

5-13-1992

## Avion 1992-05-13 (B)

Embry-Riddle Aeronautical University

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# SPACE TECHNOLOGY

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## Embry-Riddle to participate in NASA research

### Four professors chosen by NASA to participate in Joint Venture

Embry-Riddle Aeronautical University has been selected by the National Aeronautics and Space Administration to participate in the pilot phase of the Joint Venture Program (NASA/JOVE). The total value of the joint effort, expected to be \$325,000 over a three-year period, will fund equipment, student scholarships for graduate assistants and faculty salaries.

The JOVE program, established in 1989, is a joint venture between NASA and institutions of higher education. The JOVE faculty become team members of research groups at NASA field centers and at mentor institutions. An electronic network will be established between the field centers to facilitate research-at-a-distance. The objective of the JOVE program is to increase the participation of academic institutions in NASA space research and to enhance American education

in science, math and technical fields. The NASA/JOVE participants from Embry-Riddle for 1992 are Drs. Lance Erickson, associate professor, aeronautical science; Eric Hill, associate professor, aerospace engineering; Clifford Stodden, assistant professor, mathematics/physical science; and Chris Vuille, assistant professor, engineering physics.

Dr. Erickson's research project is titled, "Modeling of Stellar and Gas Dynamics in Spiral Galaxies and Develop Systems Using Numerical Simulations and Radio and IR Observations." The project will involve simulating galaxy formation

with super computers, and comparing the characteristics of early and late galaxies using inferred and visible images. The research will be conducted at the NASA Ames Research Center, Moffett Field, Calif.

Dr. Stodden's research project, entitled "Use of a Two-Dimensional Model to Assess the Effects of the Space Shuttle on Stratospheric Ozone," will involve using a two-dimensional latitude and altitude computer model, to study the effect of the space shuttle's exhaust as it travels through the upper atmosphere. The research will be conducted at the NASA Goddard Research Center, Greenbelt, Md.

Dr. Hill's project entitled "Aerospace-Composites and Acoustic Emission for Nondestructive Testing," will be conducted at the NASA Marshall Space Flight Center, Huntsville, Ala. This research will be directly applicable to the nondestructive testing of materials to be used on the space station.

Dr. Vuille's research project is titled "Theoretical Models of Rapidly Rotating Neutron Stars." A neutron star is a compact, ultra-dense object formed when a star of sufficient mass undergoes the titanic explosion called a Supernova. The goal of this research project is to better understand neutron star's properties which will shed light on stellar evolution. The project will be conducted through the University of Florida at the NASA Marshall Space Flight Center, Huntsville, Ala.

**The NASA/JOVE participants from Embry-Riddle for 1992 are Drs. Lance Erickson, Eric Hill, Clifford Stodden and Chris Vuille**



Drs. Erickson, Hill, Stodden and Vuille have been selected to participate in the NASA/JOVE program.

graduate students who participate as members of the research team will benefit greatly as they enhance their academic experience. We anticipate these projects will result in significant benefits to the space program and the educational community."

## Cosmic explorer detects evidence to support Big Bang theory

Scientists announced April 23, at the American Physical Society's meeting held in Washington, D.C., that they have detected the long-sought variations within the glow from the Big Bang — the primeval explosion that began the Universe 15 billion years ago — using NASA's Cosmic Background Explorer (COBE). This detection is a major milestone in a 25-year search and supports theories explaining how the initial expansion happened.

These variations show up as temperature fluctuations in the sky, revealed by statistical analysis of maps made by the Differential Microwave Radiometers (DMR) on the COBE satellite. The fluctuations are extremely faint, only about thirty millionths of a degree warmer or cooler than the rest of the sky, which is itself very cold — only 2.73 degrees above absolute zero. The DMR is still gathering data and the measurements are expected to become even more precise.

The Big Bang theory was initially suggested because it explains why distant galaxies are receding from us at enormous speeds, as though all galaxies started moving away from the same location a long time ago. The theory also predicts the existence of cosmic background radiation — the glow left over from the explosion itself. The Big Bang theory received its strongest confirmation when this radiation

was discovered in 1964 by Arno Penzias and Robert Wilson, who later won the Nobel Prize for this discovery.

Although the Big Bang theory is widely accepted, there have been several unresolved mysteries. How could all of the matter and energy in the Universe become so evenly mixed in the instant following the Big Bang? How could this evenly distributed matter then break up spontaneously into objects of all sizes, such as galaxies and clusters of galaxies? The temperature variations seen by COBE help to resolve these mysteries.

"The COBE receivers mapped the sky as it would appear if our eyes could see microwaves at the wavelengths 3.3, 5.7 and 9.6 mm, which is about 10,000 times longer than the wavelength of ordinary light," explained Dr. George Smoot, University of California, Berkeley, the leader of the team that made this discovery. "Most of the energy received from the sky at these

**"These theories say that most of the matter in the Universe is invisible to us and must be a new kind of matter, not yet detected in our laboratories."**

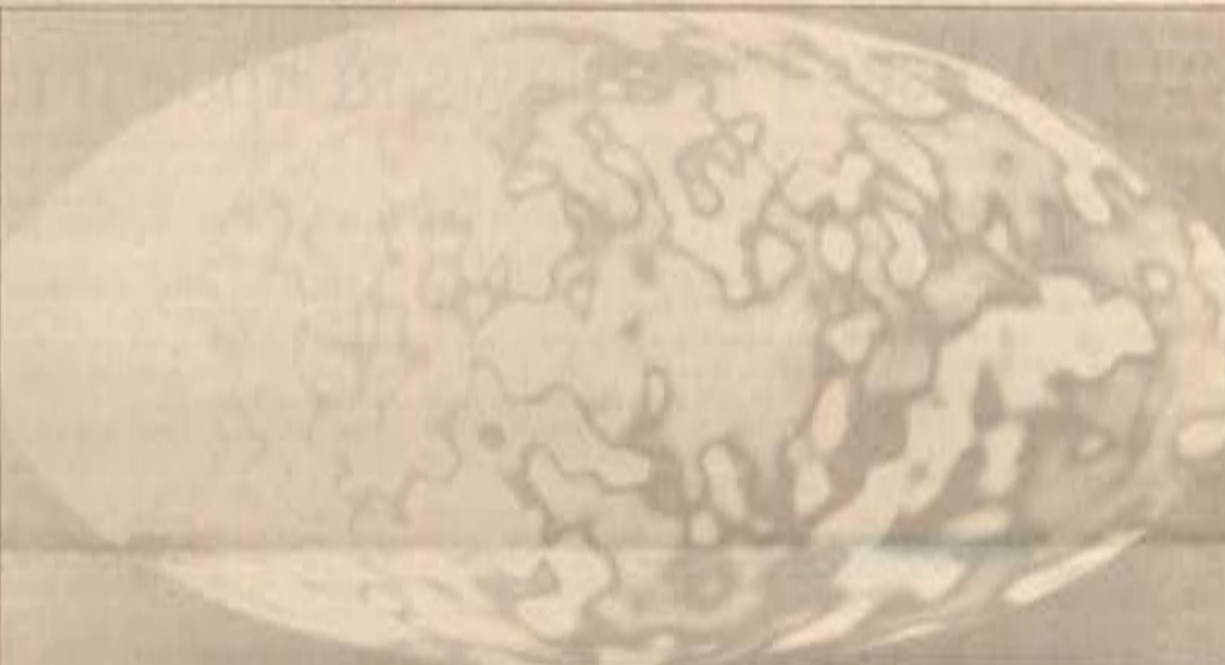
**Dr. Edward Wright  
UCLA**

wavelengths is from the cosmic background radiation of the Big Bang, but it is extremely faint by human standards.

"Hundreds of millions of measurements were made by the DMR over the course of a year, and then combined to make pictures of the sky. Making sure all the measurements were combined correctly required exquisitely careful computer analysis," Smoot explained.

Another COBE scientist, Dr. Charles Bennett of the Goddard Space Flight Center, Greenbelt, Md., explained that a major challenge for the team was to distinguish the Big Bang signals from those coming from our own Milky Way Galaxy. "The Milky Way emits microwaves that appear mostly concentrated in a narrow zone around the sky. We compared the signals at different positions and at different wavelengths to separate the radiation of the Big Bang from that of the Milky Way Galaxy," said Dr. Bennett.

The temperatures and sizes of the fluctuations in the background radiation COBE detected agree with the predictions of "inflationary cosmology," a theory that says the structure and behavior of the Universe were determined by minute fluctuations occurring when the Universe was much younger than one-trillionth of a second. The COBE results provide new evidence in support of the "inflationary" scenario.



