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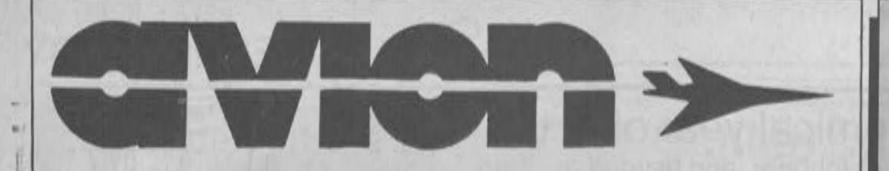
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# Aeronautica

February 7,1990

# Air Force retires SR-71 and denies "Aurora" Project

operating prototype.

retired. He willing answered

with a "You Betcha!" Johnson

attended the ceremony even



be everything Johnson said it would be. When Lockhoed celebrated the twenty-fifth anniversary of the SR-71s first flight, last The Aurora is believed to be a December, they asked retired hypersonic, unmanned reconnaissance aircraft, capable of speeds between MACH 5 to MACH 7. designer Clarence Johnson if he was interested in viewing the aircraft before it would be Observers have heard distinct sounds of it flying over the

though he way in ill-health. The SR-71 was, and still is a milestone achievement in the ever growing field of aviation. Many wonder why the government would rid itself of such a prize possession, and the only logical explanation would be a possible replacement which would have

On December 22, 1964, the SR-71, flown by test pilot

Bob Gilliland, made its first flight. The aircraft proved to

to be far more advanced then the SR-71, In the past six months there have been many reports of an experimental Air Force aircraft conducting flights over the Mojava Desert. The aircraft, known only as the "Aurora" would be the only sound reason for the early retirement of the Lockheed SR-71.

Project Aurora

The Aurora is believed to be a hypersonic, unmanned reconnaissance aircraft, capable of speeds between

a mere two years later, it had went from blueprints to a first. MACH 5 to MACH 7. Observers have heard distinct sounds of this high altitude, high speed aircraft flying over the Mojave Desert region. It is said to omit a high pulsating sound from its engines, and believed to leave sausage ring shaped exhaust.

If the Aurora exists, it may be at least another decade until the Air Force acknowledges its existence. This highly secretive "Black" program may follow in the foot steps of the F-117A project, which had fiftyseven operational aircraft that were combat capable, six years before its existence was acknowledged to the public,

If the Aurora exists, can its technology be transferred in order to help programs such as the National Aerospace Plane? And will future Air Force aircraft begin to be constructed for unmanned crews?

It will be quite awhile before we have solid answers to these questions. While government "Black" programs help us achieve great things in short periods of time, it makes the public question just how far advanced are we.

As one Lockheed spectator said, viewing the last fly by of an SR-71 at the Lockheed facilities, "Other planes are just planes...this one is special." And even if we move on, with technological advances and achievements, the SR-71 will always be remembered and admired by all.

#### The old ...

Volume 64, Issue 3

The SR-71 has been the staple of the USAF's manned reconnaissance program since it was developed in the early 1960's by Lockheed. It was retired late last month,

by Peter E. Miller Apronautica Writer

After twenty-five years of service, the Lockheed SR-71 reconnaissance aircraft wing of the United States Air Force is being terminated, The SR-71, which was the first operational aircraft able to cruise at MACH 3 and maintain a record altitude of over 80,000 feet, played a vital role in our nation's assessic reconnaissance capability.

The SR-71 has seen duty in all parts of the globe, from the Soviet Union to the Persain Gulf, It has proven itself time after time, fast, efficient, reliable and accurate.

Now, in the wake of mass criticism by both the general public and many government officials, the SR-71 program is being mothballed. The main question posed by all is simply "Why?". The SR-71 is by far one of the greatest aircraft ever built in the entire history of aviation, and one of the Air Force's greatest assets.

The SR-71, with its reliable reconnaissance data, had proven to be vital not only to the Air Force, but also to the Central Intelligence Agency (C.I.A.), the United States Navy, and even the president of the United States.

With the SR-71's record breaking speeds, the aircraft can leave from a designated base in the United States, go as far as the Middle East, photograph an area of over 100,000 square miles, and return safely. All within a more

twelve bours.

Blackbird History

The SR-71 program began in 1958. At that time, Lockheed realized that Soviet advances in radar and surface-toair missile capabilities would soon make the U-2 spy plane. valuerable to attack. Lockheed's Clarance "Kelly". Johnson, was one of the companies most valued engineers. Having designed the P-80 Shooting star, which was the first production line jet fighter, and developing the world renowned "Skunk Works" facilities, he accepted the task. Johnson proposed to the Air Force and the Central Intelligence Agency, an aircraft that would be able to maintain speeds at MACH 3 and heights over 80,000 feet.

In 1960 the proposal was accepted and the A-12 program begun. The A-12 program, with the help of Johnson's brilliant mind, would soon develop into the SR- The program faced many difficulties at the time. The. technology to be used in the construction of the SR-71, and all of its pertaining parts, had to be developed from scratch.

It was decided that the aircraft entire fuselage would be constructed with titanium - a beat resistant metal strong as steel, but light as aluminium. This project lead to many advancements in Titanium technology for future aircraft.

Fuel Reconnaissance Bay Guidance System Possible "Aurora" Design.

Mojave Desert.

The new...

If the Aurora Project exists, which the Air Force denies, it will make reconnaissance over battlefields and hostile land less risky for crews.

# Boeing 747 turns twenty

by Ron Young Aeronautica Writer

recognizeable civil aircraft, the giant cargo and some for a combination of B-747 jetliner, recently celebrated its the two. The most recent model is the third decade of airline service to the 747-400, distinguishable by its tipped world. On January 21, 1970, the first commercial flight of the Boeing 747 took off carrying 352 passengers and crew from New York to London on a Pan American World Airways flight. Today, nearly one billion passengers have been carried by B-747s over the past 20 years.

sight at all major airports around the world. To date, 966 of the "jumbos" have been ordered by both military and airline operators around the world. As of this year 756 aircraft have been delivered. Only 20 of these are no longer operational. The remaining 736 in service, with 70 operators liner. carry the majority of all worldwide passengers on overseas routes.

Overall, 16 versions of the 747 have for quite a long time.

been sold, including two military types. Some of the versions are con-Boeing's most remarkabe and figured to carry passengers, some for

up winglets. The worlds 747s have logged 27.5 million flight hours and have flown 13.9 billion miles, equivalent to over 3000 flights to and from the moon. They fly 3.7 million miles per day, or 148 times around the world.

The durability and economics of Boeing,s big jetliner is a familiar the 747 concept have been well tested and proven, and versions of the 747 airplanes will continue to provide service well into the 21st century. Boeing's willingness to explore new concepts and technologies towards the 747 insure the companies attitude toward future development of the air-

> Whatever the outcome, it seems clear the Boeing 747 will be around

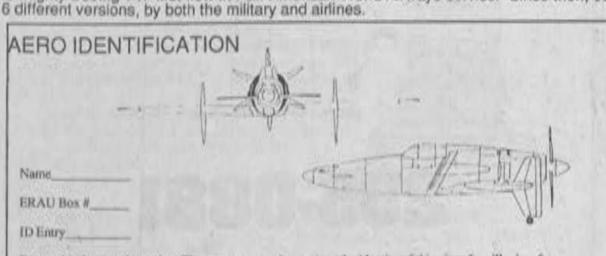


Still flying after all these years....

On January 21 of this year the mighty Boeing 747 first flew in Pan American World Airways service. Since then, 966 747s have been ordered in 16 different versions, by both the military and airlines.

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Return this form to the Avion. The exact answer drawn as to the identity of this aircraft, will win a free submarine sandwich of their choice from Sorrenio's Deli. The student publication staff, their families, and previous winners are not eligible.

### NASA plans astronomical year of activity Agency will observe Earth, its neighbors, and beyond the stars

by Kevin G. Stewart

Space Yechnology Writer

Administration's goal for the space program is to eventually have one successful Shuttle mission per month, and, even though they haven't quite reached that ambition yet, they still certainly have many fascinating-Shuttle and non-shuttle missions to look forward to in the year 1990.

Included in this list of events are Galileo; the Hubble Space Telescope, and the ROSAT. The first of which is already in space, the second is a seona planned unmanned rocker launch. LDEF retrieved and studied

January's mission for Columbia was to recover the Long-Duration Exposure Facility (LDEF) and deploy a

periments lie in trays on LDEF pictures of its clouds, monitoring the National Aeronautics and Space ing at the sun and measuring particles charged particles in the interplanetary of ionization of X-ray sources. which are trapped in the Earth's magnetic field. Materials such as epoxy composites, reflective coatings, and optical fibers were also studied over the years.

NASA had initially planned to retrieve the craft in 1985, but due to the less of the Space Shuttle Challenger and its crew, NASA postponed all future shuttle missions for 32 monthy. Some experiments may have been damaged because of the exto be shuttle mission, and the third is tended time in orbit, however, most have greatly increased in value.

