed computer networks to teach even a liberal art like writing skills.

Each student in Wresch's class has a desktop PC, which is linked to everyone else's. Students can send or receive messages, make suggestions, or correct written work.

His students, he said, get more out of writing assignments when they are encouraged to collaborate with their peers, and the instructor becomes more of a facilitator and less of an attention figure.

Released from the normal social constraints of today's classrooms, students produce a broader style of writing, while the instructor becomes more approachable.

All of the advances in technology, McKinney said, may forced students to change the way they shop for the machines.

"Most of the experience students have with computers is from personal computers," he said. "Now when they make computer purchases, they should think about how they can plug into (the school's system)."

Money troubles may halt America West orders

Seattle, WA (AP) Financially troubled America West Airlines said it is reconsidering about $1.5 billion in plane orders with the Boeing Co. America West, which filed for Chapter 11 bankruptcy protection last week, has ordered four Boeing 747-400 jumbo jets, 15 737 jetliners and 10 757 jets.

"We are re-evaluating those orders. It is possible there will be changes," America West spokesman Michael Mitchell said Tuesday. Boeing spokesman Randy Harrison said America West had not contacted Boeing about any order changes.

"At this point, there has been no impact on our order status as a result of America West filing for bankruptcy," he said.

Avmark Inc., an Arlington, Va. based aviation marketing and management company, predicted America West would cancel at least some of its orders.

"The 747-400 is a high-cost bid. It would be wise for them to consider cancelling that order," said Avmark spokesman Paul Turk of the $560 million 747-400 order.

If it cancelled orders with Boeing, America West would be the first in this wave of bankrupt carriers to do so.

"Boeing has seen order stretch-outs and deferrals during this slump. It is just a matter of time before they see some cancellations," Turk said.

America West, based in Phoenix, is the nation's ninth-largest carrier, serving 55 cities with 10 flights to Seattle daily.

Surplus...
America West may not buy this Boeing aircraft.

New airport will make significant difference

by Jon Osterholm
Editor-in-Chief

When Volusia County's improvement project at the Daytona Beach airport is done, the modern facilities promise to be worth the recent inconvenience caused to Embry-Riddle students and others.

The three-level terminal soon to be under construction at the airport will have 110,000 square feet more space than the existing terminal. It will make room for the airport's steadily growing passenger traffic, which has increased fourfold since Volusia County assumed ownership in 1969.

The three-level terminal . . . will have over 100,000 square feet more space than the existing terminal.

Passenger boarding levels between 1986 and 1990 increased from approximately 306,000 to more than 525,000 passengers per year.

The improvement project, named "Daytona Beachport Project '92: The Vision Takes Flight," is a goal that "has been a major quest of the County of Volusia for more than ten years," the airport's director, Dennis McGee wrote in a public letter about the project.

Big John, Chairman of the Volusia County Council, wrote in a public letter that the project, at a cost of $57 million, "is the largest public construction project in (the county's) history."

The history of aircraft access to Daytona began far from the regional airport. Daytona Beach's first airport was actually the beach itself, as was the first car racing course in the area. In 1930, an airport was built at the present site. The airport was used by the Navy for training during World War II, and in 1945, was reclaimed by the City.

In the 1950s, the present terminal was constructed. The soon-to-be terminal comes at a time when passenger traffic is growing at a high rate.

Embry-Riddle Aeronautical University moved operations to the Daytona Beach area in 1965, which over time increased small aircraft traffic as well as air carrier passenger traffic. Volusia County assumed ownership of the airport in 1969. In 1971, Walt Disney World opened, attracting more traffic to Central Florida, including Daytona.

Embry-Riddle's aircraft traffic is a large part of the reason why Daytona's airport is one of the busiest in the nation.

The airport's passenger traffic continually climbed throughout the two decades from 1960 to 1980. Business was so good that air carriers were fighting over slots into Daytona in the 1970s.

In 1981, with a recession, ATC strike and deregulation, business slowed for the airport. But in 1985, the business decline ended and Daytona Beach Regional Airport recorded rapid growth in passenger traffic once again.

The recently started project includes more than construction on the new terminal. Perhaps most obvious to Embry-Riddle students at the moment, Catalina Drive, accessing the back entrance to the University, is being re-routed. In addition, new roads are being built to accommodate airport consumers. Rental car companies will have new buildings, which are now visible north east of the terminal.

A new hangar for maintenance is being built near the rental facilities. The new hangar can be seen easily from Embry-Riddle's campus, appearing only as a large red frame recently.

The project's completion date has been set for November of 1992.

Coming soon . . .
This model depicts the proposed new terminal complex for Daytona Beach. The complex will have nearly triple the capacity of todays terminal and will incorporate a modern planning approach in all aspects of construction and traffic management.

Avion picks best of bushel

Campus newspaper staff chooses Macintosh

by Brian Gerk
Managing Editor

At the close of the summer A term, the Student Finance Board voted to fund an entire Apple Macintosh network renovation for the *Avion* office. The cost of the system was approximately $21,000.

The move was made to prevent a steadily deteriorating situation from growing any worse.

Numerous mechanical difficulties and network failures associated with the various IBM compatible computers that the were producing the newspaper, had escalated to the point of delaying the *Avion's* release.

The new computers will be paid out of the Student Government Association's unallocated fund. A large percentage of the fund has been contributed by the *Avion's* excess advertising revenue.

The *Avion* considered many proposals offered by various computer firms in the local area. The Apple system was found by the staff of the *Avion* to offer the most advantages in a desk-top publishing environment. The Macintosh promises to deliver both reliability, speed and simplicity.

Local Apple dealer Mini-Concepts will install and service the equipment. The system will consist of two Macintosh IIci high performance processors with accompanying high-resolution two page monitors, as well as four Macintosh Classics for use as work stations and text entry.

The *Avion* had been beset by debilitating network failures, including the loss of files, system lock-ups and extrordinary printing delays. Since the Avion is a volunteer organization, it was difficult to foster new staff with such problems.

The system is to be installed within the next month.

The big Apple . . .
This Macintosh IIcx is very similar to the faster model IIci, two of which have been purchased by the *Avion*.

Dating other students earns extra credit Lehigh and Xavier U.

(cps) - A professor and an administrator at two different schools are trying to bring back what they say is a disappearing pastime on college campuses: dating.

The two are using their classes to encourage students to socialize with their peers.

"With all the sexually transmitted diseases hitting the front page of every newspaper and magazine in the world, "students have been hesitant to date in the past decade, explained David Coleman, director of student activities at Xavier University in Ohio.

"The majority of young people don't go into the normal healthy process of meeting one-on-one," agreed Bruce Smackey, a marketing professor at Lehigh University in eastern Pennsylvania.

To get his students to go out and meet each other, Smackey has started offering extra credit to students who go on dates.

Smackey offered the 33 students in his "New Product Planning" course this spring five extra points on a test if they go on a date during the course.

Dating a student in the class nets both students an extra seven points. A student who gets turned down three times receives a "hero's award" of five points.

"In reality, the points will not penalize students one way or another," Smackey admitted.

Students say the idea has encouraged them to meet their peers. "At Lehigh, there just isn't a lot of dating that goes on at all," said Julie Johnson, a senior who dated a graduate student outside of class to earn five points and later earned seven more by dating a classmate.

"I think (Smackey's) intentions are good in that he sees a lack of interaction" among students on campus, Johnson added.

At Xavier, Coleman tries to change students' attitudes about dating through a class he has taught at the university and around the country since 1985.