Pictured is a microwave map of the whole sky made from one year of data taken by COBE. The shading shows differences in the average sky temperature of 2.73 degrees above absolute zero.

The amount of gravity provided by these visible fluctuations was inadequate to draw together the galaxies and clusters of galaxies. Instead, astronomers conclude that the galaxies formed only because most of the material in the Universe is invisible and totally unlike ordinary matter.

This "dark matter" provides the necessary gravitational attraction for forming galaxies. The fluctuations seen by COBE are too small to explain how the visible matter in the young Universe could condense into

the galaxies that now exist. According to COBE scientist Dr. Edward Wright from the University of California, Los Angeles, the COBE measurements support theories postulating large amounts of dark matter.

"These theories say that most of the matter in the Universe is invisible to us and must be a new kind of matter, not yet detected in our laboratories," he explained. "Nevertheless, we need such invisible matter to explain how galaxies formed in the early

Universe and gathered themselves together into huge clusters. Ordinary matter would be attracted into regions of concentrated dark matter, and the Universe as we know it today could develop, eventually leading to the formation of galaxies, stars and planets," Wright said.

COBE was launched in November, 1989, from Vandenberg Air Force Base aboard a Delta launch vehicle. The Goddard Space Flight Center manages COBE for NASA's Office of Space Science and Applications.

## Hubble continues to reveal secrets of universe

The Hubble Space Telescope (HST), continues to provide NASA scientist with amazing observations. HST was launched aboard the Space Shuttle *Discovery* in April 1990. The most recent observations include a new optical jet in the nucleus of the elliptical galaxy NGC3862, the first clear view of one of the hottest stars and photographs of the planet Jupiter and its aurora.

The photograph from the Hubble Space Telescope presents the first clear view of one of the hottest know stars, the central star of a nebula in our Milky Way galaxy. The separate star, called "the NGC 2440 nucleus," appears as a bright white dot in the center of the photograph. In previous photographs made with telescopes on the ground, blurring due to the Earth's atmosphere acted to smear together the light from the star with the glow of the surrounding nebula. By clearly separating the starlight from the nebular glow, astronomers have been able to make the most accurate estimate yet for the star temperature: a torrid 200,000 degrees Celsius (or 360,000 degrees Fahrenheit) or more.

The picture was obtained with

Hubble's Planetary Camera by scientists led by astrophysicist Dr. Sally Heap of NASA's Goddard Space Flight Center in Greenbelt, MD. The photograph was sharpened by computer image restoration. The brightness of the star compared to that of the surrounding nebula implies that the star, at a minimum of 200,000 K, is one of the hottest stars on record.

The image of the planet Jupiter and the surrounding Jovian aurora was observed on February 8, 1992, by the European Space Agency's Faint Object Camera (FOC). This is the first direct image of the aurora taken in ultraviolet light and is the best aurora image ever. The image of the planet was obtained by HST's Wide Field/Planetary Camera. The FOC image shows the aurora is not uniformly bright.

The bright oval shape of the aurora corresponds approximately to the position where magnetic field lines passing through the orbit of the Jovian satellite, Io, enter Jupiter's atmosphere. In 1980, Voyager discovered that Io has an extraordinary active volcano system, and many other observations have determined that volcanic particles escape from Io into the Jovian magnetosphere.

HST observations were made simultaneously with the Jupiter



This photograph of the planet Jupiter was taken by the Hubble Space Telescope.

flyby of the *Ulysses* spacecraft. *Ulysses* took advantage of the opportunity to make measurements of the Jovian magnetosphere.

NGC 3862, also known as 3C264, is a bright radio source and x-ray source. It is the sixth brightest galaxy in a rich cluster of galaxies known as Abell 1367, located at a distance of about 260 million light-years away in the constellation Leo. Previous observations of NGC 3862 taken in radio wavelengths have revealed a jet-like structure that

extends for a very long distance. Extra-galactic jets have been detected in radio wavelengths in many active galaxies, but only a few have been seen in optical light. Astronomers do not yet understand why some jets are seen in visible light and others are not. They also would like to understand the connection between radio and optical emissions.

The jet image was taken by the European Space Agency's Faint Object Camera on January 25, 1992.

## NASA says shuttle only ticket to space for now

NASA is back flying four space shuttles with the maiden flight of *Endeavour*, *Challenger's* successor. Not everyone is impressed.

While the fleet is much improved since the 1986 *Challenger* disaster, it's based on designs two decades old, said space policy analyst John Logsdon. The cost, now approaching half a billion dollars per flight, is outrageous, he said.

"What we're flying is 1970s technology, and we're getting to the 21st century," said astronaut Kathryn Thornton, one of *Endeavour's* four designated spacewalkers. "Maybe we ought to move on to something else."

*Endeavour's* launch will be what the agency expects to be the last shuttle of this type. For chief astronaut Daniel Brandenstein, commander of *Endeavour's* inaugural voyage, the occasion is bittersweet.

"It would be nice to keep the line open," Brandenstein said. "But on the other hand, we have four vehicles and I think we can fly the manifest (schedule) comfortably with four vehicles."

*Endeavour* already is cranking up extra costs. Kennedy Space Center workers found numerous problems after *Endeavour* arrived a year ago.

By late last year, *Endeavour's* launch preparations lagged more than six weeks behind because of gouged beams, crossed wires and dirty fuel lines. Crews worked overtime, but the flight still is a month later than initially planned.

The problems hit a low point last month, when NASA had to replace *Endeavour's* three new main engines after a test-firing revealed flaws.

NASA's oldest shuttle, *Columbia*, which made its debut in 1981, will have many of those accoutrements when it flies for the first time in a year in June. The spacecraft was pulled from the lineup last summer for a \$120 million overhaul.

*Discovery*, the fleet leader with 14 missions, is also in the shop getting upgraded. *Atlantis* is next.

"If we keep this hardware up to spec, there's no reason why we can't go for 100 missions," said Dan Germany, manager of NASA's orbiter project.

Like it or not, the shuttle is America's only vehicle into space for now and it will be for a while.

NASA's new chief, Daniel S. Goldin, expects the agency to rely on shuttles for a few more decades while new technology is devised. He's counting on the fleet to carry parts to a space station starting in late 1995; 17 assembly missions are planned.

# McDonnell Douglas C-17 built for a new world order

By Ronald Hess  
Aeronautics Editor

Congress has decided to cut the size of America's base military force to reduce budget costs and as a response to the end of the Cold War. To maintain an effective fighting force, the current base force will be reduced and re-organized.

Gen. Colin Powell, chairman of the Joint Chiefs of staff, told McDonnell Douglas employees that the nation's military strategy has changed from a focus on global war, to a focus on regional conflicts.

In response to Congress' decision, McDonnell Douglas has constructed the C-17 transport. The C-17 was built upon the theory that a smaller military requires more mobility. This premise has also won McDonnell Douglas funding in the fiscal 1993 budget.

The C-17 airlifter is a unique aircraft. It is the first transport to incorporate the "fly-by-wire" control system. The system, common in current military aircraft, uses computers to replace old fashioned flight controls. The result is improved control and handling capabilities. "It feels like a fighter," said C-17 test pilot Lt. Col. George G. London Jr.

The C-17 is designed to fulfill airlift needs well into the next century. The aircraft has a maximum payload of 172,200 pounds. It has in-flight refueling capabilities.

The first C-17, designated T-1, completed construction in August of 1991. The T-1 is a full-scale devel-

opment aircraft. It began its rigorous flight testing at Edwards Air Force Base, CA, on September 15, 1991. A combined task force of Air Force, Army, Marine Corps and McDonnell Douglas personnel will put the T-1 and the first four production C-17s through a two-year flight test program.

Air Force Col. Bob Black said, "This is a multiservice test program. We integrated all Army and Marine Corps test requirements into our planning." The C-17 is an Air Force acquisition, but will see action with both the Army and Marines Corps.

The T-1 completed the first test phase in early December. The transport flew over 50 hours of flight testing in 23 missions, missing only one flight due to weather. The first phase primarily consisted of airworthiness testing and flight evaluations at certain speeds and in different flight configurations.

The second phase of evaluations was the beginning of structural and aerodynamics damping investigations. Completion of T-1's first 100 flight hours occurred on January 17, 1992. This was just the C-17's 35th mission, in just four months after its inaugural flight. At that point, the C-17 made numerous milestones in its flight test program.

The T-1 made a short field landing with a ground roll of approxi-

mately 2,000 feet. The aircraft flew to an altitude of 35,000 feet, and expanded its flight envelope to 340 knots.

On the 51st mission, the C-17 performed its first refueling hookups with a KC-135 tanker, taking 22,000 pounds of JP-4 aboard the airlifter.