Galileo to pass Venus

The spacecraft Galileo which was faunched last October on a route to Jupiter, will flyby Venus February 9. communications satellite. Several ex- Galileo will probe Venus by taking

monitoring space particles originat- activity of the sun, and measuring composition, temperature, and degree magnetic field.

> data received from Venus. The antenremains hidden from the sun's heat until the transfer occurs.

Scheduled for February 22, is the launch of Atlantis on a mission dedicated to the Department of Defense (DOD). This launch is to have the highest degree of inclination of any previous flight paths. The East coast will have be an excellent vantage into Earth's orbit. This mission is a point to view the launch.

Hubble will peer into space

This is the very mission that many have been waiting for. On April 18, the Hubble Space Telescope with its \$2 billion price tag is scheduled for launch inside the cargo bay of the space shuttle Discovery. The satellite was originally scheduled for launch in until just prior to lift-off. 1983 and was initially designed in

Despite the fear of the 70's technology failing, scientists are hopeful that the updated telescope will prove to be worth its weight in gold.

Last December, a Wide-field Planetary camera was attached to Hubble in order to obtain a greater picture of the universe, to give better clarity to images of brighter stars, and to detect ultraviolet rays that do not normally penetrate the Earth's atmosphere. Scientists also hope to view such phenomena as black holes, faint stars, and the nuclei of young galaxies.

Astro to view from Shutte

On May 9, NASA will launch Astro which was designed for the European Space Agency's Spacelab Module. Three instruments make up the Astro Observatory; the Hopkins Ultraviolet Telescope, the Ultraviolet Imaging Telescope, and the Wisconsin Ultraviolet Photopolarimetry Experiment.

The ultraviolet telescopes will remain in the cargo bay and perform the necessary experimentation during the sluttle mission and return along with the shuttle.

Astro is designed to measure the

Also scheduled for launch in May However, since the craft will be so is the Roentgen Satellite (ROSAT). near the sun, Galileo will have to wait ROSAT was initially designed to until it passes the Earth again in travel into deep space while monitor-December in order to transmit the ing X-ray emissions from nearby galaxies, however, since the Chalna used to relay this information lenger accident delayed missions, the satellite was redesigned to ride upon a Delta 2 rocket and orbit the earth. The satellite will now do all of its observing from Earth's orbit.

An unmanned rocker launch is scheduled for launch in June which will place the Combined Refease and Radiation Effects Satelline (CRRES) joint effort by NASA and the US Air Force. The Air Force is planning to test microelectronic equipment in the Earth's magnetic field.

July's only scheduled mission is a DOD on board the Space Shuttle Discovery: Because it is a DOD mission. the actual time will not be released

Magelian to reach Venus

Magellan, which was launched last May, will reach Venus on August 10. Magellan will map Venus in demil using radar to see through the cloudfilled atmosphere. This radar image of Venus will be the most detailed map in the history of space explora-

August 29, NASA Very soon, we can expect NASA plans to to lay the foundation for the launch the Space Station and possibly Space Shuta lunar base. Next thing tte Columyou know, man will go to Mars. bia. Columbia will

carry on orbiting laboratory, Space Life Scien- ber 1. The Space Shuttle Atlantix will how space effects the human body. The seven-member crew will include three physicians and a physiologist. Ulysses to study the Sun

In October, NASA has plans to launch a satellite toward Jupiter. The Ulysses will head toward Jupiter and then use Jupiter's magnetic field to sling-shot the craft back toward the nun. Once it reaches the sun, it will monitor the sun's southern Pole and

date is currently scheduled for Oc-The Gamma Ray Observatory, which is designed with rocket at 17 to 25 month intervals. BOOSICES

Dr. Millie Hughes-Fulford is training for the August launch

of the Space Life Sciences laboratory to be carried into

space aboard the orbiter Columbia. She is on the Embry-

that can keep the craft in orbit for an

Awaiting...

Riddle Board of Trustees.

Jong as ten years, will launched on Novem-

ces-I, which will be used to determine transport the observatory to its orbital destination.

Finally, in December, as mentioned earlier, the data retrieved from Venus by Galileo will be down-linked to computers here on Earth as it passes on its way to Jupiter. Galileo is schaduled to reach Jupiter in the year

Microgravity science lab

Also a project with a number of aubdivisions, the International to the red planet.

then swoop around the sun in order to Microgravity Laboratory (IML) will monitur to northern pole. The launch have a series of launches in order to study materials and life sciences in a reduced gravity environment. The first launch is scheduled for December 12. Other launches are scheduled

> The year 1990 should prove to be a major stepping stone for NASA and their vision of continuous shuttle

> NASA plans to allow the Floridian government and industry to benefit at a faster pace from the space technology received over the coming years. Some of these spin-offs might include: stress-free running shoes, antiultraviolet ray sunglasses, and bener insulation for homes.

> Very soon, we can expect NASA to lay the foundation for the Space Station Freedom and possibly a lunar base. Next thing you know, man will go to Mars.

The Space Station is planned to utilize international cooperation and may form the basis for a joint venture



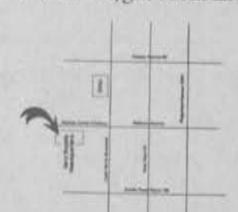
Mapping...

The Magellan spacecraft will reach Venus this year and begin mapping the planet with its radar imaging system. After obtaining the data, it will be transmitted back



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# **Booster delays Hubble lift off**

by Marianne Michaels Space Technology Writer

The launch of STS-31 and the Hubble Space Telescope has slipped from early April to the later part of the month. The reason for the delay was because the aft solid motor segment and the nozzle of the right solid rocket booster seemed to have not been properly checked for leaks at Morton Thiokol.

According to NASA spokesperson Lisa Malone, the current date is April 18 and the problem has not caused any concern over meeting this date.

Inside the Vehicle Assembly Building, NASA took the segment and nozzle off the Mobile Launcher Platform and replaced it with a new one last week.

The Hubble Space Telescope is the largest observatory ever to be placed into orbit. It will be launched abourd the Space Shuttle Discovery and placed into orbit approximately 300 miles above the Earth, high enough to avoid the distorting effects of the Earth's atmosphere.



Slipped again...

The Hubble Space Telescope is still waiting for the day it will be carried into orbit.

# Galileo speeds towards Venus enroute to Jupiter

by Jose Luis Vazquez Jr. Space Technology Writer

After seven years of delays, Galileo, a space probe which contains another probe inside, is enroute to Jupiter. It might then seem ironic how at this time it is only 5.4 millions away from Venus. Venus is in the opposite direction from Jupiter, but by doing a series of loops through Venus and Earth's gravitational fields the probe will gather the necessary velocity to reach Jupiter after a six year trip.

The spacecraft is flying at a velocity of over 78,000 miles per hour. It has traveled almost 156 million miles since it was launched last October from space shortle Atlantis. It was reported that it is in very good health. All systems abourd the craft are turned off at this time except the dust detector.

The craft is intended to study the Jovian system, which is itself a miniature solar system revolving and the red big planet, Jupiter contains informatio. origin and evolution of life in the universe. While Galilleo will remain orbiting the red planet, the probe which it carries will enter the planet's atmosphere making it the first man-made object to enter Jupiter's atmosphere.



Cruising...

The Galileo probe is now over 12.5 million miles from Earth and passing by Venus,

# Pegasus ends captured flight

by Derrick Seys

Space Technology Editor

The captured Pegasus rocket test that took place last week was successful enough that no more captured tests will be required according to Don Haley of NASA's Dryden Flight Research Facility.

Last Tuesday, the small rocket, built by Orbital Sciences Corporation and Hercules Aerospace, was taken into the morning air under a NASA B-52 at 8:00 a.m. PDT. The test vehicle encountered some minor electrical problems titude that were overcome during flight which lasted just over two hours.

it," said Mr. Haley. After the first dress rehearsal, the sys- (DARPA) is the first customer of the small rocket.

terms were recycled and the launch simulated again.

With this success, the users of the small rocket have decided the next flight will release the inert vehicle from the B-52 wing at 45,000 feet, which is currently scheduled for early March.

After successful drop tests of an inert vehicle, an active by Derrick Seys rocket will be testsed. The first-stage motor will fire five Space Technology Editor seconds after the Pegasus is dropped from the B-52 pylon. Two more stages will carry the payload into orbital al- reconfigure the Space Station weight, but will cut the cost of form has been approved. This con-

The three-stage Pegasus rocket is designed to place \$280 million budget cut from tast terms. small one-ton satellites into space from an airborne B-52. They did everything but push the button and release. The Defense Advanced Research Projects Agency



Freedom ...

Last week the captured flight of the commercially developed Pegasus rocket was successful enough to allow for release testing of inert launch vehicles.

# Space Station configuration changed

Freedom in order to comply with the delivering power to its scientific systrasts many of the other cuts that exist

the orbiting laboratory. Managers sure suit. These . reviewed their options and rephased plans have been the baseline configuration, which has changed, and the resulted in several previous cuts in use of the new suit funding.