That's when a group of students, sitting around Coleman's office, were trying to think of something to do. "The only thing they could think of doing was going to a local bar," Coleman explained.

So he developed a class in which students talk about how to find a date, the fears involved with dating and creative ideas for what to do on a date.

Some of Coleman's 300 creative date ideas include climbing a tree, making ice cream, taking a self-defense course, catching fireflies and renting a bicycle built for two.

Students taking Coleman's class receive copies of the "Ten Commandments of Dating," which include "never asking your date's major" and "always sending a small gift after the first date."

They also get the "Dater's Bill of Rights," which says students "have the right to refuse a date without feeling guilty."

Coleman and Smackey have different thoughts about why students are so reluctant to date.

"College is a microcosm of society," and society fears dating primarily because of sexually transmitted diseases, Coleman theorized. Smackey sees students' fear as a function of low self esteem.

Something has happened in our society that has made the issue of rejection a great concern among young people," he said.

(photo courtesy of the Walt Disney Company)

Chatting on the set...
The Rocketeer and Ben Vereen chat between takes on the set of *Rocketeer*. Vereen, who is working on the new National Parents Quiz, is not featured in this movie.

Barnstormer beats Nazis in *Rocketeer*

by Ron Roberts
Photography Editor

Now that the summer rush of movies is upon us, it's getting harder and harder to tell the bad from the worse. But even if you plan not to see any movies at all, at least see the one that is destined to be one hit of the summer, *Rocketeer*.

Rocketeer, based on a Marvel graphic novel, combines the excitement and comedy of Indiana Jones *Raiders of the Lost Ark* and the original effects of *Star Wars*.

Rocketeer puts all of this together into pre-World War II Hollywood, 1939. The clothing, cars and scenery are all extremely accurate as are the airplanes.

The script is very well written with a sound plot. The basic premise being that Howard Hughes developes a rocket pack which is stolen by gangsters, who are working for a Nazi spy(Timothy Dalton), and is hidden in an airport hanger to keep it from the FBI.

The basic premise being that Hughes develops a rocket pack which is stolen by gangsters, who are working for a Nazi spy...

A young pilot, Jim Secord, and his mechanic/friend, Peavy, find the rocket pack and quickly discover what it can do. This makes for one of the best, "test flights," of all time. Of course, the Nazis, the FBI, and the gangsters all want the rocket back no matter what.

This movie is guraenteed to keep you on the edge of your seat waiting to see what happens next. And then you'll fall out of the seat laughing.

This is also a great movie for all ages. The older people will like it because of the historical accuracy and refrences. The college students will love it for the adventure and excitement.

The Riddle students will love it for the airplanes and aviation accuracy. And the younger kids will like it for the comic book character.

Rocketeer opened June 21st at Voulsia 4-9 and can also be seen at the Volusia Square AMC theaters. Go see this show! And remember, no matter what happens, it's all part of the show.

Piers Anthony tries horror of a new kind

by Ron Roberts
Photography Editor

Piers Anthony's latest release, *Firefly*, has been called filth, trash and a work of genius. Unfortunately for Piers, *Firefly* has not been getting much publicity due to its controversial nature and the recognition it has gotten has been less than helpful.

Firefly is billed as the first horror novel by Mr. Anthony, but it's not the horror of a monster or some crazed axe murderer. *Firefly* is the horror of sexual abuse. The monster, called the firefly, is mainly to emphasize that message. Due to the books main theme of sexual abuse, *Firefly* is very explicit and intended for mature readers. But this is no cause to censor it as I found when I talked to Mr. Anthony last week.

Mr. Anthony claims that his publisher sent out the books to the bookstores but the stores did not put his books on the shelf to sell or if they did, it was only for a few days. Apparently, the bookstores judged that the book was to controversial to sell and returned the books to the publisher. Needless to say, Mr. Anthony was more than a little upset about this. I had to order the book from a bookstore in the mall because they were not carrying it.

Piers Anthony feels that this is a relevant message for modern society where rape, spouse abuse, and child molestation are almost too common. *Firefly* manages to deal with all of these types of abuse through five well-developed characters drawn together by the firefly and the stories told by the characters themselves. Though *Firefly* has quite a few sexual scenes in it, they are not erotic. Rather, they are to make the reader think while being entertained.

Mr. Anthony has received a lot of letters regarding *Firefly*. One from a librarian claimed that the book was filth and that she would not put this in her library. Others have praised him for writing this book because they have suffered sexual abuse in the past and have been ignored by the legal system. Unfortunately, most of the letters though have been of the former type.

Piers Anthony writes on, "many levels", though. Those who see it as trash are only seeing the level of sex. But those who praise the novel are understanding it on all its many levels.

Firefly also has a strong environmental protection message that is in almost all of Piers Anthony's books. But of course, that is much less controversial and goes largely ignored by the masses.

Firefly is not one of the mainstream horror novels nor is it one of his classic fantasy novels, but it is one of the best and most important novels of our time. The novel may not be for everybody but the messages carried in *Firefly* need to be heard. *Firefly* is currently out in hardcover and is due out in paperback next year. Look for it in the bookstores and if they will not carry it, order it through the store or directly from the publisher, Morrow Publishing.

Special effects and action make *T2* a spectacular movie

by Jason Simon
Diversions Editor

He said that he would be back, and he is. Schwarzenegger has returned, but this time he plays the good guy in *Terminator 2, Judgement day*.

The story from *Terminator* has been continued, Sarah Connors has given birth to John and she has been admitted to a mental institution since no one believes that she knows the future. Meanwhile, young John is in a foster home and has become quite a rebel and a whiz with computers.

Then the fun begins; at a lone truckstop a orb appears and from the depths of the orb appears Arnold as the first terminator. Soon afterward, in another section of town, the other terminator appears.

The second terminator is an advanced prototype; it is made of liquid metal and is capable of simulating anything it comes in contact with. It has two major limitations, it cannot form complex machines, such as a bomb or gun, and it can only imitate forms that are of approximately the same size and mass of itself.

As far as the special effects go, I have not seen a movie with such spectacular special effects in a long time. It was nice to see bullet holes that did not follow a straight line! In addition, when Arnold launches a grenade into a police car, I was surprised to see the glass shatter first. It was very impressive.

The coordination between the live actors and the computer imaging that was done to simulate the liquid metal Terminator was excellent. They did a real top job!

I did have some problems with the movie; first I did not like the advertising that was done in the movie. It seemed that the whole world only ate Subway sandwiches and drank Pepsi products.

Another problem I had with the movie was the humanizing of the terminator at the end of the movie, while the terminator was programmed to learn from the human race I do not agree that the machine could learn that much about how humans behave in that short amount of time. The scene of John Connors embracing the terminator and Sarah actually shaking his remaining hand bothered me quite a bit.

Despite these drawbacks *Terminator 2* turned into a movie I will see again. It has already made 53 million dollars at the box office in a mere six days so I think that the makers of this rumored 100 million dollar movie will get their money back. See this movie, it is worth the admission many times over!

Lear and Pratt & Whitney roll out the new Model 60

by Frances L. Cozza
Aeronautica Editor

Learjet has recently tested their new business jet, the Model 60 with Pratt & Whitney Canada engines. According to Peter T. Reynolds, Learjet's chief of engineering flight test, " It's smooth, fast and easy to fly, there were no surprises in any of its flight regimes. " In addition to its handling, Reynolds said the aircraft achieved the planned airspeed and altitude with little effort. The Lear 60 remained aloft for 1 hour and 35 minutes, testing many of the significant improvements such as the aerodynamic design.