To date, the C-17 has completed over 55 missions and 168.8 hours of flight testing. Recently, T-1 reached a top speed of .845 Mach. This was within two points of its Mach limit of .87. The C-17 topped its previous weekly flight hour record by operating for 17.4 hours in just five missions.

The first two production C-17s, P-1 and P-2, are nearly 100 percent completed. They are currently undergoing static structural testing. Once completed, the first four production aircraft will join T-1 for flight testing.

P-1 is primarily a structural test aircraft, built for testing both ground and flight loads. P-1 will be the first aircraft to demonstrate the unpaved field operating capability of the C-17. P-2 will demonstrate aircraft range and payload performance tests. It will also be used as the avionics qualification aircraft.

The C-17 has experienced very few maintenance difficulties during its testing. The only major problem encountered was fuel leaks. The leaks are believed to be a manufacturing error rather than a design flaw.

McDonnell Douglas representatives are very pleased at the C-17's performance so far. It was reported that the C-17 has exceeded all pro-



The C-17 airlift transport prototype, T-1, makes its inaugural flight at the Douglas Aircraft Company's production center at Long Beach, CA. T-1 will fly to Edwards Air Force Base to begin its two year flight testing program.

jected performance specifications. Douglas representatives also say that the lack of major design problems have allowed them to improve upon production techniques.

Unfortunately, even with improved production techniques, Douglas Aircraft Co. announced an approximate three percent increase in its estimate for completing the Air Force's contract. The contract includes development, and the first

two production lots of the C-17 transport aircraft. The price of the contract increased to \$7.39 billion.

The price increase will not affect the government since estimated costs are greater than the contract's fixed ceiling price. David Swain, executive vice president of Douglas' government segment, says the increase is based upon an evaluation of all remaining tasks for the C-17 project.

The C-17 can carry large combat equipment and troops or humanitarian aid across international distances directly to airfields anywhere in the world. These abilities are precisely why the U.S. Air Force plans to acquire 120 C-17s.

McDonnell Douglas estimates the first C-17 production lot should be filled by early 1993. The first C-17 squadron is expected to be fully operational by the end of 1994.

**The C-17 is designed to fulfill airlift needs well into the next century.**

## AOPA uses Piper lawsuit appeal to fight for product liability reforms

By David Fekke  
Managing Editor

AOPA, the Aircraft Owners and Pilots Association, filed an *Amicus Curiae* brief in the 10th Circuit Court of Appeals last month on a key point of product liability reform. The term *Amicus Curiae* is Latin for "Friend of the Court." This means, at the discretion of the court, outside parties may submit information relating to a case.

AOPA joined forces with Piper Aircraft Corporation in a legal appeal. The coalition declared that a tort law should not permit a United States jury to require the redesign of an aircraft to meet every supplemental standard a jury might rule to impose in a case.

The case being appealed by Piper involves a 1980s crash of a 1970 Super Cub. The aircraft was used for the filming of a TV commercial in New Mexico. The Cub pilot was

flying the airplane from the rear seat. A camera was mounted in the front seat, which obstructed the pilot's view.

A truck was parked deliberately in front of the Super Cub to prevent it from taking off. In an attempt to take off, the pilot suffered severe head and neck injuries.

The Cub was equipped with a seat belt, but no shoulder harnesses were installed for rear passengers. At the time the Cub was constructed, there

were no governmental regulations requiring back seat shoulder harnesses.

Despite the lack of any federal regulations, a New Mexico jury awarded the pilot \$2.5 million. The judgment was based upon the lack of a rear seat shoulder harness, and that it is difficult to see from the back of a Super Cub because of its tail wheel configuration.

The appeal to the case now hinges on the issue of federal preemption.

This is the focus of AOPA's *Amicus Curiae* brief.

The brief states, "The General safety and airworthiness of the airplane ... has been established over a period of some 50 years ... the court should rule that a ... claim, based on alleged failure ... to exceed federal requirements, is superseded and preempted by paramount federal law in the field of aircraft design and safety."

AOPA also stated that there is a

need for a single set of national aircraft design and safety standards. AOPA is in support of major changes to the U.S. tort law (wrongful act and negligence) despite vigorous opposition from trial lawyers and consumer advocate groups.

The Aircraft Owners and Pilots Association believes that general aviation consumers would benefit from reforms in the tort laws. AOPA hopes that changes will lower the cost of insurance.




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Microsoft releases summer upgrades of both Windows and Excel

By Joe Cambron
Data Tech Editor

Microsoft is on another upgrade binge. Supported by a full television advertising campaign and a savvy marketing department, Microsoft is trumpeting the co-release of both Windows 3.1 and Excel 4.0.

Overview
Quickly, for those computer owners who have been in a coma, Windows is a Graphical User Interface (or GUI- pronounced GOO-EEE) that converts DOS based PCs into a Macintosh-like system with visual cues to solve problems.

OS/2 is also a GUI. IBM, its maker, is relatively new to the retail software arena. OS/2 2.0 is IBM's first truly retail software product.

useless so far.
Microsoft, which rolls out new products with great regularity, has memorized the drill and is, in fact, in the process of selling two new products.

Excel 4.0 is the most recent spreadsheet upgrade in the Windows arena. It is also the most functional, however. Lotus, which struggled to even complete its 1-2-3 for Windows product, was forced to scale back the bells and whistles from its spreadsheet package for several reasons.

First, it makes the program more stable. The Lotus product often crashed in its initial release version. While this still qualified as an excellent first attempt at writing a Windows program, Microsoft has more than a little experience at writing spreadsheets for Windows.

Excel developers also had the advantage of knowing how Windows works at the most basic levels, whereas outside developers like Lotus cannot delve quite so deeply into Windows internal features.

Finally, Excel 4.0 takes advantage of new Windows 3.1 features that were unannounced when Lotus 1-2-3 was first available.

As for this particular version of Excel, version 4.0 at least six entirely new features.

Using drag and drop, an Excel owner can move or copy data simply by highlighting it and then "lifting" it to its new location.

This new feature allows a series of cells to be filled intelligently based on as little as one input. A series of months, for instance, can be created simply by copying "January."

Cross-tabulation tables can be

easily accessed from a Microsoft Excel database using this feature.

This allows a user to play "what-if" by quickly and easily creating a variety of scenarios and providing save/review options for each separate scenario.

Autoformat works much like a predefined stylesheet. Professionally designed format attributes can be easily applied to a range of text simply by pointing and clicking.

Finally, Excel becomes the first Windows spreadsheet to provide spellchecking for the spreadsheet's labels.

For those die-hard Lotus users looking hard for an excuse not to switch to Excel, Microsoft has removed the final barrier for your conversion.

Other features have also been augmented. The analysis toolpack now includes more statistical, financial, engineering and scientific functions and procedures.

In the area of databases, support now extends to dBASE, SQL, Oracle, Rdb, text files and Excel's

own simple database format.
Microsoft Excel is the most easy to use spreadsheet available, with extensive help on-line and numerous point and click toolbars that may be optionally displayed.

The only real criticisms of Excel are a result of its comprehensive nature. Its many options can cause sensory overload at first, but this can be overcome with time.

As for hard drive space, the program can take from 6 to 10 megabytes of space depending upon what choices you select during the installation program.

Excel is an excellent product and is available as an upgrade at local software stores at an extremely affordable price.

As you have probably already read, Windows 3.1 is the newest upgrade to Microsoft's uproariously popular Windows 3.1 program.

Usually, a "decimal upgrade" (3.0 to 3.1) is a small one, but not in this case. This upgrade is of particular interest to anyone who owns a sound card such as a Soundblaster or who does not own Adobe Type Manager and years for high quality printing.

Windows 3.1 also marks a dramatic increase in the reliability of Windows. For the first time, Windows can now intercept a system crash and in many cases allow only the offending program to be closed.

Despite press accounts, Windows does still totally crash. In trying Windows on two computers, each had its now problems associated with Windows. One computer, a laptop, occasionally produced phantom parity errors that caused Windows to lock up like a Los Angeles 7-11.

The problems with the laptop were primarily corrected by disabling parity checking in the computer's setup program, but occasional mysterious lockups occur because of a conflict between the laptop's built-in power saving program and see Upgrade, page B7.

The Encyclopedia of Aviation is the only aviation title available on CD-ROM

By Joe Cambron
Data Tech Editor

Quanta Publishing is a CD-ROM publisher that produces CD-ROMs on such diverse topics as the world's terrorists and cows. One of their titles is of particular interest to the Avion's readers.

For those of you who do not know, CD-ROM stands for Compact Disk Read Only Memory. CD-ROM disks can contain up to 650 megabytes of data, the equivalent of about 500 high density floppy disks.