Some of the significant milestones have still been kept. The first element vehicular suits used will be placed into orbit by 1995, on current Space however; the completion date has Shuttle missions slipped 18 months. The capabilities of will be used, sigthe station remained the same in order nificantly reducing to provide the users with the services they requested. International cost of the new protection device. cooperation has also remained one of the main objectives.

NASA Laugley for three weeks. Their work showed a number of changes could be made to lower the cost. of Freedom without detracting from its mission too severely. The changes nature.

The power system will be changed from an AC/DC system to all scrutinized. The development of a NASA officials have again had to DC. This will result in an increase in unique unmanned-polar orbiting plat-

The changes will reduce technical, quires protection. Initially, NASA develop a platform instead of dependschedule, and cost developments of had decided to develop a high pres- ing on a joint-venture to consolidate

put off indefinitely. Instead, the extrathe developmental

. The propulsion system of the Space Station will also under go a To determine what systems could change. The fuel has been changed be feasibly changed, managers met at from a hydrogen/oxygen combination to hydrazine, the fuel used to power the orbital nuneuvering systeni of the Shuttle.

operational costs of the space base, cost over \$221 million. This is a sigthat will be implemented are varied in but these costs will be offset by the nificant amount of the stations \$1.8 use of the current systems.

· Another sub-system was on current technology. The new The environment of space re-hardware will allow engineers to

> to deal with the cuts, managers have attempted to keep the purpose and goals of it the same. The current

changes are es-

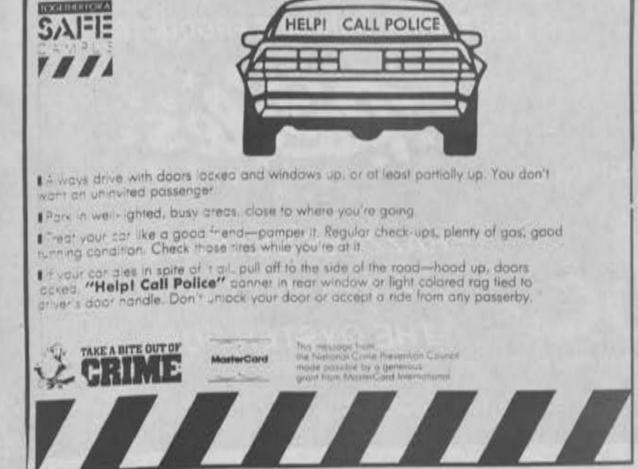
Although the Space Station

has been forced

timated to save hundreds of millions of dollars. With the money of the program constantly under scrutiny, NASA has strived to keep all costs

One study showed converting the design measurement system from the Reslipplying the fuel will add to the English to the metric system would billion budget for 1990.





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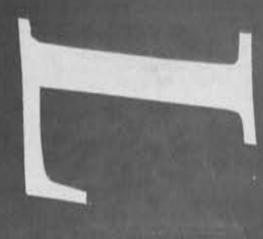
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# ReadySoft's Space Ace an intergalactic flop

by Jason Simon Data Tech editor

Remember back in the mid 1980's, there was a flood of new generation video games. They were laserdisc based games, and their creators felt that these new games would put the rest of the video game market into chaos.

Unfortunately this type of game was a passing fad, but it left some rememberable marks on the gaming society. One of these games was Don Bluth's Space Ace.

Space Ace followed in the footsteps of Bluth's Dragon's Lair, a hero versus dragon scenario. But Ace was a second generation laserdisc game. There was more freedom of movement involved in Space Ace. Unlike the "only one way" movement of Dragon's Lair there was a variety of ways to go and you could choose easy medium or hard levels. It eliminated almost all of the technical problems animation ported over from the original is apfound in the lair.

Now, almost six years later, Space Ace has found it's way into the homes of many computer users. The ad for the software is very enticing. Boasting over three times the screens of the computer version of Dragon's Lair and super quick loading. This is technically true, but this version is far from superior when compared to the original game.

The concept of this game is bizzare, the main character is Ace, kind of a galatic He-man. He and his girlfriend Kimberly are trying to stop the evil Commander Borf who is trying to take over the earth. Borf's weapon of doom is the Infanto Ray which turns humans into mindless infants.

Before Ace has time to react to Borf's initial attack, he is grazed by the Infanto Ray and is partial-screens found in this lame version do not fit the surly transformed into a spineless weakling. The only roundings depicted in the previous screen. An ex- Atari St and Amiga.

Space Ace followed in the footsteps of Bluth's Dragon's Lair, a hero versus dragon scenario. But Ace was a second generation laserdisc game.

way he can return to his normal self is through a portable energizer he wears on his wrist. Unfortunately the energizer only restores Ace for about 30 seconds, and takes a long time to recharge. Now

Age, as his alter ego of Dexter must save the Earth. Unfortunately this version of Space Ace, like Dexter himself, is spineless. Anyone who played the laserdisc game in the arcade will feel cheated by this version, from screen one to screen thirty-three. Despite all these screens the actual amount of proximately less than ten percent.

There are many problems dealing with the coherency of the game, starting with the first screen. In the original Kimberly falls off a rock cliff and into a tractor beam that sucks her into Borf's command ship. In this version it appears that Kim fatts off the cliff to her death, which makes it hard to explain to pople who have never played the game that you are trying to rescue a dead woman.

Also in the original version the player was given the option of turning Dexter into Ace, thus making the game harder to solve. In this brain-dead version Dexter randomly bounces from himself into Ace and back, losing all of the fun with it.

In addition many of the transitions to different

ample would be Dexter landing on what appears to be a modern space station, but when he jumps out of his craft he is in a dense jungle. A clear example of loss of coherency,

For those people who enjoyed the many colors found in the original it appears ReadySoft did a minimal amount of work when it came to re-rendering this game.

Even in the Amiga version Ace is rendered in what appears to be only 32 colors which, in some cases causes Ace to look different. It's amazing how in one screen his hair is blonde and then in the mext it's brown.

The background sounds found on the Amiga version of this game were all digitized from the original game, but Amiga users will be disappointed that ReadySoft opted not to unlize the stereo sound capabilities of the Amiga. Even though Amiga users had asked ReadySoft to consider this

But it appears that the biggest problem is with ReadySoft themselves. This game could have retained much of it's original flair if ReadySoft bad done more work on the game in the lab. Instead they opted for the easy way out, dissect an excellent game into small incoherent bits and serve it up to the consumer in an expensive (suggested retail \$59.95) boring form with a publicity campaign that is fueled on the merits of the original and is one step short of total lies.

The consumers best bet would be to leave this dog on the shelve and use the money saved to buy more productive software. But for those who have nothing better to do with close to sixty bucks, Space Ace is available for IBM, Macintosh, Apple GS,



Space waste...

Readysoft trashes laserdisc game to produce over-priced

# SimCity transforms average Joe into Megalopolis Mayor

she can select from

by Jason Simon

Imagine, for a moment, being Ed Koch or the late Richard Calliguri. land. These formations include They were both great Mayors of New residential areas, commercial areas, York and Pittsburgh respectively. The factories, roads, airports and stadiums major tasks involved while Mayor are to name a few. tremendous. SimCity, a relatively new software simulation brought forth by Broderbund software, now gives you the option of ruling your own metropolis.

The simulation starts out after "terraforming" a new plot of land. The users task as Mayor is toefficiently use the parcel of land generated while keeping the complaints of the populace at a minimum.

its own way. A overhead view of a small section of the land is displayed by the computer, which takes up about Also included on this screen is an back and only give then so much of rate are also shown on this screen.

formations the user can add to the

There is a status screen that can be evaluation nctivated by the user. The screen displays an overhead view of the entire city. Various on screen icons are used to toggle special features that can be displayed on the city form. The user can find out various problems with the taxes are city section, such as where the most and how much the various depart- how well the Mayor is doing his job pollution is concentrated, what part of the city has the highest crime rate, and what areas have the highest land what it wants, or, if the amount of pollution and housing. Plus the

75 percent of the screen. Along the accurate time graph. This graph what they want. But user beware, if right edge of the scren are the various shows the rate of climb of descent of each department gets less than the the items, such as crime, previously amount asked for, the quality of the ser-

> hundred and twenty years; budget and If these problems are not enough screens. The for the simulated Mayor, he or

budget

screen dispreprogrammed disasters. plays how high the ments(Police, Fire and Transporta- by displaying a poll taken by the simution) want for the next fiscal year. The lated city dwellers.

where the wost traffic problems are. user has the option of giving each Also depicted are the top problems

described over a choice of ten or one vices will go down. It will take longer

for crime to go down, longer for fires More important features are the to be extinguished and potholes will

form in the main streches of roads. Tih e

evaluation depicts

The setup of the screen is unique in There are also toggles to determine department one-hundred percent of encountered in the city, such as crime,

The simulation is very interactive. San Francisco earthquake, bombings The "citizens" of the user's town oc- in Humburg during world War two casionally demand items like and traffic problems in Bern Switzerstadiums, airports, and scaports. Also land. But some of the scenes are totalas the city gets higger it may have a ly bunk, like the Tokyo monster threat brown out due to insufficent electrical in 1957, a meltdown of a nuclear power. Airplanes may crash into sec- power plant in downtown Boston and tions of town and an occasional ship the problem of incredible boredom in will ram a bridge or two.