"Brian E. Barents, Learjet president and chief executive officer said the Model 60 will be " the largest jet ever produced by Learjet and will offer unprecedented range and fuel efficiency, a spacious cabin with full aft lavatory and a number of new passenger amenities. "

A significant feature of the Model 60 is its Pratt & Whitney Canada PW305 turbofan engines described as high speed, high altitude, and fuel efficient. Each engine is flat rated at 4,400 pounds of thrust with outside temperatures up to 80 degrees Fahrenheit. Low fuel consumption is achieved as a result of higher pressure and bypass ratios. Dave Caplan, president and chief executive officer of Pratt & Whitney Canada, was very pleased in partaking in the beginning and completion of the Lear 60. " We are proud to P&WC power a Learjet, " he said, " and we look forward to building a solid, long-standing relationship that will be beneficial to both companies."

These new designs employ the most advanced computational methods available...

One of the capabilities the Learjet 60 has is a maximum operating speed (Mmo) of .81 Mach or 533 mph. In addition it will be certified for flight up to 51,000 feet and will routinely have a flight level between 43,000 and 51,000 MSL to take advantage of optimum winds aloft and lighter air traffic.

Increased performance and efficiency extends the Lear 60s range, enabling it to travel as far as 2,800 nautical miles with VFR reserves. This will allow the Model 60 with NBAA IFR reserves to fly nonstop from New York to Los Angeles, San Francisco to Honolulu, London to Cairo, or Stockholm Riyahd. Flights from London to Houston or Los Angeles to London can be achieved with a single stop.

Further improvements of the Model 60 have been incorporated since it was introduced late last year. Aerodynamic improvements to the inboard wing (including an increase in wing area), the wing to fuselage fairings, a change to the winglet shape and a redesigned engine pylon have reduced the total aircraft cruise drag by over 4%, which converts directly into fuel efficiency and increased range.

The aerodynamic improvements also result in improved buffet characteristics which allows for flights to higher initial cruise altitudes at increased gross weights. These new designs employ the most advanced computational methods available including extensive analysis at the NASA Ames Research Center in California utilizing NASA's Cray computer and TRANAIR software program.

Barents pointed out, Learjet is dedicated to making the Model 60 the best possible aircraft for the mid-size market. We intend to produce the Model 60 for many years and our investment is based on a long production life. FlightSafety International has committed to building a Model 60 simulator to support ongoing training requirements." The company expects to have the Model 60 certificated and initial deliveries underway during the fourth quarter of next year.

Fuel efficient
The new Model 60 pictured here, features new aerodynamic designs, comfort and remarkable fuel efficiency. Pratt and Whitney PW305 turbo-fans power the Model 60. The aircraft will be delivered in the late 92.

Lockheed offers grants

by Frances L. Cozza
Aeronatica Editor

A grant given by Lockheed Air Terminal, a subsidiary of the Lockheed Corporation provided Embry-Riddle Aeronautical University in Daytona Beach, with $3,000 to support aviation-related student scholarships.

Through the Lockheed Leadership Fund, established in 1953 to provide monetary assistance to the education field, the corporation has given more than $1.5 million in scholarships and grants to more than 70 major universities in the United States this year.

The contribution represents Lockheed Air Terminal's support of the aviation engineers, managers, and scientists of tomorrow, " said Viggo M. Butler, President of Lockheed Air Terminal.

" We want to promote the students of Embry-Riddle Aeronautical University by providing them encouragement and financial assistance as they pursue their education, " Butler added.

the corporation has given more than $1.5 million in scholarships and grants to more than 70 major universities...

Lockheed Air Terminal, headquartered in Burbank, California, is the largest and most experienced private developer, operator and manager of commercial airport and airport terminal facilities in North America.

Any students interested in the grants should get more information at the Financial aid office in the first floor of Spruance Hall.

Mooney

(continued from page 1)

tried to open their IFR flight plans in ERAU's Mooney 20J aircraft.

"We have your clearance, but we cannot give your flight IFR clearance due to the restrictions on your aircraft." was the response many students were subject to while trying to obtain clearance on the ground. The students were then given two options: cancel their flight, or attempt to make the same flight under visual flight rules (VFR).

This situation, though not very new to the FA-250 students, presented yet another twist in a complicated curriculum that has been dogged by problems with the Mooney electrical system.

Months ago the Mooney aircraft were limited to instrument meteorological conditions (IMC) mandated by Embry-Riddle's internal policy. This basically meant that the M20J's could not enter clouds, icing conditions or any areas of limited visibility (such as heavy rain). The reasons for this stem from recurrent failures in the Mooney electrical system.

Voltage overloads, alternator failures and starter problems are examples of these types of problems. After Mooney Corp took one of the ERAU aircraft back to their factory for further testing, the plane came back with a burnt-out starter. These types of problems have the flight department very concerned with future delivery of any further M20J's, which are scheduled to take place in the next few months.

Mr. McDuffee assured the Avion that ERAU did not ask air traffic control to decline IFR clearances, but he understands why they have done so.

"They were essentially stuck with vectoring IFR aircraft just the same as VFR, which made it very difficult for them to plan for IFR traffic separation. I understand their reasoning behind it. But no other ATC locations applied these restrictions," said McDuffee.

The IMC restriction is still the only one that the ERAU flight department has issued as far as IFR flight is concerned. Daytona ATC, after a meeting with Mr. McDuffee, agreed to accept IFR flight plans but will make no allowances for an IMC restriction. If a pilot deviates from ATC instructions he will be quickly reported to the local FSDO.

According to McDuffee, this week Mooney Corp. will conduct a meeting with the entire factory staff connected to the M20J, and ask for recommendations from the ground up to rectify the current electrical situation. After these resolutions are decided upon Mooney will immediately send one or two service representatives to ERAU to actively institute the changes to the aircraft.

In the mean time, any FA-250 students who so wish may complete their flight course (including the phase check) in either an IFR equipped Cadet or Skyhawk. The students must inform their instructors of their decision as soon as possible. The students are still required to complete the high-performance standardization section of the course in the Mooney.

WERU

continued from page 1

asses the student body's views. The results follow: 89% of those polled supported an SGA funded radio station; 84% approved of $3.50 of their existing $30.00 SGA fee to be spent in the procurement of a station; 87% felt that the university community would benefit from a campus radio station; 54% would volunteer their time in the operation of a campus radio station. It is with this overwhelming support that the aforementioned committee acts for the student body. The committee's chair, Alyssa Sudlow, expresses great enthusiasm in the quest and encourages all questions and opinions. If the reader is interested in taking a walk with The Broadcast Club one can contact its members through the SGA.

To listen you only need ears; to hear you need WERU.

Space news...

Scout/Rex rocket launch is a success... NASA launched its 114th Scout launch vehicle successfully on Saturday, June 29. The rocket which was launched into a 450 nautical mile polar orbit carried an Air Force Radiation Experiment (REX).

***Ulysses* sets course for Jupiter fly-by...** The *Ulysses* spacecraft fired two small thrusters on Monday to set the final course for its early February 1992 rendezvous with Jupiter. The maneuver was conducted by the mission operations team at the Jet Propulsion Laboratory in Pasadena, California. This was the last change to the spacecraft's flight path before it reaches Jupiter.

Ulysses is currently traveling a speed of 44,000 miles per hour. Once it reaches Jupiter it will only stay there for a week before it darts out towards an encounter with the Sun in June 1994.

Ulysses is a 5-year joint mission by NASA and the European Space Agency (ESA). Tracking and data collection are provided by NASA's Deep Space Network, which is managed by JPL.