For between \$275 and \$1000 depending upon your tastes for convenience and performance. With prices of CD-ROM drives about the same as a hard drive of about 80 megabytes in size, CD-ROM drives can be considered economical for the first time ever.

With this kind of versatility and the sheer magnitude of data that can be stored in a single CD-ROM, they seem to be the certain wave of the future. Another factor which is leading software publishers toward CD-ROM is their lack of "copyability."

The tremendous size of CD-ROMs makes them almost impossible for the average person to copy. A gigantic hard drive or an ocean of floppy disks stands in the way of "would-be" law breakers.

The bottom line is that software publishers are in love with what they view as a step toward the end of software piracy. Finally, a single CD-ROM disk can cost less than a dollar when purchased in bulk, but

the costs of distributing a large program on floppy, i.e. OS/2 2.0 uses 30+ disks, can add up to \$10 or more.

Getting back to Quanta's new release, The Encyclopedia of Aviation makes use of the CD-ROM only two particularly useful ways. It is, of course, a large program that requires over 100 megabytes of disk space, but its only other extraordinary feature is its library of aircraft images.

that could be played would be aircraft noises.

Nevertheless, the program is a bit to low level for most aviation buffs. It contains useful information, such as dimensions of aircraft and their missions, but that is about it as far as data is concerned.

Perhaps most importantly, to aviation enthusiasts, the title is somewhat misleading. The program is actually a database of only military aircraft. It includes full data for U.S., Soviet/Russian and other airplanes like the French Mirage.

When it comes to images, the program is a mixed success. TIF format

images are provided for all the aircraft discussed on the disk. The images are essentially on three levels. Some are merely poorly scanned line drawings of white on black, others are more detailed.

This CD-ROM does not represent the best of the technology by any means, but its price-\$99- is far from the highest in the genre. The data is interesting, if not all encompassing. As an aviation buff, this disk would probably get more use than the standard CD-ROM encyclopedia, but have to wonder who would buy another Quanta title called About Cows.

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# Check Your Head from the Beasties is fingerlickin' good

By Boyd Kelly  
Diversions Editor

The Beastie Boys' musical style is a little like the Octopus ride at the carnival, every time the car comes around you see someone else. Everytime they put out a new album its in a new style.

Their latest album is called *Check Your Head*. It is supposed to be based on an ancient Beastie Boy proverb that goes, "When all around you are losing their heads, check yours."

The sound has progressed from the hard-hitting *Licensed to Ill* and surpassed the sample-o-rama *Paul's Boutique*. It lies somewhere off to the side in groove land. This album is very funky.

The number one biggest bonus of this album is that they play just about all of their instruments and there are very few samples. On the other hand they have mellowed out a little.

Although there is nothing as powerful as "High Plains Drifter" or "Looking Down The Barrel Of A Gun," this album does have its gems.

The first, of course, was the first single released, "Pass The Mic." It keeps with the old heavy hitting style. As we move on through side one, there is a lot of bass guitar and the unmistakable sound of a Hammond organ. For those of you that don't know, the Hammond is supposed to be the best jazz organ ever.

The comedy and rhymes continue with "Finger Lickin' Good" and then we slide into a small battle at the end of the side.

They pulled together Biz Markie and Ted Nugent for "The Biz vs. The Nuge." This is the closest the album gets to heavy metal.

Side two starts out with a pseudo-ad for Blue Nun wine. Side two also contains the funk song of the album which is bursting with the beautiful

sounds of the Hammond. "Groove Holmes" is a song that could fit into just about any niche of society. It then moves into "Live At P.J.'s," which gives us the feeling that we are in a little blues night club.

We then listen to "Mark On The Bus," not too bad, but it leads us up to the other favorite of the album.

"Professor Booty" is all Beastie and provides the reaffirmation that they are after-all a hard hitting band that refuses to follow trends.

"In 3's" is exactly that, a quick musical jam in three.

So is the change in style related to the Beasties move to California? No. This is a chance for them to expand even more and diversify. The album is full of instruments and at one point I'm sure I heard someone playing a kazoo, or maybe it was even a comb with tissue paper wrapped around it.

Many of the instruments were picked up at garage sales. So, if you want to look at it from a different



"When all around you are losing their heads, check yours."

point of view, they swapped samples for fun instruments to play with.

The only problem I did have with the album was that it seemed like they had just discovered the voice

box and did not want not to use it.

Other than that, this is a great follow on. I look forward to seeing them on tour this summer as well. This is the first time in five years

that they have toured and it will be an incredible feat to see them play songs from all three albums live. They will be playing in Orlando on May 28 at The Edge.

# Wise Guy puts on more than just a regular show at The Other Place

By Douglas O. Fischer  
Diversions Writer

When it comes to seeing top quality Rock n Roll bands live on stage, the Other Place is the place to be. This establishment, located north of Seabreeze on A1A, has been rocking Daytona for the past 20 years with the nations finest rock bands.

Before the band starts you can shoot pool on one of the many pool tables, or sit back and watch some of the awesome laserdisc videos. If you have a special video request, just ask Wendy, the best looking D.J. in Daytona, and she'll play it for you.

The top notch band that played here last week is a west coast Florida band that goes by the name of Wise Guy. This band Rocks! Good old fashion rock and roll, nothing less. Wise Guy consists of Jody doing the lead vocals, his brother Dan on lead guitar, Steve on

the bass, John on drums, and last but definitely not least, Zippy on keyboards.

I didn't know why they called him Zippy until his solo. Zippy jammed on the keyboards for ten minutes in a manner that Beethoven, Mozart and Rick Wakeman would be proud of. His fingers flew across the Ivory's at the speed of light, something very few concert pianists can do.

As for the rest of the band, they wail. They did an excellent job on the cover tunes, but what impressed me the most was their original music, which I hope gets released soon, because what I heard was great. "Life is Strange and so are you," and "Come On" were my two favorites.

Wise Guy also put on a very good Stage Show, which included special appearances by Cornelie the Wolf on Drums, and Jody as Captain

Condom. It seems that the Captain is very concerned about the welfare of the bands listeners, so he had condoms a plenty to give out to those in need. He had the thin ones for members of the opposite sex that you know fairly well and thick ones for new acquaintances. He also gave hankies to the ladies after a mad song.

I'd like to thank the band for putting on a fantastic show and a special thanks for doing an excellent job on the "Jet City Woman" request, it made the night for a special friend.

Seeing live Rock n Roll seven nights a week at the Other Place just got better because the management is offering a buck off the cover with Riddle ID.

You only need identification to drink, everyone is welcome to enter and have a great time. There are no gimmicks or stupid contests at the



Wise Guy toasts the crowd.

O.P., just excellent Rock n Roll. Remember that when you get on the

dance floor with the best looking Rock attired crowd, don't do the

funky monkey, "Dance like a Rock n Roll girl."

## Reviews in Brief

By Boyd Kelly  
Diversions Editor

### Sweet Lizard Illtet-Sweet Lizard Illtet

What is an Illtet? According to E. Zef, lead singer, "Illtet... like quartet or quintet, only stickier." These guys have a definite sound to them. Definite in only the way that a band from New Jersey and New York could have. It is a heavy metal, hip-hop, rock and roll sound that is powerful stuff. They sound a little like Faith No More and their lyrics convey thought and meaning. Some notable favorites are "Mutiny zoo," "Rat Funk" and "A School of Fish." Nice use of samples and drum triggers. Overall grade: A-, B+.

### Recoil-Bloodline

This is an interesting piece of work. Recoil is basically Alan Wilders solo band. Alan Wilder, of course, is best known for his Depeche Mode work. Also on the album is Douglas McCarthy of Nitzer Ebb, Toni Halliday of Curvo and samples of Bokka White.

It is only seven songs long and lends itself to being more of an extended mix kind of album, but it is selling for full price at the store. I wouldn't run right out and buy it until hearing it first. It does sound like an offspring of Depeche Mode and it really isn't all that special. Overall grade: C.

### Diego Modena & Jean-Philippe Audin-Ocarina

This was an excellent introduction to the Ocarina. This little instrument is akin to the Pan flute. Well, sort of. It is a little hand held flute thing indigenous to South America.

It is a very soothing sound and actually the guitars on the album stick out more than the ocarina does.

Apparently *Ocarina* was very popular in France. But, being English I've never really trusted the French. Rest assured this is a good album if you like Zamfir or Yanni. A couple of favorites on the album include "Moonlight Reggae," "Song of Ocarina" and "Implora" (flute solo). Another song I liked was "Bagpipe Reggae," but they used synthesized bagpipes, very poor taste. Overall grade: B-.