If these problems are not enough for the simulated Mayor, he or she can select from preprogrammed disasters. The disasters that can be toggled on and off include fires, flooding, air simulators such as Microsoft flight crashes, earthquakes and "Godzilla"

user he or she can select from pro-received from this program will well programmed scenarios included from outweigh the cost of the program itthe manufacturers. Some scenarios - self. SimCity is available for IBM,

Dullsville USA.

Overall, this is one of the best simulations available for the Amiga and other home computers. It is radically different from other mainstream simulator and Accolade's test drive, but it runs just as well as the other But if this is still not enough for the simulators mentioned. The enjoyment included actually happened, like the Apple and Amiga computer systems,

# Microsoft's Flight Simulator brings electronic flight to new heights

by Joseph Szarmach

Staff Reporter much to offer both flight and non-flight students. With the release of Flight Simulator version 4, Microsoft has ex-

pertly simulated many of the characteristics of real flight. After the program is finshed loading the user will find himself sitting in an acurate representation of a Cessna 182, sitting at the end of Michigan's Miegs airport. The top half of the screen displays a three-dimensional, out the Florida area disk. Though the Daytona Beach Regional

window, view, A 360 degree view is available by pressing the arrow keys in the direction you wish to look.

This new version includes dynamic scenery. The computer pilot is now faced with avoiding other aircraft and an occasional fuel truck that may dart into their path.

The dynamic scenery also simulates weather fronts, including thunderstorms, which challenge the pilot to stay VFR at times, much like the Daytona area weather.

Though the dynamic scenery is a nice addition, it is not without cost. The tasks performed by the computer are so vast that the speed of the program is slowed dramatically, to a point which makes an 8088 microprocessor inadequate. In fact, even an 80286 is taxed to keep up with the complex calculations and animation required.

The bottom half of the display reveals the cockpit instrumentation. The simulator offers all the instrumentation feature in an actual airplane, including dual VORs with ILS, DME, and marker lights in addition to all the standard cockpit instruments.

The program has an option for one or more joysticks. This is provided so a separate yoke and a throttle can be added if the user would like a more realistic cockpit...

Other aircraft controls and engine settings can be changed by using the keyboard. For example, the gear is The Flight Simulator by the Microsoft Corporation has raised and lowered by pressing the "G" key. The carburetor heat can be turned on using the "H" key

Other additions include the ability to fly in formation flight or air race with another computer pilot through the use of a modem, and a smoke system which can be turned on to see the other aircraft better.

Scenery disks can be purchased separately including a

Airport is one of the many airports included, none of the taxiways nor the Riddle ramp, is included.

The Halifax River is nicely animated, including the river's distinctive Northern end denoting the Daytona ARSA's (Airport Radar Service Area) outer

The program performs the

first approach as instructions

are displays inside a small

pop-up window. The program

then resets to the short final

Familiar sites on a southerly departure include Ponce Inlet and the Space Center, including a space shuttle on

The Ormond airport and VOR is available on it's real world VOR frequency, and though the Daytona ILS on runway 7 left is not included, a VOR approach to Daytona's runway 16 can be made using the actual ap-

For the pilot wishing to practice ILS approaches, plenty can be had using the default scenery areas that are included with program. Five default areas are included: The New York/Connecticut area, Chicago, Los Angeles, San Francisco, and The Washington area. There are several ILS approaches in each of the five areas.

The Flight Simulator is ideal for learning the various holding pattern entries. The various pattern entries can be



No ratings required...

Microsoft's Flight Simulator lets you fly Cessna's 182, as well as other aircraft including: the Lear Jet and a Sopwith Camel, A new feature in Flight Simulator's Version Four allows would be designers to create their own aircraft.

practiced without the cost of fuel or plane rental.

flight instruction in all phases of flight.

For example, landing instruction can be selected from the pull down menus at the up of the screen. The program performs the first approach as instructions are displays in-

side a small pop-up window. The program then resets to the short final and the stu-

dent is allowed to attempt the landing on their own all the For the non-flight student, Flight Simulator includes while instructions are displayed should the student make

> The fifty dollar program supports most of the popular graphic adapters including VGA, Tandy Graphics, Hercules, MCGA and CGA. It can be run from a floppy, but a hard drive is recommended and is a must for the flight tessons, logbook, and scenery disks.

Needed.

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For more information contact Jason in the Avion office.





# Glory is another Hollywood film featuring the horrors of War

Much like Born on the Fourth of July,

the audience was allowed to see the

meaningless carnage brought about

by misplaced hate and the misuse of

the power of life and death.

by Joe Cambron Managing Editor

moguls are no strangers to cut-throat competition, and perhaps the best way to compete is to "fight fire with fire". The overwhelming success of the New Year's epic Born on the Fourth of July, has nearly obscured another film that aims at a similar target in the human heart. The movie shoes, out of uniforms, and is Glory and it stars Matthew Broderick in easily his most out of combat. demanding role

Much like Born on the Fourth of July, the audience was troops were driven with an allowed to see the meaningless carnage brought about by unusual spirit that pushed misplaced hate and the misuse of the power of life and them onward. Even after their death. Whole cities were "torched" for disturbingly linle wages were reduced because reason, as women and children alike either watched or of their color, his troops were incinerated with it.

The two films are really only similar in their size and scope. Both concern war and the changes it causes: Born on the Fourth of July, however, only really concentrates rules to the letter. He did this even when it meant slighton one man, while Glory aims at an entire race.

Matthew Broderick is featured in the principal role as a white Civil War commander enlisted to lead a rag-tag easy to see the fence that President Lincoln is attempting cavation. It is Broderick's canning which finally brings

By allowing a few token soldiers into the Union Army Just like other businessmen, Hollywood's movie Lincoln apparently felt that racial prejudice would be appeased. Nevertheless, nothing could be further from the

Broderick's force out of

Nonetheless, Broderick's

As a commander, Broderick was stern and followed the ing a childhood friend who was now an enlisted man under his command.

His men do not follow his lead without question, group of black soldiers to war against oppression. Though however. They begin to lose faith as training evolves into present, right? All the elements needed, burring a realistic their efforts are endorsed by Lincoln, it is often only to manual labor, mostly consisting of burials and latrine ex-

Broderick and his force find themselves as bloody com-

Glory is not a perfect film, but it deserves in be landed In fact, discrimination amongst Union officers kept for several of its accomplishments. First, it apparently is a

fair representation of Lincoln's amonipts to partially integrate the Union Army. The film is, in fact, fashioned from a series of letters written home by Broderick's charac-

Second, the Civil War deserves the attention paid to

vowed to fight without pay, as did his officers and him- it by films such as this one. There simply has not been an

Finally, few movies receive the resources that were committed to make this one. Seis, costumes, and cinematography were uniformly beyond reproach.

As this reviewer sut amongst a self-our crowd of 500 in

Tanita's music is a mixture

of many different genres to

create her own style ...

the regiment to combat. Seizing the opportunity to black- a theater deep in the heart of dixie, the crowd found it hant mail a compact the block of warrant mail a corrupt Union superior with tales of his thievery, to stop laughing. Amongst the blood of wanton death, Broderick and his first superior with tales of his thievery.

The soldiers' private conversations did little other than inuiginable. demonstrate their lack of education, and generally suntracted from the film's credibility as a moving opic of the

cial achievement. Conversations amongst the officers were painfully pro-

dictable, though their actions were not One of the most often criticized parts of the film in

frequent recitations by Broderick of his letters home. Thus seem more akin to one of Broderick's Neil Simon plays than a serious drama.

The film's greatest scrback to also its summit. As the epic feature chronicling the Civil War since Gone With the credits roll, most moviegoers will find themselves asking what was the point. True, the Union won the war, but may as a result of these soldiers. At least according to the files

It could be argued that the film is all a mibile surcame commenting on what linte improvement has occurred over All the elements for an Academy Award winner were the last 130 years, but if that in the case, the moviegoer has all the more reason to contemplate the point of it all in presented in this movie.



Tanita...

Another figure has entered the Music Industry. Tanita Tikaram, after lowed up for album with an extensive dance to It has a good rythm and good lyrics. having much success in her native Europe, is trying to make it the highly competitive American Market.

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Close To Airport

# European singer making the U.S. scene and returned to Europe and more tour dates. Its melody is very different yet familiar, A

by Ron Roberts

Photography Editor

Tikaram is breaking into the American music ber of songs written on tour. These were to bescene. Her songs provide a welcome relief from come her second album, The Sweet Keeper. the redundancy of today's pop rock.