***Galileo* sets course for asteroid encounter...** The *Galileo* spacecraft fired its small thrusters on July 2 in order to set an encounter path with the asteroid Gaspra, the first flyby of an asteroid ever performed, in October 1991. *Galileo* will fly by Gaspra, 8 mile across, at a distance of 1,000 miles.

Galileo is currently enroute to the Jovian system and ultimately Jupiter where once around its orbit it will send a probe into the planets atmosphere. It will reach its final destination on December 1995. The *Galileo* mission is managed for NASA's Office of Space Science and Applications by JPL.

Manifest for space shuttle flights during 1991-92

Date	Mison	Vehicle	Payload
July 91	STS-43	*Atlantis*	TDRS-E
September 91	STS-48	*Discovery*	UARS
December 91	STS-44	*Atlantis*	DSP
February 92	STS-42	*Discovery*	IML-1
April 92	STS-45	*Atlantis*	Atlas-1
May 92	STS-49	*Endeavour*	INTELSAT-R
June 92	STS-50	*Columbia*	USML-1
August 92	STS-46	*Atlantis*	TSS-1/EURECA
September 92	STS-47	*Endeavour*	Spacelab-J
September 92	STS-52	*Columbia*	USMP/LAGEOS/ CANEX

UARS Spacecraft to study ozone layer

by **Jose L. Vazquez-Delgado Jr.**
Space Technology Editor

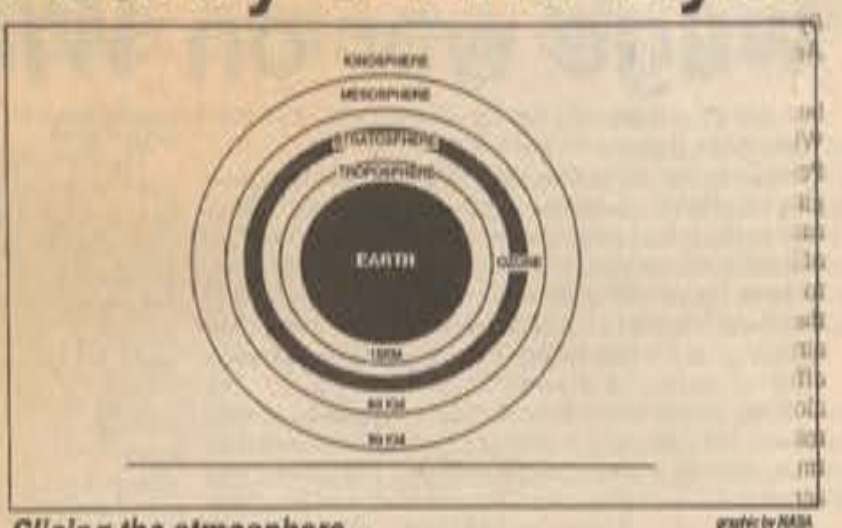
In the last three years, NASA has embarked in the launching of satellites destined to explore the planets of our solar system. The *Magellan* spacecraft was propelled to Venus to map it's surface, *Galileo* was impulsed to Jupiter to unravele the mysteries of the largest planet of our system and *Ulysses* was darted towards the Sun to study it's poles. In September, the *UARS* spacecraft will be launched to study the most interesting planet of them all, Earth.

The Upper Atmosphere Research Satellite (*UARS*) will study, observe and analyze the stratosphere, mesophere and lower atmosphere. In essence, it is an international venture intended to investigate the global climatic and atmospheric changes from space. England and Canada are among the countries that have contributed to the making of *UARS*.

UARS especific mission objectives are to understand the causes of ozone depletion and to assess the role of human activities in atmospheric changes. It is a 35-foot spacecraft that will be launched aboard Space Shuttle *Discovery*, Mission STS-48 in early September.

The ozone layer is a thin belt within the stratosphere that provides Earth with a protective shield against the dangerous and violent ultraviolet (UV) radiation that enters the Earth's outer atmosphere. It has been observed since the '70's that human activities are generating detrimental long-term effects on the global Earth system that may be irreversable. Among the effects are the increase in skin cancer, cataracts, destruction of crops and plankton that support terrestial and marine life.

Last Monday, project managers and project scientist participated in a science briefing and showing of the satellite at the Kennedy Space Center (KSC). Mission STS-48 astronauts also participated on the showing of *UARS* at one of NASA's clean rooms. The briefing revolved mostly at the threat of the ozone layer depletion and the difficulties the program's survived.



Slicing the atmosphere...
The ozone layer is contained inside the stratosphere.

Are you sure it's clean?...
Technicians inspect and assemble the UARS spacecraft in one of NASA's clean room. GE Astro is in charge of the spacecraft's lightweight, low-distortion platform design.

> ***... human activities are generating detrimental long-term effects on the global Earth system that may be irreversable...***

The study of the ozone layer began back in 1984 with hopes for a mission in 1989. Originally there were going to be two spacecrafts instead of one, having one launched from the KSC and another one from the Vandenbur site in California for a higher inclination. Plans rapidly changed to one satellite to be launched from KSC with a maximum inclination of 57 degrees. But unlike other NASA projects, *UARS* will actually bolt into space 35 million dollars under budget and one month ahead of schedule.

The launch window revolves around *UARS* being able to make two Northern Hemisphere winter observations, but actually observing both, the Artic region and the Antartic region. This means that its mission could be accomplished in only 18 months, but it has a life expectancy of 36 months at a cost of approximately 740 millions for the entire program. If *UARS is* delayed by weather or other technical reasons it will have a launch window until December 31 of this year.

NASA expands space communication network

by Jose Luis Vazquez-Delgado Jr.
Space Technology Editor

NASA is getting ready for the launch of Mission STS-43 which will occur at the end of this month. Senior officials will meet by the end of this week to set a launching date. It will be the ninth flight for *Atlantis*. The primary objective of the mission is to deploy the third Tracking and Data Relay Satellite, *TDRS-E*.

Once it is deployed and boosted to geosynchronous, it will become part of a sophisticated TDRSS communication network linking low-orbiting spacecraft with Earth. Spacecraft orbiting Earth at low altitudes have a limited communication time of 15 minutes of every 90 minute orbit. This network will increase communication time from 15 percent to anywhere between 85 and 100 percent during a spacecraft orbit.

The first, *TDRS-A*, was deployed in April 1983, but the second, *TDRS-B*, was destroyed along with the Challenger. *TDRS-D*, a third satellite, was put into orbit in March 1989. The TDRS is actually one of the largest, heaviest and most complicated satellites ever launched into geosynchronous orbit. Even though, once in space it is moved only by 12 one-pound thrusters which are no bigger than a small human finger.

The *TDRS-E*, attached to a 32,000-pound Inertial Upper Stage (*IUS*) booster, will be deployed at about six hours into the mission. TDRS separation from the *IUS* will occur about 13 hours into the mission.

Besides the *TDRS-E* deployment, the STS-43 crew will also work on a variety of payloads to support programs like the Extended Duration Orbiter, Space Station Freedom and medical, materials and evironmental research.

TRW Space and Technology Group in Redondo Beach, Calif., has contracts with NASA to provide seven TDRS spacecraft. Boeing Aerospace Co. in Seattle, Washington, builds the *IUS* upper stage under an Air Force contract.

Say cheeeese...
The STS-43 crew includes from left S. Lucid, J. Adamson, Comm. J. Blaha, G. Low and pilot M. Baker.