### The Spent Poets-The Spent Poets

These guys are starting off on the right track. They combine plain simple rock and roll and regular studio tricks together in a way that has been done before but is still fresh. At first I thought that maybe they had just sat down and listened to all the Beatles albums and then wrote an album. As I listened more to the album though, I realized that I had made a mistake. It is really just the middle eastern influence in their music. The sitar and the music that goes around it has a distinct sound that has only been used in the west primarily by the beatles.

This album is chock full of songs and has quite some diversity. Some of the notable tracks, "Mr. Einstein," "You Existential Past," "Alli Ali Ackbar" and "Walt Whitman's Beard". Overall grade: A.

### Barkmarket-Vegas Throat

Barkmarket, once only synonymous with increased product protection, now an ever-expanding Brooklyn-based group of friendly manufacturers whose common goal

is the complete satisfaction of you, our beloved customers.

From hardware to easy listening records, the care and consideration we at Barkindustries put into every line of our products is still far more important than mere profits.

Barkindustries prides itself in its skilled craftsmen who work with extra care to create products of lasting value. Take Dave Sardy- a dedicated technician, long wearing, and dependable vocalist/guitarist/producer. Or drummer Rock Savage; durable and resilient, with an unhampered use of power. And then there's bassist John Nowlin who each year spends a week in our Barklabs being fine-tuned. He is subjected to 98 separate ordeals and then handrubbed until he radiates.

There's no better way to turn a dull day into a bright one than with a Barkproduct. All of our goods are sturdily built to give years of rugged use. The widespread popularity of Barkproducts is directly due to our scientifically correct designs, rare accuracy of manufacture and quality of materials.

We still take that extra moment to lovingly cradle every packaged good that leaves our Brooklyn warehouse. But sometimes, even honesty and love aren't enough to convince customers of the joys of a Barkproduct.

"The more you try the more you want!"

And it's not hard to tell why when you experience the delicious combination of Barkmarket's "warped vocals, grungy hooks the size of Montana, with lyrics and images designed to make you uncomfortable with your perverted consumer self." -excerpt from *Barkmarket press release*.

Overall grade: C.

# Billy Walker, Jr. provides a new jazz style on his *Untitled* album

By Boyd Kelly  
Diversions Editor

I had never really listened to very much jazz as I was growing up. I was exposed to a lot of music in my dad's collection, including Frank Sinatra. So, I was pleasantly surprised to hear this new album from Billy Walker, Jr.

*Untitled* is the name of it and although it is an odd name it is his fifth album to be produced.

Walker spent most of his life dedicated to music.

"As a kid, I was a radio scanner. At night, I could pick up stations from all over the country. I'd listen

to jazz, country, rock, just about anything."

When he was nine years old he had his very own thirty minute show on a local radio station. His big break came before his 18th birthday. He had just moved to Los Angeles and was playing The Palomino nightclub when he was picked up by a talent scout.

The influences of his past really show through. Most of his early career was spent as session guitarist who played with the likes of Ray Charles, The Beach Boys and Chet Atkins.

The album provides a very soothing sound. "Under The Stairs, 4th of

July and Water Bells" are among some of my favorites.

Apparently his Country roots caused some problems for a while "Some think that you can't do this jazz-oriented music unless you're from a big city. But strangely enough my audience never mentions it. I love entertaining and being close to them. We have an intimate relationship. When I'm on stage I talk about what I was visualizing when I wrote a piece and what it inspires in me. They don't seem to mind my accent."

Well, I agree that it is an imaginative album and it has made a new wave jazz fan out of me.

# Ramones new album *Loco Live* is reminiscent of "choking cattle"

By Dan Stoffler  
Diversions Writer

In our topsy-turvy world it is always good to be able to kick back and enjoy the harmonious sounds of choking cattle.

*Loco Live*, the new album from long time punk band The Ramones did just that; It allowed me, the listener to indulge in some of the worst production talent I've ever heard.

As a Ramones fan myself I found it hard to bash this one powerful band, but as time marches on so must the Ramones. It seems that a live album of their highly publicized tour of Spain is not exactly what the "American Public" needed.

To say the production quality was bad would be an understatement, the

clue should have been these few simple words, "Recorded live in Barcelona, Spain." Between the static, the squealing and the screams of braindead Spaniards, you could hear the soothing riffs that only Joey, Johnny, Marky and newcomer C. J. could manage to create.

The songs themselves still breathe the stale smoldering of subhumanity that Ramones preach so well with such hits as "Pinhead," "Beat on the Brat" and "Somebody Put Something In My Drink."

However, they push the outer limits of palatable with their remake of The Trashmen's classic "Surfin' Bird." True agony was reached with their futile attempt to recreate Dee Dee's electric voice in their classic, "Wart Hog." Believe it or not you

can actually understand the lyrics, what a let down, but as my three hundred pound aunt said to me right before she got on the skateboard, "You ain't seen nothing yet."

The real jolt came after finishing the liner notes of the album and finding out that they were written by the polyester princess herself, Deborah Harry. Yes, that's right, Blondie.

I should tell you folks not to buy this work of art, but I won't because I know that anybody who would even think about buying a Ramones album will buy it anyway, and if you like the live Ramones sound without their stage antics to go along with it, please be my guest, but don't say I didn't warn you.

# Orchestra sues Disney over *Fantasia* profits

Associated Press

PHILADELPHIA (AP) -The Philadelphia Orchestra filed suit Wednesday demanding half the profits from videos of *Fantasia*, the classic movie on which the orchestra and Walt Disney Co. collaborated a half century ago.

The suit, filed in U.S. District Court here, claims Disney and Buena Vista Home Video, both of Burbank, Calif., did not obtain the orchestra's consent for the videocassette and laser disc versions issued last fall.

The lawsuit involves technologies

that weren't even contemplated in 1938-40, the years when *Fantasia* was planned and produced. But the orchestra claims the new formats infringe on its right to control the use and commercial value of its name, likeness and sound recordings.

Disney sold 14.2 million copies of the new issues by Jan. 24, making \$220 million in revenues and at least \$120 million in profits, according to the lawsuit.

"The Philadelphia Orchestra is entitled to 50 percent of Disney's profits" on the videocassette and laser disc versions, the lawsuit contends.

"The orchestra played an integral role in creating this timeless and unique film," Joseph H. Kluger, orchestra president and chief operating officer, said in a statement.

"It is with great frustration and sadness, therefore, that we are forced to take this action in order to obtain just compensation for the Philadelphia Orchestra's participation in the home video release of *Fantasia*," he said.

Disney spokesman Steve Feldstein said the company does not comment on litigation.

The orchestra originally only permitted Disney to use its sound

recording of classical music "for a feature-length theatrical motion picture exhibited in theaters outside the home," the lawsuit states.

When Disney first sought to release phonograph recordings of *Fantasia* in 1957, it obtained the orchestra's permission to do so and agreed to pay royalties, according to the lawsuit.

No similar permission was sought or granted before the videocassette and laser disc versions were released, the lawsuit claims.

Walt Disney first approached the orchestra's conductor, Leopold Stokowski, with the idea of recording Dukas' "The Sorcerer's

Apprentice" and animating it in the 1930s. The plan grew into a concert of eight classical works narrated by Deems Taylor, a popular composer and radio broadcaster.

In the movie, Stokowski's hands appear as the orchestra performs Bach's "Tocatta and Fugue in D Minor" and later Stokowski shakes hands with Mickey Mouse.

The soundtrack also includes Tchaikovsky's "The Nutcracker Suite," Stravinsky's "The Rite of Spring," Beethoven's "Pastoral Symphony," Ponchielli's "Dance of the Hours," Mussorgsky's "Night on Bald Mountain" and Schubert's "Ave Maria."

Join the Diversions Staff for that oleen sexy look!

# St. Augustine offers a weekend retreat from classes

By Roland Houle  
Editor in Chief

Only one hour away from Daytona Beach, you are in an entirely different place and in some ways, a different time. This place is St. Augustine, and it is ideal for an inexpensive get-away weekend.

St. Augustine is located about 60 miles north of Daytona Beach off I-95. As the oldest permanent European settlement in the continental United States, St. Augustine offers a diverse history and culture to its visitors.

**History**  
Juan Ponce de Leon first sighted the land in April of 1513 while he searched for the fabled Fountain of Youth. Here, Ponce de Leon's landmark cross recorded Spain's first claim to North America.

The Spanish explorer Pedro Menendez de Aviles stepped ashore here in 1565 in order to establish a permanent settlement.

The settlement, small though it was, survived under Spanish, British and finally United States rule. It was 32 years before Jamestown, Virginia came along, and more than a half century before the Pilgrims landed at Plymouth Rock.

