NEWS AND

INFORMATION FOR

THE GWINNETT

COUNTY CHAPTER

OF THE

EXPERIMENTAL

AIRCRAFT

ASSOCIATION

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CHAPTER 690 NAVCOM

February 1997

Dues Are Due!

Plus, tune in, turn on, and sign up!

Please complete the two forms that are inserted into this issue of the NavCom. One is a Membership Profile Form that the Chapter will use to update its records about its members. Chapter 690 has doubled in size in a little more than a year. Our records are badly in need of revision. This information will be used to update the NavCom mailing list, member roles for National, and our own roles for the sake of the Treasury. Please take the time to complete this form even if you did so last year. You can also take this opportunity to send a check for your dues if you have not paid them this year (\$30).

The second form is a Volunteer Sign-Up. The chapter has grown so quickly that our committee chairs and officers have not been able to keep up with the interests of all the members. Completing this form will give them an idea of who would like to do what. Please take the time to let us know what areas excite you. This will help immensely with the smoothing the

rough edges of our many events and ongoing activities.

New 'wave' in space exploration may be coming soon

WEST LAFAYETTE, Ind. -- First there was "channel surfing." Then came "surfing the Net." A Purdue University researcher now has found that spacecraft might be able to "surf" through space.

For nearly 20 years, Kathleen Howell has been combing the solar system in search of specific points in empty space, called libration points. Using high-speed computers, she now has determined that spacecraft launched from Earth can practically "surf" toward a libration point by simply landing in a kind of gravitational "undertow" that naturally funnels a craft there.

Her efforts could help lower costs of planetary missions. Her work already is being utilized to support studies of the sun and its effects on planetary environments. Such missions may provide advance warning on solar activity that can cripple communications satellites orbiting our planet.

Howell, an associate professor of aeronautics and astronautics at Purdue, studies spacecraft trajectories in the vicinity of libration points, where the gravitational pull from two or more heavenly bodies, plus the centrifugal force from their rotation, cancel each other out. For example, there is a libration point between the Earth and the sun.

Theoretically, a spacecraft placed at a libration point would stay there indefinitely. However, very subtle gravitational tugs from distant planets or an errant asteroid could disturb a craft enough to cause it to drift away, Howell says. But place a spacecraft in orbit near a libration point and you've got a stable venue for making observations and taking data.

"In the late 1970s, when I was working on my dissertation at Stanford University, my adviser was involved in the discovery of orbits around libration points, and that's when the utility of these regions was first realized," Howell explains. "These orbits are very complicated, much more complex than the orbit of a planet around the sun, which is why we often refer to the orbit as 'near' a libration point instead of 'around' a libration point."

Howell will talk about her research on libration point orbits Feb. 10-12 at the American Astronautical Society Spaceflight Mechanics Meeting in Huntsville, Ala.

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Busy! Busy! Board meetings, committee meetings and telephone calls -lots of calls. Saturday January 11th the Board of Trustees, Board of Directors, and the Executive Committee all met in the hangar at different times. Even though the Board of Trustees meeting lasted longer than expected, the Board of Directors and Executive Committee still had time to discuss several matters that were important to the chapter and helpful to me as president. One item was chapter secretary. Because David Rowe has a new job and it is uncertain if he can attend every meeting, he has asked to be released from his responsibilities Subsequently an informal nominating committee gave me the names of members to be asked about filling this vacancy. Wayne Whitaker has agreed to accept this position. According to the bylaws, we will need to vote on this position at the next meeting. If you have other nominations, obtain the nominees permission and present their name when we vote.

Also Greg Janakos has asked to be taken off the budget and finance committee. I have complied with his request and have appointed Clyde Schnars and Dennis Kass to this committee. The committee will be working on the budget and finances for this lyear.

The Board of Trustees met again January 17th to continue their business. Chairman Frank Wilcox will be giving the details of these meetings in his report.

Elnor Levine, Charlie Sego and I met on Saturday January 25th and went over the financial records for the construction of the eight hangars. We hope to be able to meet with the hangar owners soon and come to a closure on the building of the hangars. Thanks, Elnor, for all your labors in keeping meticulous records of the finances for the hangars. We need to show more appreciation for volunteers like Elnor who do so much for Chapter 690. So I say again - "Many Thanks".