IBM and Quarterdeck wage war on *Windows*

Microsoft®
Making it all make sense™

***Windows* shuttered ? ? ?**
Microsoft is having trouble making sense of two attempts to hurt its lucrative *Windows* software.

by **Joe Cambron**
Data Tech Editor

With the success of Microsoft's graphical operating system for IBM PC computers, *Windows 3.0*, software vendors are realizing that there is more to making software than applications and games. One program called *GeoWorks* already "improves" upon *Windows* with its own brand or graphical interface. This article will discuss two new programs that could change PC computing dramatically over the next twelve months.

Many people now realize that the environment of *Windows 3.0* is essentially a replica of the MacIntosh interface. Two other soon to be released programs will use this type of interface, but at the same time will bring new flexibility to the PC and software programmers. These two new products are entirely new operating systems.

The first, and less exciting of the two, is called *Desqview X*. Many people have heard of *Desqview*. Its simple capability to run more than one program at a time, or multi-task has been well-received by users. What makes this new version so much different than past versions is the "X" in its name. The "X" stands for *X Windows*. For those unfamiliar with Unix, Unix is one of the most popular operating systems for high-end computers, *X Windows* is its menuing system.

"So what?," you may ask. Most people are not familiar with Unix's interface anyway. Well, the important step here is that not only does it look like *X Windows*, it also acts like *X Windows*, meaning it can run Unix *X Windows* programs. This is a significant bridge toward the future. This may also give the makers of Unix, primarily AT&T, a boost in the PC market.

OS/2 2.0

The other product is one that most computer users have heard of or talked about, but few have actually seen. That product is *OS/2, or Operating System 2*. Formerly manufactured by Microsoft, the product is now being developed by IBM, and a major release is being prepared for late this year. *OS/2 2.0* may be what *Windows 3.0* was two years ago, in fact, it could be even bigger.

Some of the things that *OS/2 2.0* can do are pretty exciting. An early version is now circulating among program testers, and this reporter has seen and used it, here is what it will do for you:

- A new file directory system for your hard drive that allows 254 character file names with spaces and periods. It also is able to keep a record of the file creation date, the last access of a file, and the last time it was changed.

- Compatibility with DOS *3.3* and *4.01* on the test version and probably compatibility with DOS *5.0* which is now available. DOS programs may be run from windows in *OS/2*, and unlike earlier versions of *OS/2*, more than one DOS windows may be run at once. Hard drive and floppy formats maintain compatibility if you do not use the high performance file system. DOS and *OS/2* can even both reside on the same hard drive with DOS booting from a floppy disk.

- Most important for stealing *Windows 3.0* users is an interface almost identical to *Windows*. The only differences are improvements. Security features exist, unbelievable levels of detail in setting the environment to your tastes, and a clearer method of shutting down the computer.

- The little things are even included in the test version. The ability to use the mouse within different programs when more than one window are on the screen at the same time. This is something *Windows 3.0* can not do.

- Most importantly, *OS/2* does one thing DOS and *Windows* will never do, completely wipe away the memory barrier at 640K. *OS/2 2.0* test version will not even run on anything less than an 80386 based computer with two or three megabytes of RAM. The computer this reporter used had eight megabytes of RAM, and the program made *Windows* seem inchworm-like.

IBM even promises that the new version of the program will run *Windows* programs directly from the *OS/2 Presentation Manager*. This option could make *Windows* an also-ran in the Graphical User Interface business.

An always chipper William Gates looks at the release of *OS/2* a little differently. The Microsoft President thinks that *OS/2* will end up running only Windows programs on user desktops because developers will not bother to take advantage of *OS/2*'s capabilities. Even if this is the case, the speed advantage makes *OS/2* a better program.

Stay tuned for this Fall. William Gates has said he will eat a floppy disk if IBM can release *OS/2 2.0* before year end.

(This article is reprinted by permission from PC Product Review, an electronic magazine available on Bulletin Board Systems via modem.)

MS Word 5.5 now available

by **Joe Cambron**
Data Tech Editor

Microsoft *Word 5.5* is one of those products that heralds a new era. As with most changes, the era may not be welcome, however.

Microsoft *Word 5.5* is Microsoft's first attempt to bring its functional, DOS-based word-processor into the era of *Windows* and pull-down menus. Many users are already lamenting the loss of Microsoft's ESC based menuing system, but it has been replaced by an equally impressive mouse based system.

Many people ask why a product that is completely redesigned, as least visually, is only version *5.5* an-seenot a version *6*. Many programs like *PC Tools*, seem to churn out major updates at a rate of one each month. The reason is that *Word 5.5* really adds very little in terms of features to the previous version of *Word*.

Word 5.5 does add, however, a style bar (ala *Windows*), a more complete spell-checking system, and is fully *OS/2* compatible. The changes are subtle compared to the change in format of the menuing system, but they are still significant. As this article is being typed on *Word 5.5*, it is clear just how easy it is to change the type style compared to the past. Many users used the function keys to highlight text when using *Word 5.5*. This option is essentially nostalgia with version *5.5*. It may still be possible, but with the menuing system practically dictating the use of a mouse, why bother. Once text is highlighted, formating is as simple as it is with *Word for Windows*. Simply select the typeface from the style bar, pulldown the point size menu to pick the size, and highlight bold, italic or underline if you need to.

It is actually faster then the old way of highlighting text, pressing ESC F C, and then picking through the menu with the TAB key for the right option.

One thing that most word processors seem to be missing is also missing here. It is a minor gripe, but remember how paint packages allow the mouse to highlight whole blocks of data and then format only that block. Word processors only allow highlighting to be done on a line-by-line basis, and *Word 5.5* is no exception.

The *OS/2* compatibility is a nice addition to the package. It may seem like a small thing now, but after *OS/2 2.0* debuts this Fall, this attribute will probably take on added importance. In testing *Word 5.5* on a beta copy of *OS/2 2.0*, this user was surprised to find that one could open ten separate sessions of *Word* simulataneously without any problems. This speaks well for compatibility since Ventura for *OS/2* would not even last twenty seconds on *OS/2 2.0* without locking up the operating system.

The important thing about *Word 5.5* is that it heralds a new era for *Word*. Version *6* is sure to offer more features, but it is also sure to look a lot like version *5.5*.

(This article is reprinted by permission from PC Product Review, an electronic magazine available on Bulletin Board Systems via modem.).

Caches improve performance, but what are they?

by **Joe Cambron**
Data Tech Editor

Caching is a hot topic in computing today, but they come in a variety of types and implementations. The two primary kinds of caches are RAM caches and drive caches. These two will be discussed in this article.

RAM Caches

"0 Wait State" was once hard to find, but much sought after trait of computers. It means that at least on read operations the processor can access its RAM memory chips on a single processor cycle. The impact of this is obviously speed. If it takes two processor cycles to access the memory chips, the processor must wait for one cycle while the information is transferred between the processor and the RAM. This is "1 Wait State Operation."

Thanks to a technique called memory interleaving, and the common use of 80 nanosecond memory chips instead of the old standard 120 nanosecond memory chips, "0 Wait State" exists on virtually every new computer. This is only for read operations, however. A wait is almost universally required for the slower process of writing to RAM. Even so, this is still referred to as "0 Wait State" or infrequently "0/1 Wait State."

With the increase in megahertz ratings to 25, 33, and even 40, designers found it difficult to maintain "0 Wait State" operation...

With the increase of megahertz ratings to 25, 33, and even 40, designers found it difficult to maintain "0 Wait State" operation. Two solutions have been used of late to remedy the problem. The first is to increase the length of the cycles that involve memory fetches and writes. This is really cheating because the time saved is marginal.