Before the European settlers, the Timucuan Indians resided in the area and were on shore to observe

Menendez landing.

Menendez reached the Florida shore at Cape Canaveral on August 28, 1565, the feast day of Saint Augustine, Bishop of Hippo. He then proceeded north to find the French settlement of Fort Caroline. When he encountered the harbor leading to the Indian village of Seloy on September 4, he named it St. Augustine in honor of the saint's day of his first sighting of land.

The little settlement survived the attacks of Englishmen Sir Francis Drake (1586) and Robert Searles (1668); setbacks prompting the construction of the coquina fort, Castillo de San Marcos. This fort provided protection from a number of raids over the next century.

Spain lost Florida to politics in 1783 when it was ceded to England during a territorial exchange.

In 1821 Florida became a territory of the United States, gaining statehood in 1845.

In the late 1880s, oil millionaire Henry Flagler built elegant hotels and churches in an attempt to turn the quaint town into a tourist mecca. By the turn of the century, however, Flagler's interests had moved south, but the buildings remained as architectural gems.

Now, the nucleus of these buildings house Flagler College, the City Hall Complex and Lightner Museum

and the County Courthouse.

Today, the city still retains its historical buildings and sights for residents and visitors to see.

**Activities and sights**  
Many of the following activities are free or inexpensive (\$5 and under) activities. For complete details and location of sights, restaurants and lodging, see the Visitors Information Center on Avenida Menendez near Orange Street.

**Anastasia Island:** There are many historical sights to visit on the island, such as the coquina quarries, the sight of an old Spanish lighthouse, and a Spanish well and chimney believed to be the barracks housing the quarry overseer, master mason and stonemasons who quarried the coquina stone for the fort. It also has beautiful beaches with sand dunes.

**Castillo de San Marcos:** The coquina fortress located on the bay front has been attacked many times in the past, but never conquered. The fort offers very interesting sights and guided tours. The admission cost is \$1.

**Catholic Cathedral/Basilica:** This historical structure represents the original Catholic church dedicated in 1797 becoming a cathedral in 1870. Donations are appreciated.

**Flagler College:** The centerpiece of the Flagler College campus is the former resort hotel, Ponce de Leon, which has been described as a masterpiece of American architecture. Complimentary guided tours are given daily over the summer.

**Fountain of Youth:** This is North America's first historical site. It is located on the ancient Indian town of Seloy, where Ponce de Leon came ashore to record the discovery of North America.

**Government House Museum:** This museum explores St. Augustine's history from early native settlements through European to Flagler's Golden Era. Entrance fee is \$1 for students.

**Historical Society Complex:** The St. Augustine Historical Society Library is open free to the public. There is a small charge for the Oldest House and the Museum of Florida Military History.

**Lightner Museum:** The museum

is housed in the former Alcazar Hotel, part of Flagler's contribution to the city. It houses a collection of Victorian period memorabilia and contains the largest American cut glass exhibit known. There is a small admission charge.

**Marineland of Florida:** Marineland is a journey beneath the ocean's surface. It offers a look at coral reefs, dolphins, penguins, sea lions and many other aquatic creatures. Located just south of St. Augustine, Marineland has an admission fee.

**Mission of Nombre de Dios:** The Catholic Mission of Nombre de Dios and the Lady of La Leche Shrine are on the sights of the landing of Pedro Menendez de Aviles in 1565. Donations are appreciated.

**Spanish Quarter:** This "living history museum" on St. George Street includes several restored homes and offers a look at Spanish St. Augustine during the 1740s. Guides in period dress explain life of the early residents and create crafts of that time. Admission is \$5 general.

**Other activities and sights:** Alcazar Antique Mall, art galleries and shows, cemeteries, picnics, Fort Matanzas, Bridge of Lions, Memorial Presbyterian Church, Oldest Drug Store, Oldest Wooden School House, Spanish Military Hospital, Potter's Wax Museum, Ripley's Believe It or Not! Museum, Cross and Sword and Alligator Farm to name a few.

**Lodging in the Area**  
For overnight travelers, there are several options for lodging in the area.

**Hotels and Motels:** There are many hotels and motels near the heart of St. Augustine or within 2 miles. The prices for a couple range from \$18 to \$30 for an average hotel. Of course, there are also high priced hotels that offer much more luxurious accommodations.

**Bed and Breakfast:** Most of the bed and breakfast houses are located only a few blocks away from the heart of the historic district of the city. Prices start at \$55 per night for a weekend. At most locations, this price includes accommodations, a continental breakfast, wine, use of bicycles, parking, private baths,



Photo by Todd Hughes

St. George Street is the center of the historical district in St. Augustine. There are many sidewalk entertainers like this guitar player to entertain visitors.

cable television and more. Although they are generally more expensive than hotels or motels, bed and breakfasts are in old houses and inns that offer more.

**Camping:** There are several state, county and private camping areas that the public can stay at for only a few dollars per person per night. There are also trailer hookups avail-

able for more money.

**Summary**  
Either as a day trip or a weekend trip, St. Augustine offers a great choice for spending some time away from Daytona.

For under \$100 dollars, a couple could spend Saturday and Sunday in historic St. Augustine and still not see everything there is to see.



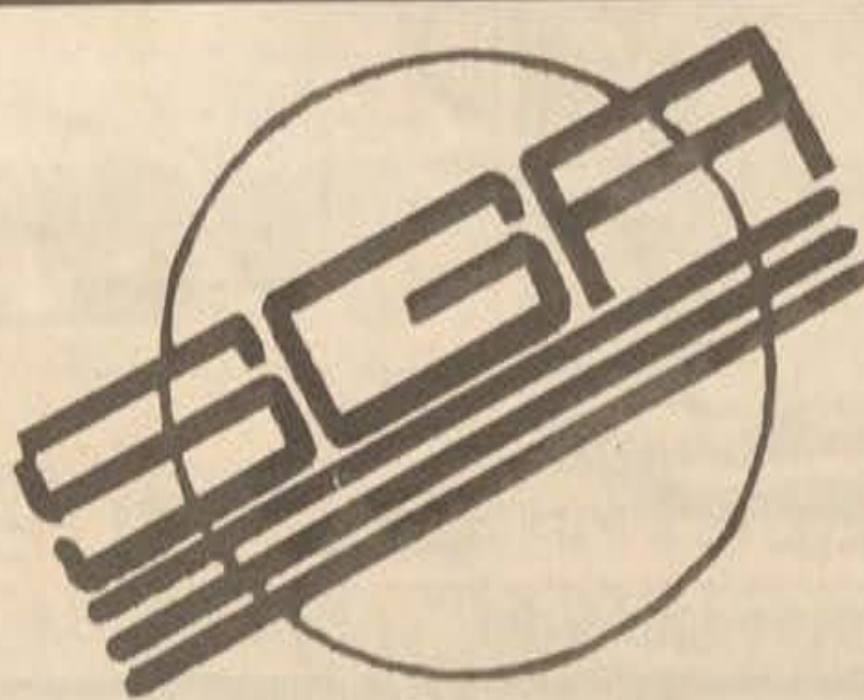
Photo by Todd Hughes

Scarlett O'Hara's is the place to be in St. Augustine when you want to sit back and enjoy a few drinks.



Photo by Todd Hughes

This is the oldest wooden school house in the United States. The school house has stood in St. Augustine for over 200 years.



## Become part of your Student Government Association!

The Student Government Association has the following openings for SGA Officials.

7 Student Representatives for the following programs:

- 1 Aerospace Studies
- 1 Aircraft Maintenance Technology
- 2 Aviation Technology
- 1 Aerospace/Aeronautical Engineering
- 2 Aeronautical Science
- 1 Housing
- Deadline May 15th
- 4 Student Finance Board Members
- Deadline May 15th
- 7 Student Court Justices
- Deadline May 14th

Contact the SGA office for complete information.

Here's your chance to do your part to help the students and Embry-Riddle.

Student Government Association - Students serving students

Calvin and Hobbes

by Bill Waterson

MY GUM HAS LOST ITS FLAVOR.

WHEN THAT HAPPENS, I DON'T GRYT IT OUT. I JUST ADD A NEW REICE.

AFTER A FEW PACKS, IT'S LIVE CHEWING A BIG SOGGY SOCK! MY JAWS ACTE AND I CANT CLOSE MY LIPS, SO I WEEZE THROUGH MY OPEN MOUTH AND DROOL!

AN ORIFICE IS AN AMUSING THING. ALL RIGHT.

IT'S FUNNY HOW YOU NEFFA THEE GROWN-UPH DO THITH.

OH BOY, THE NEW ISSUE OF 'CHEWING'.

YOU GET A MAGAZINE?