Tanita's music is a mixture of many different album, "They are like my souvenirs,...! write a

genres to create her own style that is both relaxing and stimulating. Her newest album, The Sweet Keeper, is a wonderful collaboration of different types of music to make for a truly original record.

Tanita was born in West Germany and her family moved to England where she attended college. She made her first singing debut in the Mean Fiddle Acoustic Room in London in about falling in love with December of 1987.

Tunita received an offer from Paul Charles to mampe her immediately following her debut. She accepted the offer and was signed to throughout this album. This WEA in March of 1988.

Tanita released her debut album, Ancient of the other songs. Heart, in September and by January of 1989, it was a platinum seller in the U.K. She also had great success in other European countries, her song, "Ancient Heart," staying at the top of the charts in Norway for fourteen weeks! She fol-European tour.

Tanita toured America in the spring of 1989

Album sales then topped three million. After standard love song with a different twist, Wow! A recent success in Europe, Tunita touring, Tanita went into the studio with a min-

Tauta comments on her songs for the new

song in each country. I can remember places by the songs I have aword really."

Once & Not Speak," is a surprising

The Sweet Keeper, is a

wonderful collaboration of

different types of music to

record.

song. Tanita's exceptional and different voice guitar on this and some of her other songs.

"Thursday's Child," is someone who is very different. Originality seems to be the pervading influence song is more upbeat than most

It All Came Back Today. Another love song, but with a strong folk music much as to scare people away. All the lynes me

This does have some pop (och influence to it. "Consider The Rain," has a quieting effect. pop.

Sunset's Arrived, has a great plane beet. ground and a more moving sythm, he's an original combination of piano and trampet.

"Little Sister Leaving Town," has the Kreisler String Orchestra adding to the fullness of the sound. Which adds to this sound and gives it an wonderful depth of sound.

"I Owe All To You," was unintentionally serwritten. This is quite clearly written about her mother. A mokes it a very moving and thoughtful song.

"Love Story," is probably the best song on the album. It's a love story of course but very moving. It is well written and it has a simple add to the beauty of this piece. Tanita also plays background to bring out the beauty in Tanita's voice."Harm In Your Hands, is a very hyp-

antic and mystical song, it has waters melody and Tanina's visice adds to the elfeet of the sung.

make for a truly original Overall the album is very good. It is original and different but not in

influence. This makes the song very soft and well written and the music is fitting Tanina's, deep and soft voice. In today's world of post "We Almost Got It Together," is a song to rock, Tanita Tikatam creates her own style of music for people who want to bear and feel something different than the standard norm of



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Foot stompin'

Hank Williams Jr. spent 18 months working on Lone Wolf, his new album. When Hank Jr. isn't manking music, he spends his spare time hunting wild game.

photo courtery of Winner Bros.

# Hank Williams Jr. completes Lone Wolf

By David Fekke Diversions Editor

Hank Williams Jr. is not a Country Musician. Some people would disagree with this statement, but his music speaks for itself.

Hank Williams has a new album titled Lone

Jim Ed Norman and Hank Jr. Hank Jr. had this to say about the new album, love blues, jazz, gospel, Cajun, traditional, southern rock, and I think there's some of all that on this album."

Hank Jr., now 40, has been performing professionally since he was 8 the women that helped him when he was down in years old. He got started with the aid of his father, out. As far the music goes, this song has a bluesy who was a country music legend. Hank Jr. has laid sound to it, much more pleasing to your ear. It can to live with that fact since he started performing. also be called foot stomping. This also has a lot of country and rock music Hank Jr. makes this apparent in the song "standing jazz influences. in the shadows" he wrote when he was 16.

As a musician, Williams is very accomplished. Cajun sounds to it. It is so Cajun, He plays the guitar, violin, bass, steel guitar, piano that Hank Jr, has a Cajun singer, and many other instruments. As a country singer he Jimmy C. Newman, sing the

He spent 18 months making this album. He got will love this song, but they will help making this album from such people as Jim be the only ones. Horn, who played with George Harrison on his last album, Sammy Hagar, of Van Halen fame, plays Hank Jr. comes across with that lead guitar on one song.

This album shows that he has many different influences. Some of these influences include Johnny Cash, Elvis Presley, Jerry Lee Lewis, and Ray

The first track "Good Friends, Good Whiskey, sidered either Rock, or Southern Rock. Good Lovin'" is a typical country music song with Steel Guitar and all. This is by no means the best song on the album, but it lets Hank sing about the people he considers the working people.

"USA Today" is a subtle song about refugees. Wolf. This album was produced by Barry Beckett. This song has less impact than the first song, but

still has a real country atmosphere to it.

Hank Williams Jr. calls the next track, "Hot to Trot", his Bocephus anthem for the ladies. Bocephus is of course his nickname, and in the song he pays tribute to

Big Mamou" has strong has received countless awards for his vocal ability. chorus. People from Louisiana

"I love blues, jazz, gospel, traditional, Cajun, southern

rock, and I think there's

some of all that on this

album."

With "I Mean I Love You",

words comes across as "an old Nixon speech" The song "Man To Man" features Sammy Hagar.

mile per hour speed limit. This track could be con-song-writing ability.

"Almost Persuaded" follows the previous track with the same intensity. If every song on this album were like these last two, it might be a good album. They are both blues oriented with a strong rock

The song "Stoned At The Jukebox" goes back to the previous format. The song was written in his pick-up truck when he was in his mid Twenties after bearing the song "I can't help it if I'm still in love with you" by Linda Ronstat. He was getting divorced at the time.

"Ain't Nobody's Business" sounds like a piece written by Ray Charles but actually is a jazz song written back in the 20's. It is probably the prettiest song on the album.

The last track on the album is the title track, "Lone Wolf". The song reflects on his career and his music and how he has been in limbo between

> Hank Williams Jr. is an amazing musician, but along with Prince, and several other musicians, he does not use his talents to his full potential. Perhaps if in the future, Williams will be open to suggestion and broaden his horizons beyond his current scope. Despite his strength as

skin ripping country sound. The song in his own a musician, this album has little or no real meat.

The great hardships that Williams has had in his The guitar solo on this song defiantly breaks the 55 life have apparently not completely affected his

# Movie Rating System

In Flight

An excellent, movie worth seeing twice

Takeoff

A good movie, worth the money

Taxiing

A fair movie, worth seeing

At the Gate Walt for the videotape

Crash and Burn

Not worth time, or money

### Top videocassette rentals:

1. Working Girl

2. Roger Rabbit

3. Rain Man 4. Major League

5. Pet Semetary

New videocassette releases:

Pink Cadillac Lethal Weapon II Pink Cadillac Rude Awakening

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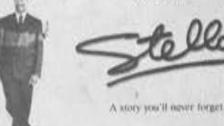
With "I Mean I Love You", Hank Jr. comes across with that skin

ripping country sound.



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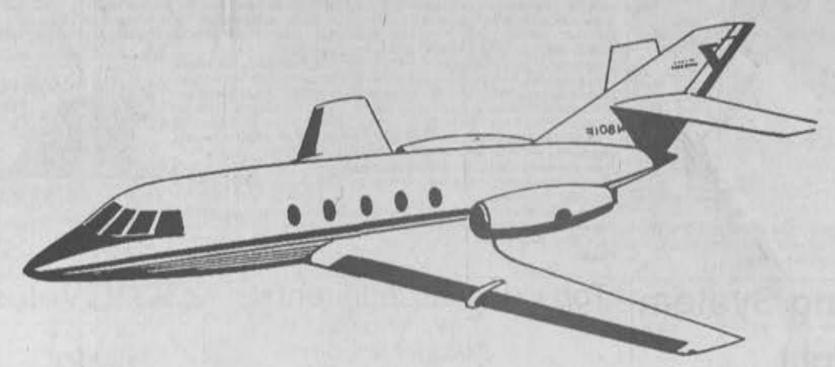


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### Calvin and Hobbes

## by Bill Waterson Far Side

#### by Gary Larson















Sunset in the vampire army.



"You're so morbid, Jonathan — the paper comes. and that's the first section you always head for."













Well, here we go again . . . Did anyone here not eat



QUIZ: Jack and Joe leave their homes at the same time and drive toward each other, Jack drives at 60 mpin, while Joe drives at 30 mph. They pans, each other in 10 minutes.





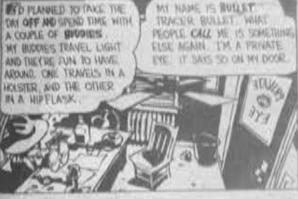
Slow Yar apart, were Juck





his or her homework on the way to school?"

by Mike Peters





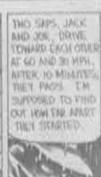
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HEY ... I COULD GOLF ...

Mister Boffo

by Joe Martin



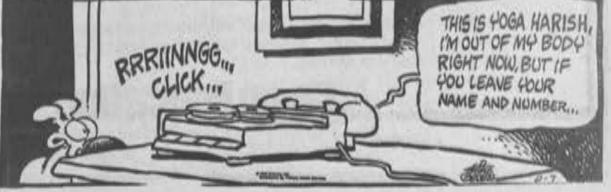












#### Counseling Center Programs Spring 1990

Experience+Plus!