The other solution is to place static RAMS (as opposed to dynamic RAMS) to act as a buffer between regular RAM and the processor. These 25 nanosecond static RAM chips are called Fast RAMS or more frequently "the RAM Cache."

By placing frequently used data in the cache, wait states are eliminated on even the 40MHz AM386 processor. The catch is that only is their true "0 Wait State" when it just so happens that the information needed is in the cache. A cache controller and even software like QEMM 386 can try to place data in the cache before it is requested. This is more of an art than a science, but the Hit Rates (The percentage of memory accesses that are in the cache) can be surprisingly high.

New processors like the 80486 use the same technology by placing a small 8K cache inside the processor. This memory has virtually zero access time, and is extremely fast.

Drive Caches

Drive caches exist in three forms. The RAM resident drive cache, the controller based cache, or the drive based cache. Drive based caches are all the rage these days among manufacturers. Almost all IDE interface drives have some form of cache. These caches are from 8K to 32K in size on drives under 100 megabytes. They primarily used to store file location information that allows the drive to decrease its access time. In this manner, slower drives appear faster.

The second kind is obscure, but is grow-

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Caches

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ing in popularity on IDE drive controllers. Controller caches can be as small as 64K or as large as 1024K in some cases. This method is probably not the best solution. If your computer can handle more RAM that extra megabyte could be used with more versatility on your motherboard. In fact, it could even be used as a RAM drive cache.

The most popular type of cache is the RAM based drive cache. Whether it is called Hypercache, SmartDrive, or PC-Cache it still serves the same function-to store disk sectors or part of the file location data.

These programs can provide enormous speed improvements. A good way to test a drive caching program with your system is to use it with X Tree Gold. Try logging a drive and then re-logging it. The second log of the disk should be dramatically faster, indicating that the file locations are stored in RAM. Some programs are faster than others, and this is a reasonable test. SmartDrive is an excellent cache that comes with Windows and DOS. It may be the best of all.

One word of warning when using hard drive caches. Many, such as PC-Cache, use optional write caching. Most caches use read caching. This means that the cache is redundant. Any power failure will erase the cache, but not the original information on the hard drive. Write caching, though very fast, can be very dangerous.

Write caching does not feature redundancy. Most people still say to themselves, "I never have power failures, so why not?" The reason why not is that you never know if there is anything in the cache, and neither do any of your programs. When you turn your computer off, for instance, how do you know if your caching software has finished writing its contents to the hard drive.

The following is a worst-case scenario that really happened: A computer with 4 megabytes of RAM was set up using a megabyte read/write cache through PC Tools PC-Cache. Another program, 386 To the Max was being installed on this system. This program tries different extended memory setups in order to determine the best one for your system. Unfortunately, the only way to do this is for it to automatically reboot your machine repeatedly. In this process, 386 To the Max stores your AUTOEXEC.BAT and CONFIG.SYS files, creating new ones for its testing procedure. When the program wrote the new AUTOEXEC.BAT and CONFIG.SYS to the drive, PC-CACHE caught them and stored them momentarily. Just as PC-Cache began to cycle by writing its cache to the hard drive, 386 To the Max rebooted the system causing an incomplete write to the hard drive's file allocation table-corrupting it. All the data on the hard drive was lost even to Norton Utilities which tried to save it for nearly an hour.

The point of this example is to emphasize a serious danger inherent to write caching, disable it whenever possible or face the dire consequences.

Conclusions

In synopsis, caching is an important item to consider when buying the computer of the 1990s. It is also important to remember that caches in RAM may be disabled and the memory they tie up-used to run programs, whereas controller based caches and drive caches can only be used for one purpose. Finally, avoid write caching unless you both love to play craps and do not mind rolling snake eyes occasionally.

(This article is reprinted by permission from PC Product Review, an electronic magazine available on Bulletin Board Systems via modem.)

Editorial

Is the 80486SX a cripple among chips?

by **Joe Cambron**
Data Tech Editor

The 80486SX may be Intel's newest processor, but it is still just an over-hyped rip-off that may only be saved by an inexpensive price. The processor, in fact, instead of being a cutting edge device, is a the cripple of Intel's upper end processors.

Only 20MHz?

Many people wonder why processors have different speed ratings. The reasons have a lot to do with resistance, heat transfer, and sub-atomic electric charges, but they also have a lot to do with the quality of the merchandise. The fact is that for every 80486 33MHz that is manufactured several do not pass muster. Intel uses a machine to test the processor's million-plus circuits. Those that are found to be defective are closed via the chip's internal software. Those closed circuits are re-routed, thus slowing the chip. As a chip is found to have more and more defective circuits the chip is slowed down. The chip is then rated according to its expected speed minus a comfortable margin for quality control purposes. This number is finally rounded to the nearest lower speed sold by the company. Previously, the 80486 was available in either 33 Mhz or 25 Mhz varieties.

Essentially, up until now all 80486 processors that could not pass the 25MHz test were thrown away or stored. With the 80486SX, all those processors that have been in indefinite storage with ratings between 20 and 25 Mhz will be resurrected and sold.

Now this system is one that dates back as least as far as the 6 Mhz and 12MHz 80286 processors and in itself is no reason to cast aspersions upon the quality of 80486SX chips. Speed is not the only problem with the 80486SX, however.

> ***"I think I'm going to speed up my computer by adding a co-processor."***
>
> ***Innocent Computer Owners***

The Co-processor Rip-off

For years, unknowing computer users have uttered the following words, "I think I'm going to speed up my computer by adding a co-processor." Little did they know that their new co-processor would sit idle, sucking up power 99.99% of the time unless they are using one the few programs that support it (Even when it is in use, the main processor sits idle, they never work simultaneously.).

The 80486SX takes this sham one step further. Normally, the 80486 has a built-in math co-processor. This feature is efficient because it is integrated with the 80486. This improvement can provide enormous speed improvements, and is partly responsible for the 80486 25MHz's 114MHz Landmark speed rating. Intel, in its infinite wisdom, decided this feature was too much for the users 80486SX, and disconnected it. Yes, it is still there-it is only disabled.

(Intel executives must have had this one come to them in a dream.) So, guess what the 80487SX is? That's right, it is the 80486 in disguise. The 80487SX is another slowed down 80486 operating at 20MHz, except this time the internal math coprocessor is still active.

Curious what happens to the 80486SX when the 80487SX is installed? It shuts down. It never processes another instruction until the pins of the 80487SX are pulled out of the motherboard. I am surprised they did not set it to release a laser beam destroying the 80486SX.

Is it faster than an 80386?

Intel claims the 80486SX is twice as fast as an 80386 running at 33 Mhz. Recent analysis of the two chips in running systems, however, have revealed it is actually slower. Intel officials were quick to add that when 32 bit programs hit the market, it will run them twice as fast. Whatever the case, 32 bit Windows is not expected to be completed for at least a year, and it is the only major program that is expected to support 32 bit operations.

AMD's Challenge

Apparently, the real cause of this whole debacle is the announcement of the AM386. This 40 Mhz 80386 clone is a major foray into Intel's backyard. This clone represents the first effective competition in the PC market for Intel since the 80286.

AMD may be losing money and have prices close to Intel's, but Intel is running scared. The direction they are running is toward the 80486 and the rumored RISC (Reduced Instruction Set Chip) supporting 80586. The real question is what will happen to the 80386 line of chips.

With Intel placing its bets on the 80486 and its injured cousin, what will happen to the 80386 33 Mhz and 25 Mhz? With the 80486SX supposedly "faster" and as inexpensive, how long can Intel be expected to keep churning out 80386 chips.

Bye, Bye, 80386...