WOW, THIS LOOKS GREAT! "SPECIAL SUGARLESS GUM ISSUE— CHOOSING AN ARTIFICIAL SWEETENAR THAT'S RIGHT FOR YOU... TONGUE EXERCISES FOR BIGGER BUBBLES... RAD FASHON KNEEPADS FOR WALKING AND CHEWING... PLUS AN INTERVIEW WITH BAZZOKA JOE!"

SEE, IT'S ALL TARGET MARKETING! ADVERTISERS DONT WASTE THEIR TIME ON MASS AUDIENCES ANY MORE. THEY FIND YOUR SPECIAL INTEREST AND THEY MAIL YOU!

AS IF ADVERTISING WASNT INTRUSIVE ENOUGH BEFORE.

OOH, THE '92 SPARMINTS ARE OUT! I GOTTA GET TO A STORE!

I CAN'T BELIEVE THERE'S A MAGAZINE FOR GUM CHEWERS.

HECK, THERE MUST BE A DOZEN SUCH MAGAZINES.

EACH APPEALS TO A DIFFERENT FACTOR. "CHEWING" IS HIGH-GLOSS, LITERATE AND BARRIFICATED. "GUM ACTION" GOES FOR THE GOZZO CHEWERS... CHEWERS ILLUSTRATED NIMS AT VINTAGE GUM COLLECTORS, AND SO ON!

EACH ONE ENCOURAGES YOU TO THINK YOU BELONG TO AN ELITE CLIQUE, SO ADVERTISERS CAN APPEAL TO YOUR EGO AND GET YOU TO CULTIVATE AN IMAGE THAT SETS YOU APART FROM THE CROWD. IT'S THE DIVIDE AND CONQUER TRICE.

I WONDER WHAT'EVER HAPPENED TO THE MELTING POT.

THERE'S NO MONEY IN IT.

HERE'S AN INTERESTING ARTICLE THE TOP FIVE GUM BRANDS ARE COMPARED IN TERMS OF FLAVOR RETENTION, ELASTICITY, BUBBLE CAPACITY AND CHEWING REBOUND.

THE COMPUTER GRAPH SHOWS THE RESULTS COMPENSATING FOR VARIOUS SALIVA ACIDITIES IF YOU KNOW YOUR PH, THIS REALLY HELPS YOU CHOOSE THE PROPER GUM FOR YOUR CHEWING STYLE.

WHAT KIND OF NUT WOULD CARE ABOUT ALL THIS?!

EVERYONE! THIS IS HARD DATA! IT LETS YOU QUANTIFY YOUR ENJOYMENT!

I THOUGHT FUN WAS SUPPOSED TO BE FUN.

WELL, I PREFER TO TRUST THE EXPERTS.

HERE'S AN AD FOR A NEW GUM CALLED "APPEALABLE" AND IT SAYS, "IF YOU'RE NOT CHEWING, YOU'RE NOT BEING YOUR COOL." OOH, GREAT COPY!

GOSE, AM I COOL ENOUGH TO CHEW APPEALABLE? WHEN I'M NOT, MAME, I'LL ONLY BUY APPEALABLE. YOU BECOME COOL!

OR, MAME, IF YOU CHEW IT, EVERYONE ASSUMES YOU'RE COOL. SO IT DOESNT MATTER IF YOU ARE OR NOT? WHAT DO YOU THINK? SHOULD I BUY SOME?

IF YOUR EMOTIONAL SECURITY DEPENDS ON SATISFYING A NEED YOU DONT HAVE UNTIL YOU READ THE AD, GO AHEAD.

I THINK I WILL! BOY, I'M GLAD I GEE THIS MAGAZINE!

YAHHH!

RRGHH

WHICH MUNCH MUNCH

YOU'RE RIGHT. FOOD DOES TASTE BETTER THIS WAY.

Mister Boffo

by Joe Martin

LOUDEST NOT AWARD

YEA, MISS HASTINGS... I'LL HAVE MY PARENTS CALL THE SCHOOL ABOUT MY REPORT CARD AND THE BROKEN WINDOW AS SOON AS THEY GET HOME!

IT WAS OUR FEELING, DICTATED BY THEIR DEBANCOR WHEN ENTERING THE BANK THAT THEIR ELMS WERE NOT LOADED

THEREFORE, WE BROKE FOR LUNCH.

A BIG PART OF THE REASON YOU FEEL MORE OLD SECURITY GUARDS THAN DO '92 PILOTS

APPARENTLY THERE'S A PROBLEM ABOUT SOME THIRTY-SIX HUNDRED DOLLARS WORTH OF UNPAID PARKING TICKETS.

Far Side

by Gary Larson

22nd International MAD SCIENTIST CONVENTION

"So please welcome our keynote speaker, Professor Melvin Fenwick — the man who, back in 1952, first coined the now common phrase: 'Fools! I'll destroy them all!'"

"Mom! We were all singing 'She'll Be Comin' Around the Mountain,' but Randy won't stop with the 'whack, whack' part!"

Oh, well... There he goes again.

WELL, I PREFER TO TRUST THE EXPERTS.

"Sorry to bother you, sir, but there's another salesman out here — you want me to tell him to go to heaven?"

Are those her lips? Maybe those other doobies are her lips.

Oh, God... He's roasting for my lips.

Fly dates

"OK, McFadden... So that's the way you wanna play."

Mother Goose and Grim

by Mike Peters

HEY! ATTILA, IF FISH FOOD IS MADE FROM FISH AND PLANT FOOD IS MADE FROM PLANTS, WHAT IS CAT FOOD MADE FROM?!

ATTILA

ATTILA

ATTILA

THIS IS ALMOST TOO EASY.

MINIMUM SECURITY ZOO

YOU DONT SCARE ME, I HAPPEN TO BE THE PICTURE OF PERFECT HEALTH...

...ALTHOUGH THE FRAME COULD USE A LITTLE ADJUSTMENT.

## Autos for sale

1982 Mercury Grand Marquis, good basic college transportation. Radio, A/C, asking \$400 O.B.O. If interested, call Laura at 760-9686 or leave message.

1988 Lincoln Mark VII LSC. Black leather interior, power steering, brakes, windows, locks, mirrors, antenna. Power lumbar seats, AM/FM digital cassette stereo, 16" wheels and new tires. 5.0 high output engine. 48,000 miles and in mint condition. \$7950. Call 761-2483.

1983 Toyota Camry. 4 dr. hatchback, stereo, A/C, automatic w/overdrive and cruise control. Runs excellently, reliable, clean and immaculate inside and out. \$2500 O.B.O. Call Kelly at 239-9411.

1988 Ford Ranger XLT. Velour interior, mag's, new tires, low miles, excellent condition. \$3500/offer. Call 761-2483.

1985 Nissan Sentra. Looks and runs great. 68,000 miles. \$1975. Call 761-2483.

1986 Firebird, V6, loaded, excellent condition inside and out. T-tops. \$2800. Call 761-2483.

1971 Ford F150 Pickup. 351W, tow kit, new cab, new electrical system, ice stereo, A/C. \$1000. O.B.O. Call 788-4634 and ask for Phil.

1982 Buick Regal. Automatic, cold A/C, power steering, brakes, windows. AM/FM cassette stereo, velour interior, new tires, great condition. \$1250/offer. Must sell. Call 761-2483.

1986 Ford van. Grey interior, 4 captains chairs with table, TV. 55K, asking \$7900 O.B.O. Call Benny at 322-1213.

1987 Camaro. Absolute mint condition, good miles, best offer, must sell this week. Call 761-2483.

1981 Suzuki 530 GST. A decent bike, but it needs some basic work. \$200 O.B.O. Call 788-7280 ask for Jonathan. If no answer leave message.

1986 Yamaha 600SRX. New tires and brakes, looks good. Needs minor repair. \$800 O.B.O. Please call 760-5074 ask for Luis or leave message.

## Roomates & Rental

Female roomate needed for Fall and Spring. Will have own bedroom and bathroom, 2.5 miles from campus. \$217.50 a month plus 1/2 utilities. If you need further info., call 756-1273.

Roommate needed: male or female, own bedroom, right on lake, 1 1/2 miles from school. \$183/month plus 1/3 utilities. Call 238-0533.

Furnished room for rent in private home with private bath and entrance. \$220 per month includes utilities. Prefer male, non-smoker. Just 1 1/2 miles from campus near river. Contact Jim 258-6878.

Roommate needed immediately! Female or male to share beautiful, new house 10 minutes from ERAU. Includes washer, dryer, dishwasher, A/C, cable/phone extensions in each room. Only \$320/month includes all utilities except phone. Must see! Call Dennis 788-8276.