We are looking for "non-traditional" students who are interested in getting with other such students to join our group called "Experience +" here at ERAU, A "non-traditional" student is defined as someone who initially entered college after a break of four years or more from academic studies. The purpose of this group is to form a supportive social network as well as to discuss issues that effect the non-traditional student. The group will meet for monthly luncheons.

If you are interested, please contact Lynne Norris or Patty Ruddy

in the Counseling Center, 239-6035 for further information.

#### Communicate! An Experimental Group.

One of the targest pitfalls in todays relationships occurs because of the misperceptions that cause conflict between people. Statements such as "I can't understand my girlfriend/boyfriend/the other sex...," will be addressed through viewing video clips from current popular television programming. The group will meet weekly for two hour sessions, during the weeks of February 5 - February 26, 1990. The group size is limited, Interested persons need to make an appointment, to discuss the group, in the Counseling Center during the week of January 29 - February 2, 1990.

Lecture Note: Taking

Tuesday, February 13, 1990 from 1:30 to 2:30 pm in the John Paul Riddle Student Center, Conference Room, Information on how to efficiently take legible, helpful notes.

#### Self Hypnosis for a "Change"

Learn how to use self hypnotic techniques to build your ego, improve study habits, climinate negative habits, solve problems, develop positive habits, explore your inner self and much more... The self hypnosis group will meet for five two hour sessions during the weeks of February 26 March 26, 1990. The group size is limited. Interested persons need to make an appointment, to discuss the group, in the Counseling Center, during the week of February 19 - February 23, 1990.

#### Free Information

The Center has books and cassette tapes that can be checked out plus many free handouts and brouchures. The materials deal with numerous subjects such as stress reduction and relaxation, study skills, depression, grief, sexuality and relationships. The Counseling Center also has a biofeedback machine for stress reduction and video tapes that can be viewed in their Resource Room. The Counseling Center, located on the first floor of the Student Center is open from 8:00 am to 5:00 pm, Monday through Friday,

#### Orientation leader position

Applications for Orientation Leader are now being accepted, Position descriptions and applications are available in the Counseling Center Deadline to apply is Wednesday, February 7, 1990.

#### Degree completion and commencement

According to University Academic Policies and Procedures, every student must make formal applications with the Registration and Records Office for degree completion. Due to the fact that there are now two

commencement ceremonies per year, new procedures have been devised. Formal application for degree completion may be made with the Registration and Records Office. A second form designates which commencement ceremony the student will attend, information for ordering cap and gown and information for commencement program. Both forms must be completed and submitted to the R & R Office no later than the application deadline published in the University calender and the AVION

Forms are now being accepted for April '90 and August '90 degree. completion. If you are requesting April ceremony attendance, there is a separate form to fill out. Any Summer '90 degree completion people desiring Fall '90 ceremony attendance should so notate it on this form. If you do not wish to attend either ceremony, only fill out the "Degree Completion" form. Forms will be left with the R & R Office and checked for eligibility. If you are found ineligible for degree completion or ceremony attendance, you will be asked to re-apply at a later date.

Applications received after the published deadline may cause the prospective graduate to relinquish privileges for participation in commencement exercises, publication of student information in the program, eligibility for Chancellor's award and announcement of graduation honors, Diplomas will not be available after the ceremony for 'late" applicants:

Anyone who has already applied to the R & R Office for April '90 degree completion (and ceremony attendance) and received a preliminary evaluation need not re-apply.

Please be aware of your responsibility for reapplication in order that your degree completion may be a smooth one.

#### SGA elections

It's election time again! The SGA is now accepting applications for the positions of: President/Vice President, Student Finance Board/Student Representative Board and Chief Justice of Student Court.

Eligibility requirements must be met by all applicants. The completed applications must be returned to the SGA office by Friday, Feb. 9 at 4:00

For any further information or questions please contact:

Tony Delauro 252-1103 Mike Henderlong 756-4637 Christy Kieth 252-9242

#### Attention April graduates

The first meeting for April graduates will be held in the Student Center at 8:00 p.m. on Wednesday, Feb. 7, 1990. Graduation information will be reviewed at that time. Elections for Senior Class President and Vice President will also take place. The Senior Class Council will be secured after the meeting on Feb. 7, 1990. The group consists of 20 to 35 volunteers for graduate's guests, raise funds for the class party, keep the class informed of their progress, and socialize prior to graduation. If you are interested in being on the council, we will meet immediately after the graduation meeting.

#### Creations editors and submissions needed

All those who expressed interest in "Creations" in Fall 1989 are requested to contact Ms. Berg ASAP so the staff can read and organize submissions. Submissions are being accepted now at Rm. A-230, mailing A-EH or student box 5998.

Editors please contact Ms. Berg in Rm. A 230 right away, so we can get rolling on this.

Sign up for fall 1990 boasing

New contracts for university-managed housing for Fall 1990 and

Spring 1991 will be available in the Department of Housing during Feb. 5-12 16 in Room 278 of Residence Hall II. If you are interested, you need to complete the contract, pay \$150 prepayment, have the Cashier validateyour contract, and then submit it to the Housing Office. You may complete this process anytime during this two week period: however, any contracts submitted after Feb. 16 will be placed on a secondary waiting list. Contracts for continuing students will be randomly selected for the available spaces.

Therefore, this does not guarantee everyone a space. Housing fees for the Fall 90 and Spring 91 terms are as follows:

Residence Hall I \$860.00 Residence Hall II \$808.00 Apartment Complex 1 \$860.00 Apartment Complex II

#### BASIC SKILLS COURSES POLICY CHANGE

All students required to take Basic Skills Courses, HU 003, HU 006, HU 013, HU 017, or MA 005 must do so during their first semester/term of attendance, Courses will be graded A, B, C, or F (there are no D grades), but as these courses are not applicable to any degree program the grades will not be calculated into either the Semester or Cumulative G.P.A..

Students may not drop Basic Skills courses, and any which are failed must be repeated the following semester/term. Students who are unable to satisfactorily complete a Basic Skills course after the second attempt will be suspended from the University.

If suspended, a student would need to apply for readmission to the University through the Readmissions Committee, Readmission would depend upon the student earning transferable credit (C or better) in an appropriate first level English or Mathematics course.

Students who previously took a Basic Skills course at the 100 level and now need to repeat the course will be given the repeat policy. Copies of the new Academic Policy are on file in the SGA Office, Program

Chairs' Office and Registration and Records Office. If you have any questions on how this polity effects you - stop by Registration and Records,

#### New Parking Policy

Effective immediately, all ERAU student vehicles will be towed from the Health Center purking lot near the AWS. There will be no prior warning for this violation.

#### Income Tax Preparation

Volunteer Income Tax Assistance will be available every Tuesday from-5:00 pm to 8:00 pm in the Conference Room in Room A-117. This is run in: conjunction with the Taxation Class taught by Ms. Wilson.

#### Simuflite scholarship

The Simuflite Corp. of Dallas, Texas, has provided two scholarships period year to Embry-Riddle Aeronautical University students. This scholarship is composed of approximately \$8,000 in training in either the Citation or the King Air Phase II simulators and \$1,000 for expenses.

To be eligible for this scholarship, the following criteria must be met: 1) complete all degree flight requirements at ERAU, 2) currently enrolled as a full time student at ERAU, 3) Have a minimum CGPA of 2.8 with a minimum GPA of 3.0 in Flight and in Aeronautical Science course work, 4) Possess Commercial Instrument and Multi-Engine ratings, 5) Recommendation from a previous flight instructor and the appropriate flight training manager, 6) Two letters of recommendation from Aeronautical Science faculty. Candidate must have had each of the faculty members forar least one upper level course.

Pick up applications at Aeroscience Office, 123 (New AWS building) Application data due into Aeroscience by end of day on Friday, Feb. 2,

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Every year, over a million new college graduates put on their new blue suits and go job

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#### Autos for sale

LASSY CLUNKERS-1980 and up used 100% warranty all care. Will reason No Interest. \$500 to \$1000 cheaper any other dealer in Daytona. Call Jim 153,9784, Evenings 1-446-4028.

Pomiss Lemans Lt. Blue/Dark Blue of MK miles, AM/FM Cats., CB, Bosch Sony AMP, Jenson 6X9, Ragle ST "New" Lakefront Aps, FEMALE roommate malials, Clean, No Rust. 34500 neg. Call alm 274-2936 or Box 1345.