It looks like Intel plans to consolidate on the following chips: the 80386SX-20MHz for low end users, the 80486SX-20MHz for middle of the line users, and the 80486-25MHz and 33MHz for power users. This should at least be the plan until the 80586 debuts probably sometime in the next twelve months.

(This article is reprinted by permission from PC Review, an electronic magazine available on better BBS systems.).

Early looks at *Windows 3.1* leave users unimpressed

by **Joe Cambron**
Data Tech Editor

Microsoft is now preparing *Windows 3.1* for release later this year and here is the inside scoop on what it will offer and

Bring On 3.1

Many users look to the new version to bring nagging problems to an end, but you should not expect too much. The beta version of *Windows 3.1* (the evaluation and testing version which is partially completed) is certainly no faster than *Windows 3.0*, and requires the same levels of equipment. With that sad news delivered, there are some improvements in the new program.

The little things have received more care this time around. Now there is a built-in screen blanker, support for many more peripherals, an algorithm to try to prevent icon lettering from overlapping, a better window arrangement scheme, yet another new look for on-line help, better use of color, more attractive icons, better browse functionality, and the proposed "Multi-Media Extensions" which were not available in the test version.

All in all, the program still performs miserably even on the best systems. Operating on an 80386-33 based computer with 8 megabytes of RAM, 64K RAM cache, 17 millisecond access time hard drives, and super VGA, the program was miserably slow multi-tasking. So slow, in fact, that a file download cannot be achieved without substantial errors (either version 3.0 or 3.1) while using a high speed modem (9600 bps or more) and multi-tasking on the machine described above.

OS/2 2.0 and *Windows 3.1* probably will hit the market at about the same time, the beginning of the fourth quarter. The fact is that *Windows 3.1* simply cannot compete with *OS/2*. *OS/2* has dramatically improved file access performance compared to DOS based *Windows*. This speed improvement is substantial even when not using *OS/2's* high performance file system. If the two programs were on equal footing marketing and application support-wise, *OS/2* would be the clear winner in performance.

But wait, there may be a way to achieve *OS/2* performance with *Windows* programs. IBM, the new owner of *OS/2*, has access to Microsoft's *Windows* technology through an exchange agreement. *OS/2* already bears enormous resemblance to *Windows*, making it an easy transition for *Windows* users. Most importantly, though, *OS/2 2.0* is purported to run *Windows* specific programs. This feature would automatically add the *Windows* program catalog to *OS/2's* making it the preferred interface for users because of its increased performance.

Whatever happens, the new release of *Windows* appears to be nothing to hold your breath waiting for. This upgrade, apparently, only tweaks a few of the cosmetic factors while adding some added peripheral support.

(This article is reprinted by permission from PC Review, an electronic magazine available on better BBS systems.).

Calvin and Hobbes — by Bill Waterson

Far Side — by Gary Larson

"You're a long way from Big Poodle, stranger. ... This here is Dead Skunk, and if I were you I'd just keep on movin'."

"And so please welcome one of this cartoon's most esteemed scientist-like characters, Prof. Boris Needleman, here to present his paper, 'Beyond the Border: Analysis, Statistical Probability and Speculation of the Existence of Other Cartoons on the Known Comics Page.'"

"... And please let Mom, Dad, Rex, Ginger, Tucker, me and all the rest of the family see color."

The 100-meter mosey

The Blob family at home

"Hey! Not this new stuff. ... Me want Jurassic Coke."

Mother Goose and Grimm — by Mike Peters

Mister Boffo — by Joe Martin

Roommates

Male or female to share: two bedroom, two bath apartment with swimming pool, free cable, kitchen. $230.00 a month with 1/2 utilities. Not far from school. Call Milo at 238-0438.

Roommate wanted to share 2 bedroom/2 bath apartment. Room comes furnished or unfurnished. Washer, dryer, microwave and more. Only 2 miles from school. $275 plus 1/2 electric. Call 760-7394.

Roommate needed for fully furnished apartment at The Atrium. Waterbed, microwave, cable, Cinemax, all at no extra charge! Male or female. Rent is highly negotiable. Call Gerry at 767-1279.

Roommate needed for Summer B and possibly longer. Nice house and neighborhood. $250/month plus $200 security, first month in advance. House is fully furnished except for your room. Must see to fully know what you are getting. Call Paul 760-8281.

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2 rooms for rent in 3 bedroom house. Only 1 mile from school. $300/ month for house so only $167/ month with 3 people. Deposite $150 per person. Each person pays 1/3 utilities. Available now. For more info. contact Todd at 252-7183, 506 White St.

Autos for sale

1971 Pontiac Lemans V8-350, runs great. Need money to finish flight only $1100. Call 788-1240.

1974 Celica GT. 5-speed, headers, new brakes, rebuilt motor. $1000. Contact EXT. 6812 mornings or 767-3251 evenings.

1982 Nissan Sentra, two door, 5-speed, new pull-out stereo, great gas mileage, runs excellent and very reliable. Asking 1,500. Call 767-8568 for more information.

1982 BMW 323, Sunroof, BBS, New Motor, Paint, dual exhaust, great car. call 677-9641 and leave message.

1981 Audi 5000s. New paint, Pirelli tires, Front seats, carpet, An a clutch. Beautiful Car. Must Sell. Just Graduated and starting new job out of state beginning July 25. $2700. No reasonable offer refused. Jeff @ 756-3298.

1984 Ford Tempo, Clarion AM/FM cassette: New front tires: Blue: 87,000 miles engine Appr. 60,000 miles: two door: clean: A/C: $1,750 OBO. Call Volker (904) 252-8404.

1981 International Harvester Scout, incredible beach vehicle 4-wheel drive, Sherwood stereo. $2,250 OBO. Call Jeff leave message 756-3298.

Cycles for sale

1988 Kawasaki Ninja 600 in great condition. 6500 miles. $2900. Call 2539240.

1989 Kawasaki Ninja 600R. Black with red stripe. Showroom condition. 4600 miles, 3 months of factory warranty left. Asking $3650. Call 788-1240.

1981 Suzuki GS 850GL, 9000 miles, tail trunk and adjustable backseat, cruise control, new tires. $600. Evenings, call Mark 761-7836.

Misc. for sale

For Sale: IBM original PC Convertible, fully compatible with all of todays IBM software. Excellent condition. Fully portable with 3 hour battery or simply use on desk-top at home. 512k RAM, 2 3.5" floppies, LCD screen. $350 OBO. Stop spending all of your time in the crowded computer lab! Call Brian at 255-6393 or 239-6049

Twin bed for sale. Call 760-8150.

Turbo Graphix 16 video game with 9 games. 1 year old. $200 O.B.O. Call Dana 756-1195.

For Sale, MA 220/320 book for statistics and decision math. $30.00 call 239-6109.

For sale couch and chair set $100, full size bed with frame $50, couch with bed $40. Call Alison or Doug to 760-7924 or Apt. #50 1830 S. Clyde Morris.

For sale: Desk with shevles, $80; DRak, $20; super single waterbed, $75; twin size bed with frame, $35; Outdoor couch, $80; 2 couches, $15 each. Call Gerry 767-1279.

Books for sale. Graphics (IIT 101)-$35, Math (MA 111)-$30, chemistry (PS 101)-#44, study guide for chemistry-$15, good condition, contact box 1367 or call 239-6540.

Bed for sale. Single bed, 1 year old, like new, $100. Call 255-8498.

For sale 60 channel programmable scanner, Realistic Pro 2024 $150.00. Leave message at 254-0489 or Box 5404.