Roommate needed, 2 1/2 bath townhouse. 1 1/2 miles from school in Deerwood (behind Volusia Mall), \$250 plus 1/2 utilities. Call 252-0172.

Roommate needed to share 2 bedroom apartment in South Daytona for Summer A. Non-smoker preferred, \$212/month, 1/2 utilities. Call Herb or Ron at 322-0946.

Furnished, nicely decorated, 3 bedroom apartment, new tile bathroom, carpet, ceiling fans, A/C, large open porch off third bedroom. Pest control supplied, 2nd floor of two family home for non-drinking, quiet living students. \$450/month. Call 254-4730.

## Misc. for sale

For sale: Large dorm refrigerator, brand new, used only 3 weeks, \$100. Call Tanya at 760-7394.

Books for sale: Text for PS 101, EL 106, MA 241, Test and tools for ET 101. Very reasonable prices. Call 238-0533 and ask for Joe.

Attention A1000 owners! For sale: side car, full IBM compatibility, 5 1/4" drive, 3 expansion slots, 640K, \$250. Also 16 Mhz accelerator with 68881 math coprocessor slot, \$100. New mouse for A1000, \$15. New mouse for A2000, \$10. Call 760-3219.

For sale: All R/C planes and parts. Includes 7 channel FM Futaba compatible radio, glider, .25 trainer (new engine), .60 size trainer (no engine), and more. \$250. Giant scale P-40 Warhawk. Includes fiberglass cowling and cockpit glass. Not fully finished, \$120. Call 760-3210.

For Sale: Washer and Dryer, 2 years old, \$250 or best offer. Contact Shawn at 756-0206.

For sale: One set of David Clark H10-20 Advanced Headset. Look and work like new. Carrying case included for \$200, \$40 cheaper the Sporty's (not including tax) Call Dennis 788-8276.

Must sell: 30-30 rifle with scope, asking \$125 O.B.O. Call Benny at 322-1213.

Full size bed for sale. Headboard, frame, box spring and mattress. Call 760-9686 and leave message.

## CLASSIFIED AD POLICY

- ➔ Non-commercial classified advertising and personals are free to the student body, faculty and staff of Embry-Riddle with 35 word limit.
- ➔ All other non-commercial advertising is \$15 with a 35 word limit. Each additional word is 10 cents.
- ➔ Commercial advertising is available through the Avion advertising department, at 226-6051.
- ➔ 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) 226-6049.

For sale: analog storage monitor/telescope Teconix 603, \$150. 3 amp, 12 v Midland power supply, \$10. R/C Scarab w/61 engine, nics, \$120. Call 760-3210.

HP 485X for sale, \$200 (includes manuals) Call Matt at 673-7752.

For Sale: Peavy VTM 120 half stack, Tube Works II pre-amp, Art CT Reven 13 rack, \$1000. Will sell separate. Call Phil 788-4634.

For Sale- Columbia 10 speed bicycle. Good condition, cheap transportation. Comes with flexible Kryptonite lock. \$35 O.B.O. Call Ethan at 253-7815.

## Miscellaneous

Flight Training: Private, Commercial, CFI, Aerobatics, Emergency Maneuver Training. Highest quality at reasonable rates from an experienced instructor. Contact Ken at 760-9265 or leave a message.

Scuba Happening's Fly/Dive to Marathon, FL. Exclusive weekend or week day dive charters to the Keys, includes: rooms, dives, round trip flight. \$198. "Be in the Keys in 2 hrs." Dive lessons, etc. Contact Alumni Nick Mostert, PADI Scuba Instructor, Multi-engine Comm Pilot at 441-2008.

I buy and sell used motorcycles. Call 255-1329.

Request stringing. Many types of strings starting at \$8. Call Kelly at 239-9411.

Need Multi Time? Get cross-country PIC time in Piper Seminole for only \$50. per hour. Ferry flights for Atlanta and Florida based flight school. Call Jim at 252-2300 and leave message.

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MULTI-TIME! Pa 34-200 Seneca \$105/hr. wet, Pa 34-250 Aztec D \$130/hr. wet, Pa 23-160 90/hr. wet. Instructor fees not included. Contact Mike Send CFI, MEI, Single and Multi, Land and Sea, at (904) 257-2042

EXTRA INCOME '92! Earn \$2000-\$500 weekly mailing travel brochures. For information send a stamped, addressed envelope to: Galaxy Travel, Inc. P.O. Box 13106, Silver Springs, Md 20911-3106.

## Personals

JIFFY Your the world's greatest guy! I love ya! No matter how busy you are with SGA Pres. or how busy I am with nursing school, let's always make time for each other! STACEY

The Eagles Flight Team 1992 Safeco National Competition team members would like to thank all the team members who stayed behind, as well as the Alumni Association, Flight Department, Dr. Silwa, Tom Arnold, the Masons, the coaches, the Riddle student body and countless others for their support which made our victory possible. Thank You!

LONNIE Let's go to Tampa! Equipment or not! PC

ERAU PRECISION FLIGHT TEAM: 1992 NATIONAL CHAMPIONS!

PUSSYCAT The past two months have been the best of my life, I just hope we can make everything work out so we're together. Love you always! Let's go flying! KITTY

LAURA Hey dude! What's up with you? Just wanted to say thank you for the present, I love the cats. Have a good semester since I don't see you that much. MAL

Thanks to all those who understood my situation, helped me, and gave me all those rides to school, back home and to the grocery store. I am grateful and will not forget. Meanwhile, now that I have a car, (a brand new '92 Saturn SL1), I am looking forward to be of any help to you all! Thank again. SIAN (-FRENCH FRIES-) (RED JACKET)

TONY Yo dude! Call me sometime and we'll party this summer! MAL

Toonces, Lookout! (Stob-buh-buh...)

## Upgrade

(continued from page B3)

Windows' new screen blanker. On the desktop model, the installation problem seems to be related to the computer's CD-ROM drive, but trying at least thirty possible setup combinations produced no results. Finally, an installed copy of Windows was transplanted from the laptop to the desktop PC. This arrangement worked except for mouse problems that occur after shelling from Windows to DOS. Luckily, a new program called Dr. Watson and a set of Microsoft Diagnostics can be used to inform Microsoft of the exact nature of your

problem so they may make an informed guess at its origin. A third system, a desktop AM386SX experienced no problems whatsoever. One important fact, not noted in the Microsoft documentation applies to users of QEMM Memory Manager. The following line should be added to the QEMM386.sys line of your config.sys: X=B000-BFFF. (Those are zeroes and not the letter "o") Sound and Printing Printing is substantially faster with Windows if you decide to use the True-Type font technology built-in to Windows 3.1. If you invested in a number of ATM Postscript fonts

and are still running version 1.0 of Adobe Type Manager you should probably choose not to load True Type, but if you are running version 2.0 of ATM, or have no type manager at all, you will find True Type fonts print faster than ATM fonts because they are integrated into the program. ATM 2.0 and True Type fonts may coexist in the font list. Sound is perhaps the most noticeable improvement for Windows 3.1. Windows now supports full multimedia implementation including CD-ROMs, sound cards, and MIDI peripherals such as keyboards. If you own a Roland or Thunder Board or Soundblaster, your Windows sessions can now have

speech accompaniment. System events can now screen or twang to get your attention instead of simply beeping as they did in the past. Speed Windows 3.1 provides its greatest advantage in speed, unless you are using WinSpeed already. WinSpeed is a driver packages intended to increase video redraw speed in Windows. Microsoft developers stole many of that programs tricks to speed Windows 3.1. While calculations are somewhat faster now, video speed is the programs true advantage. WinSpeed for Windows 3.1 could only provide a small improvement over the already accelerated speeds of 3.1. WinSpeed did,

however, cause numerous errors and conflicts particularly with hardware like scanners. Windows 3.1 video redraw is 150 to 300% faster than its predecessor. Math Coprocessor If you are thinking of buying a math coprocessor to speed up Windows, read this next sentence very carefully. After lengthy consultation with Microsoft technical support, a Windows advisor admitted "Windows makes no use of the math coprocessor and purchasing one would do nothing to improve your performance." He did make the point that "other Windows programs such as Autocad may use the math-coprocessor, that is not prevented,

but the actual Windows program does not use it." This is true even with the release of Windows 3.1, if the math coprocessor is ever to be used frequently, Windows would be a great place for the process to begin, but sadly Microsoft has not taken this theory to heart. Summary Windows 3.1 is an excellent product from a company that will help you iron out any problems that might arise. The increased speed and reliability of the program when combined with the additional "bells and whistles" make the program a reasonable upgrade, particularly at its relatively low price of under \$100 at many outlets.

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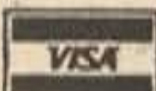
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