1979 Remailt Le Car-Fun Temportation, most biths work. 1st \$350.00 Takes R!! Call 196.0464

- Otherwise excellent shape, \$600 O.S.O. Call 257-7842, Leave mercage.

juli Dodge Omni-Good condition, reliable, AC Power streeting, Automatic, Sterein Callette, All Maintenance Rocords, \$875. ISB 756-2377 for DRIL

nd, on owner, \$3800 O.B.O . Call Patrick

feld Ford Ranger XLT, 46,000 miles, PS. PB/AC, AM/PM Cassens, Bedliner, \$6500

1985 Chesy Chevette-Great condition. Just 1950 Call 255-2100 Wed, Sen. 12 noon to

1913 Mazado 626-Still in good afape, stable immigoration, all automatic, sir, willandy on transmission, I need your east, 13895. Call Mike after 5 pm 760-6618.

pars VW CITI-16v Sunnoof, Trip Computer, ACL Red, excellent condition. Extended factory Powertrain Warranty, \$8500, 236-

1983 Nissan Sentra-Only 49000 miles, New Banery, Chitch, Exhaust, and Brakes, 5-1000), Fixe. Cond 52400, 788-3209.

1075 (Manushile 98 Regency interior assistant, ours great. Very little rest, the pulser pasel needs sanding and paint 1'S; H), power windows, Graduating and moving. Alast 23X-0587

#### Cycles for sale

1982 Yamaha 250 Exener 4,700 miles, New stry, hearly, limited thay in color, may ndulearn. And remember Insurance for neconcycles is not required in the STATIL of FLORIDA, Asking \$350/obo. Rey 788-3095 before soon or after 6:00 p.m.,

1981 Kewmaki CSR 750 Good Condition. Very dependable. Must Sell, Asking \$750. Cull 252-538X.

#### Roommates

Roommate wanted. Must be female. Pay Hisron + 1/3 utilities, needed immediately?" \* \$999 100% IBM Compatible AT \* Ipm to Ip.m.

Dur't Miss out on Your Change Get Out of the Dome-2 moons for rent in new Ewebone 3 mi. from school + close to there, mail, beach, etc. Rooms available right 15250/mo plus 1 month security that can be paid in installments. Your sham of milnies(sloc, water, cable) Place has Tottowave, washer/deyer, pool, A.C + heat. If meetined drop a note for Angels in Hox. SEA. Leave name, number, and box number-

Wanted: An epartment for Fall 90 and after. I west to have lease and deposit taken care before leaving for Summer Break, Warn Rent % the \$200 to \$300 range. Daren box 3565.

Contact:

Roommate wanted-I need a roommate for SoifCom C-40 Headset (Brand New) 5145, Summer A and B to share a lg. 2 bedroom/2 AVSTAR (Brand New) \$35. Call Jeff 2 238bath apartment on South Beach St. Furnished. Call 252-1100 if interested.

3 bedroom, 2 both Home for Sale in Port Orange (Foxboro III). Built in August 1988. 1500 sq. ft. Land 80 X 115. Mun Sell. \$89,750. Call 756-2377 for DEIL

wanted to share 2 BK 2 BA Apt. at the Groves in Port Orange (5-7 min from ERAU)-Screened porch facing lake, A/C, Pool, etc. Rem Special 1st mo. \$125 A 1/2 utilities. With 1yr or 7 month rent (after 1st mo.) is \$250 & 1/2 utilities. Call Maritan 60 2.58-7673.

1911 VW Bug-Needs a little transmission. Roommate needed to share 3 bedroom/2 tuth house. \$250 month. Includes two rooms, bathroom, all utilities (except long distance calls), 1 mile from ERAU, 2 blocks from DRCC. Petr ok. Male or Female. Must be Non-imoker, 239-0065

Furnished room for nent in quiet neighborhood. Washer/Diyer, microwave, slishwasher, security alarm system, newer 1926 Postias Sunbird-Great condition, house Only \$225/Month, 1/2 electric, Call For Sale: Apple II & Computer Complete austanically sound, gray, sucreed, arank 257-2514, ask for Tony or Kate or leave system including printer with near letter merrage on machina.

> Want to share room or apt. Moving Out? No place to go? Clean, non-smoking male, 767-1742 or Box 6806.

> ROOMS FOR RENT \$160-for Jan 31, 90. \$180-for March 1, 90, Both fumished, in quiet, very nice homey house, all utilities included, also providing bedding, kitchen use, living & dining room. No lease-Gentlemen, non-moker. 258-5901.

> One Bedroom Apartment for Rent 1 Bedroom, I hath, spacious living room, walkin closes, A/C & heat, fairly new, 10 min from ERAU. Rent-325/Month, you pay milities. Chris Logan @ 239-0517.

Female roommate wanted, 5175 a month, Own room 3 miles from campus, 238-3339.

blocks from Ocean Center, \$160 a month plus BBC, Skambourd, like new \$70. Call Greg 1/2 phone and electric deposit. Call Paul 257- 255-8667 or IIRAU box 7699.

Forest Lake Townhouse 53500 Cash, including all closing costs, just assume our low interest PHA Mortage Non-Qualifying lbdr, 1 1/2 bath, 2 story w/loft, Unitity court, pool, lake, clubbourn. Close to IIRAU A shopping. Must Sell 788-5503.

#### + Misc. for sale

For Sale: Apple He computer with megabytes RAM. Includes Multirem RGB, Multiram Plus, Monisor, all Cables, Software, and much more. Call 239-5965 or 253-9105 or ERAU 3325.

\* \$599 100% IBM Compatible \* Linopened, complete, super fast XT operator at 2.1 times IIIM PC. 640K Memory. 101 Key Keyboard, Monitor included. Add \$200 for Hard Drive, Call 238-7355.

Consist Inn at 257-6460, MWI between This unopened, extra-quick, complete IRM AT286-12 Clone runs at 15.3 tunes IBM PC spend. Up to 4 Meg RAM possible, 0 Wait State, 1.2 Meg Ploppy, Hard Drive and Monitor, Call 238-7355.

> Computer! Tandy 1000, 642 K. Color Monitor, 2 Ploppies-5 1/4, 1200 Baut Internal Modern, \$650 o.b.o. 239-6370 days, interested contact Jay at 258-0209 or box 760-3628 evenings.

For Sals: 2 table lamps, floor lamp, and misc. kitchen appliances. Contact Jenny @ 5907.

Jet Ski, 550 Mod. Past and dependable. New paint and angine, very nice. Call Scott 760-

3355.

Looking for R/C airpinus pilot w/haperisnos willing to teach beginner. Leave Massagn ERAU box f-121 or Call 257-3813.

Leam Prencht I am a french student who will teach or totor you in the French language. Private lexions. Call Lawrence (b 239-9437.

socker spaniel for sale. Given as a gift, but 10RAU box 3132. must sell after developing an allergy to it. Loves kids and very quiet & friendly. You over \$650, but asking \$350 or best offer, in box 7078. Contact Angela box 4064.

Weight bench for sale with over 200 lbs. of weights must sell. \$100 or best offer. Contact Matt m 255-3057 or box 6767,

quality. System still expandable. Excellent for doing papers. Large amount of software, \$350 @ 254-6854.

double density-\$1.00 apiece or \$8.50 for a pack of ten LABELS INCLUDED! Why pay more semiswhere else for the same disk? Contact Japp. Hox 4412 or call 760-3219. Why pay more?

Sailbant, 13ft Banshoe, Its 115# Light weight hull, make it easy to transport. Car rack included! Must sell so give me an offer! Jou

Laurouse Halmet for Sale-Helmet was bought brand new and only used about un times For the Animal Lever! 4 month old black Asking 550. Call Amie @ 258-3862 or

will get dog, 20its, food, toys, book, For Sale: Advent Prodigy Tower Home doghouse, brush, feash, & collar. Hul it's Speakers-300 watts, \$230 negotiable. Call shots (rabies) and headwarm pilla. Value Joel @ 257-7678 after 6pm, or leave message

> For Sale: Century 7 Radio w/flight pack and 4 servos, Great Condition \$200. Call 258-5974 leave a message.

For Sale-Commodore 64 w/ printer, disk drive, and software. \$225 or best offer. Call Jon at 258-2445.

For Sale-20 Pro-Printer/Pro-Printer II or best offer. For more information call Matt. ribbout, \$3 each or 5 for \$10. Contact Porest at Bux 2247.

#### 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 advertis ing 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 adver-

tiser must be included for the ad to run. Ads will run for two issues and may be renewed by filling out

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For more information, stop by or call the Avion office at (904) 239-8049.

Roommais wanted-nonamoker, 2 bedroom, 2 Por Sale: Couch \$40, 19 inch color TV 360,

King Private Pilot video ground school Tapes and book, VHS: 595, Box 7546 or 253 5518 ever mit weetunds.

Car Stereo Amplifiers for Sale: Pyle 400 wan and Alpine 60 wan. Beth excellent. Paid over \$900, \$450 for both or separate. Box &546 or 253-5518 even and weekmdi.

For Sale: Twin Bed. 550. Weight Bench, 3. hars and 24 weights over 200th. All for the For Sale-Water bed, super single, free flow unbelievable price of \$60. Call Taxous of 322-0524

Flightnick (Joystick) for IBM and Compatibles with game card lettighter simulator for IIIM and Compatibles. Both still to planic wrapping, never used, \$50 each on both for \$90. Call John @ 274-2936 or box 1345.