For sale Craftsman tool box like new. Ideal for AMT students , $20.00. Contact Jack Miller at 258-2848.

Livingroom wooden frame couch for trade. Will trade for one 1.75L. bottle of booze. Call Jack, Jerry or AJ at 258-2848.

Bicycle for sale. 10-speed Huffy Beach Cruiser. Graduating, must sell. $40.00 Contact Jack Miller at 258-2848.

CLASSIFIED AD POLICY

- Non-commercial classified advertising and personals are **free** to the student body, faculty and staff of Embry-Riddle with a 35 word limit.
- All other non-commercial advertising is $10 with a 35 word limit. Each additional word is 10 cents.
- Commercial advertising is available through the *Avion* advertising department.
- Classified advertising is carried out by filling out a classified ad card in the *Avion* office.
- Only one classified ad per card. Name and address of advertiser must be included for the ad to run.
- Only paid ads will run for two issues and may be renewed by filling out another classified ad card.
- No classified ads will be accepted over the phone.
- For more information, stop by or call the *Avion* office at (904) 239-6049.

For sale Pioneer speakers with 10" woofers-$80, 4 Keystone black/chrome rims-$130, Pioneer Supertune III car stereo-$110, Metal detector-$150, 4 drawer dresser-$35, Golfballs (new) 15 balls for $5.00. Call 788-1240.

For sale- Super single waterbed for $50. Bar-8ft long by 4.5ft high for $35. Bicycle (needs work) for $15. Call Todd at 252-7183

For sale: Hand built solid oak wood bar. Beautiful condition $100. Call JOhn 258-2435.

Big screen TV for sale: Quasar 48" rear projection with remote. $400.00 firm. Call Chad at 756-1773.

Book For Sale: ES 305 Thermodynamics-Looks Brand new. $50.00 write to ERAU Box #6637 For more information.

Attention All HP48sx owners: Brand new HP48sx Equation library card for sale $79. (Retail value $99.95). Never been used; the manual has never been opened, write to box 6637 for more information.

No Qualifying: Assume 9 1/2% fixed Fairway Estate Subdivision, 3 bedrooms, 2 baths, large fenced backyard concrete block and brick, new central A/C Heat pump, $69,900. Call 255-2547.

Attention Amiga Owners: Fellow Amiga owner wishing to trade software. Including Falcon, Indy 500, Wings, etc. Call Jay at 756-1401 anytime, leave message.

For sale: 4 flight suits, $50. 1 field jacket $25. 1 medium weight flight jacket, $60. Navy flight helmet, $200. Army flight helmet, $250. 1 Army headset, $25. 16 model airplane kits and dremell tools; prices negotiable call (904) 253-6531 and leave message.

Miscellaneous

For sale: 1975 Cessna 150M. King KX 175B Nav/Comm. TSP W/Encoder (Narco) 3500 TT 220 STOH. Serious inquires only. $16,500/OBO. Write: Nick Mostert 527 3rd St. Holly Hill, Fl. 32117.

Typing: Fast and accurate typing done in my home. Letters, speeches, manuscripts, bulletins, term papers, reports, envelopes, etc. Dependable service, very reasonable rates. Janna Straughan (904) 252-2667.

Play Paint Ball! Everything is real except the bullets! Survival Zone, Ocala. 1-591-4330.

For Sale King size waterbed. Mahogany, Mirrored headboard, rails, heater, liner, new matress. $150.00/OBO. Call Chris 238-7884 evenings.

Window Tinting: Most cars $55.00. Call Todd at 257-1622 after 3:00.

For Sale: TRi-fold instrument chart knee board with leg strap. $20/OBO. Instrument hood $15/OBO. Ask for Nick at 252-1642.

For sale: Technic's CD player SL-p370 ($120 o.b.o.) and double deck cassette player RS-TR165 ($150 OBO) both for $250 OBO. Call 238-3303 ask for Jose.

For sale: Sofa $75, Loveseat $50, End Dresser $30, Dresser w/mirror $60, Single bed w/frame $55.

For sale: Futon Bed, Black incl. Frame, 1/2 year, $100 OBO. Raleigh mens bicycle $10, Epson action printer, 9 pin, incl. Printer stand $75, Toaster white as new $20, Braun coffee maker as new $20, Dental water jet as new $20, steak knife set $10. Call Volker 252-8404.

100% IBM clone 286/12, 30 MB Harddrive, 3 1/2 and 5 1/4 Disk driveam 101 keyboard, printer, $1,200 OBO 258-3998.

Personals

The past few month have been great on the Enterprise. Hope Summer B goes well for you. I'll miss you very much. See you in August.
Frog

Fencer #2
En Garde!?
Wait...eat first, fence later.
Pincushion

To: Minitman
Where were you? I was ready, sweaty, and most of all Heavy-In the back of your Chevy!!
Signed: Wrong Number
P.S. I'm on a diet.

"Happy Birthday, Vandana"
Remember that you might owe me congratulations in Fall. Guess Why?
Faiza

MARTHA,
Hope you get a job, and I also hope that old age doesn't set in as quickly after graduation as they all say it does.
HERMAN.

Doug, Thanks for everything. You're the best thing that's ever happen to me. I love you always!
Beth
Delle: don't lose this one again! (Ha!Ha!)

Computer:
Indicate present location of Commander Riker.
Picard

Picard:
Present location of commander Riker unknown.. Cannot comply with request.
Computer

#1:
Establish an away team and proceed to Carmichael's Pub.
Picard out.

To the Anti socials,
When are you cooking that B-B-Q for us.
Picard and Crusher

To Picard and Crusher,
Concerning operation B-B-Q. The away team is away looking for the rare and elusive Tasmanian boar. Operation completion to be at a later date.
The away team

Commander Riker,

Mommy Dearest
Thank you for my baby brother. I'll love him even though he was ATD
Love you
Your Son

Doug,
You're the best thing that's ever happened to me. THanks for everthing. I love you always. Love, Beth.
P.S. Good luck on your preg. I know you can do it.

Last: My beautiful brown eyed girl.. Last seen turning northbound off of 7L, hope I find her again soon.
Damn, I hate it when that happens.

Safe Environment

Safe Environment

Tallman

continued from page 1

bringing in more professors with doctorates to the academic programs.

One of the more consequential things that Tallman did for the University was making contacts with the aviation industry and representing the university and aviation as a whole in front of Congress.

Recently at the National Coogress of Aviation and Space Education, James Busey of the Federal Aviation Administration awarded Tallman a plaque with the statement, "During your long career you have clearly demonstrated your dedication to aviation education and aviation research. You have earned the respect of the aviation industry and the lasting gratitude of the FAA."

President Tallman is a West Point graduate and was a General in the U.S. Air Force. He was Superintendent of the U.S. Air Force Academy just before his Air Force retirement.

Sliwa

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there, he will be speaking to a group of Embry-Riddle Alumni.

To prepare for his role as president, Sliwa said he attended a "new president's school" at Harvard University. Twenty-six other new university presidents attended the school.

Sliwa said that he is interested in having a question and answer session with the student newspaper every month or so. This will be a vehicle to keep him more steadily in touch with problems and trends on campus, and also to reply to comments and questions students have.

Included in the list of educational credentials Sliwa holds, he has a Doctorate in Aeronautical Engineering and a Bachelors Degree in Business Administration. He has a proven ability as a manager and planner, being a highly successful entrepreneur in the software business and a manager with NASA.

Sliwa said he is "looking forward to working with faculty, staff, and students to continue to build (Embry-Riddle's) reputation as a world class institution."