Water bed for Sale. King Size good condition asking \$90. Leave note in box 8052 or call. (407)-323-9797.

For Sale: Philco 19" Color TV w/Remon-\$150 or bo.

AVSTAR flight computer \$20 firm. If

Hewlett Packard 12C Calculator for cosp. finance, managerial accting or any finance. Wanted Plexifoil sum kiss either 10° or 12°. class. Call rise at 257-4233 and by one for Call Doug @ 258-5974 leave a message. \$50.00. Ask for Bob.

Call 253-6937 ask for Jean.

For Sale-40 Channel Cobra Base Station. 10 usable side bands. Asking \$200. Also Silver liagle Mike with Presidential Scal. Asking 5100. Will sell combination for 5250, Call Grag at 257-1239 or Box 8265.

For Sale-Couch with Hide-A-Bed-\$60, Brachemiser-535, Directors Chair-515 Call Kelly at 253-1125, leave a message.

For Sale-Waveless Water Bod. A complete water bed with 2 Jamps, head board. Queen Roses are Red size. Valued for \$500 wants to sell for only \$230, Call Med 238-0769.

with under-dressers. Asking 5100. Lauve a note in Box 6364 or call 238-0375.

Selling \$300.00 off my CUSTOM CARD for only \$200.00. All legally transferrable to your own card. Call Alysis at 760/7106 or leave message at Box 8907.

Wanted: Dedicated Female workout panner. for early morning workouts, 3 to 5 times a neck. Cross-Train. Run, Swim, Bika, Nantilus, Call. Jim, 252-5907.

Interested in learning FRENCH or currently carolled in a FRHNCH, and need some help. Please contact Agnes in Room 248 Dorm I, or at 258-9965, or leave a message in Box 1035.

#### Miscellaneous

Anyone interested in driving to the Chicagoland Area or University of Illinois Rotweiller Pupe-Pedigreed Pemales, 3350. from Feb 15 thru Feb 20, please call. Round Trip cost only \$80 John box 8655.

Disk Blowout-3.5 inch disks, double sided. Semi-formed band looking for drummer and DOUG, vocalist. Material performed includes: Cut, Zeppelin, Guns n Roses, Joe Satriani, & Hendrix. Most have own equipment. Contact Matt at 253-7003.

> Wanted: One Apple MacIntosh computer W/printer. Leave message at 258-5974.

Need your papers types?? Let me do it for you. Typed, spelling & grammar corrected for \$1/page. Contact Matt at 255-3097.

Calculator Found: Thursday morning. February 1, near telephones in library. Send note with your name, telephone mumber, calculator make and model, proof of ownership, and 5 mwant to box 8424.

Wanted: Dedicated Female workout partner for early morning workcome, 3 to 5 times a TO THE AVIONICS MAJOR: Nautifus, Call Jim, 252-5907.

Interested in learning PRENCH or currently enrolled in a FRIINCH, and need some help. TO ROB NIVEYRO Please contact Agnes in Room 248 Dorm I, or "You've lost that loving feeling." at 258-9968, or leave a message in Box 1035. YOUR ROOMIES

#### Personals

Thack you for being my friend. KAAS

PHOENIX STAFF Have you met your deadline? If not: 1. Increase production

2. Cut Costs 3. Quit hanging around the coffee machine!!

CHARLIE CO, It was an interesting way to spend an evening. Actually, I had a pretty good time. Hopefully we can do it again sometime. Please. AN ADMIRER

TO MY PETTTE LITTLE FLOWER, Is is great to have you back again. Thanx again for the Olive Garden. Lets make this semester even more fun than the last one. Love Walder

another wild Lambada How about sometimes? KAAS

He's just painfully boring! THE MOOSE

Violets are Blue Being in love with you. HOBBES

PUMPKIN SEED,

You are the source of all my happiness, I love you! POREVER P-POOH

blands heir and eyes of light sea green.

There are things that cannot be dented, like HOBBUS the smaxing thing between you and I. Remember: LEARN, don't memorize and

To the one sasily spotted in the UC with

HEY YOU, GNARLY DUDE: YOU ARE MR. EVERYTHING!

you'll pass Yo Yo's class.

What comes around, goes around. And now I'm watching you!

PREPRY, How about those Broncos? Only 81 days left and I'm Dulta bound. BOCA GRL

Mail to Great Mail to Cool Mail is Wonderful

When it's received from you.

Some Punkin-Head loves you very much-and much more than that. Happy 22nd Amiversary. **GUESS WHO?** 

POLAR BEAR Happy 51 I think you're great-keep smiling. YOUR FAVORITE ARCTIC ICE BIRD.

week. Cross-Train. Run, Swim, Bike, Work hard at everything you do and our feelings will always may fresh and new. HOBBES

MRS. SMITH It's good to be BACK. Looking forward to a semester of punishment, Hot Bubble Baths, and long trips in the car. I LOVE YOU!! MR. SMITH

What Happened to You? Did you drop out of school due to a little reality trip? or just figure you would send your personals to University of Berkeley?

PSUEDO TINA

Don't forget to pack a deck of cards in your flight bag. Maybe we can invest a new game. LOVE, POOKIE

KRESS AND DAVID, Paybacks come in packages of two, so HEWARE you guys. POOT RAPE VICTIM

MR. MARK C. DEIP. I'll meet you in the lading room. MR. DIANE L. WHILLTON

KHLLL Thank you for helping me. HINNY

JENNY

HINNY

Wasn't it great to see Clus again! When does he go on active duty?

ELIZABETH, Thank you! You mally saved me from a lot of mouble.

TO THE AVIONICS MAJOR Will you be my valuntine? (Reply Next Week

TO THE HARD ONE TO SEE IN THE UC My eyes of blue are only for you but my perioription I need to renew.

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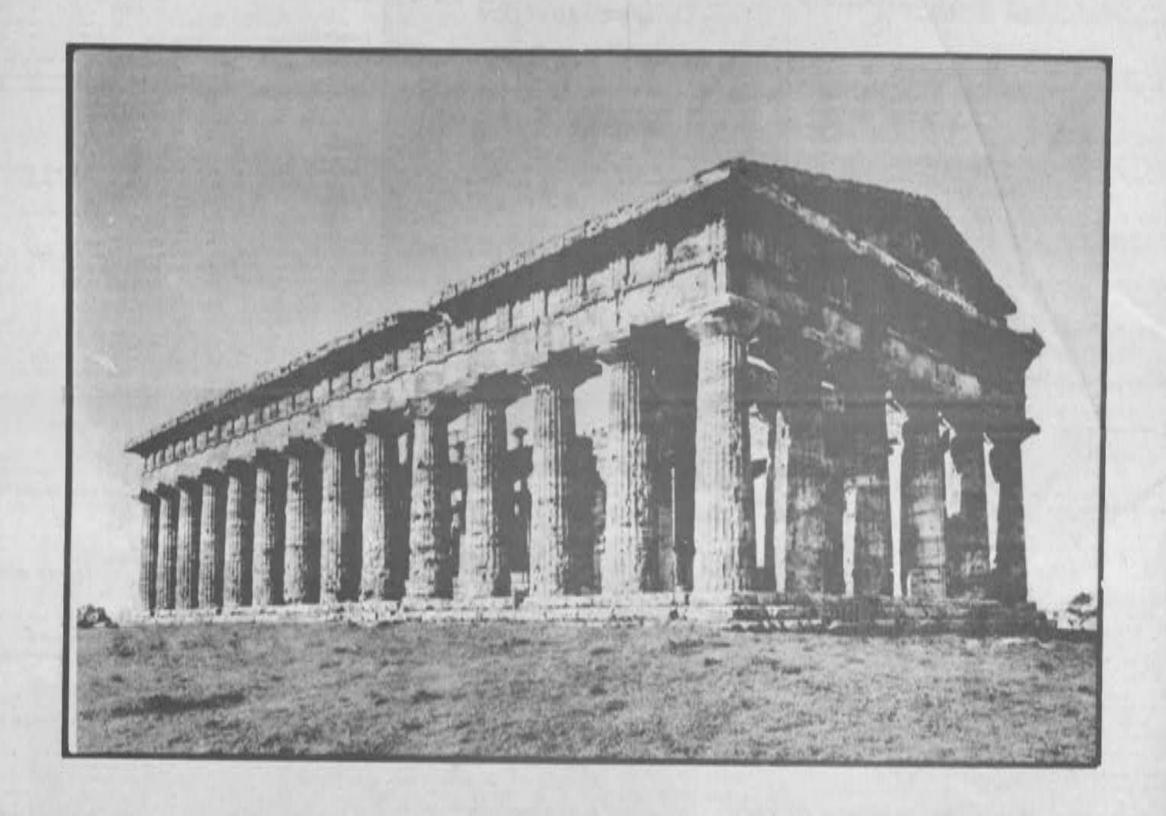
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