While I was writing this article, the mail man brought

our video tape "Aviation Odyssey - Oshkosh '96" which we received for selling - I mean buying -100 World of Flight 1997 calendars. No we haven't sold them. There are still nearly 50 calendars for sale. There are 12 beautiful aircraft pictures and for \$8 this can be considered a bargain and \$2. below retail. If we sell some more we can break even and if we sell them all we'll make a little profit. Only those who buy a calendar get to watch the video! (I'm just kidding.) Purchase a calendar at the February meeting - the year is still young.

Dues for 1997 are \$30.00. They are due.

Chapter 690 is now a collection center for recycling aluminum cans. The last time I took them to the Home Depot we made \$8. for the chapter. Bring all the cans you can! It is nice if they are crushed. Thanks.

Make plans to come to our first monthly fly-in pancake breakfast on March 1st, 1997. The first Saturday of each month seems to have the least number of conflicts with other monthly breakfasts. Join us for good food, fellowship, fun and flying. And bring your friends and relations, too. Also consider this idea should we offer coffee and doughnuts for sale on the other Saturday mornings? Donations could be accepted to defray the cost and maybe make a little profit. Let me know what you think.

A Young Eagles Rally for about sixty Scouts is being planned for April 19, 1997. This is between Sun and Fun - April 6-12, 1997 and the B-17 event April 23-27, 1997. I have not received confirmation for the B-17 event at this writing, but should receive it soon. Please begin planning for these events and how you would like to help Chapter 690 execute them. See the volunteer sheet with this issue of NAVCOM.

I'll see you at the next meeting February 14, 1997. (You can bring your sweetheart!) Hangar flying at 7:30. Meeting at 8:00.

Keep 'em flying!

Board of Trustees Report

The Board of Trustees has been very busy since the first of the year. There have been three meetings with agendas ranging from frozen water pipes to lawn care(deferred to later); from building interior designs to rental of hangar space, and a few other pertinent items. Thanks to all board members for their active participation.

The organization of the Board for 1997 was a non-event. The officers for 1996 were unanimously reelected for 1997. They are President, Frank Wilcox; Vice President, Bob Zahner; secretary, Joel Levine. The other members are Dennis Kaas and Duane Huff, second year members and Tim Fulmer and Charlie Sego, new three year members.

The cold weather in mid-December froze the water line at the road. Somehow the buried box that contains some valves was smashed - probably mowers_exposing the pipe and valves. It was repaired by our members and steel fence posts were placed near it to prevent further damage. Also to preclude freezing of pipes in the chapter hangar, a small thermostatically controlled electric heater was purchased. Heat for our building for meetings during the rest of the winter will depend upon borrowed heaters.

The Board voted to accept donations of two major tools for

Frank Wilcox

the chapter. Leonard Pace has provided an electric welder and Lisa Goodman gave a light duty milling machine. Electric cabling needs to be made for the welder. Instructions will be provided in the use and care of the milling machine. We thank Leonard and Lisa for their generous gifts.

The layout of a large sign to be placed along Airport Road was approved. It will include the EAA "wings" logo and will identify our buildings as a Sport Aviation Center, home of EAA Chapter 690.

Agreement has been reached with the airport director for the reorientation of the auto gate. This is intended to help direct vehicle traffic away from the ramp area of building 8. The chapter has offered to help with labor if needed. It is not known when this change will be made.

The Board discussed at length the idea presented at the January chapter meeting of short term lease/rental space for aircraft storage in our building. The idea was presented as a fund raising effort and not as a service. The result of these discussion was a vote to recommend to the Board of Directors

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Joe's Chapter Calendar

Saturday, Feb. 8 - McMinnville, Tenn.

Fly-in country ham breakfast at Warren County Memorial Airport (RNC). Call Joe Howard at (615) 668-4806 for more information.

Friday, Feb. 14 - 8:00 PM: EAA 690 Hangar (Lawrenceville Airport)

February Chapter Meeting. David Posey on Gas Tungsten Arc Welding of aluminum and other metals.

Saturday, Feb. 15 - Chattanooga, Tenn.

Collegedale Pilots Club monthly fly-in breakfast at Collegedale Airport (3M3). Call the airport at (615) 236-5008 for more information.

Saturday, Feb. 15 - Lewisburg, Tenn.

Fly-in country breakfast at Ellington Airport (LUG). Call Clay Derryberry at (615) 359-5001 for more information.

Sunday, Feb. 16 - Russellville, Ala.

Monthly fly-in at Russellville Municipal Airport (M22). Call Hans Pauli of Quad City Aviation at (205) 331-9000, 332-9906 or 486-3170 for more information.

Sunday, Feb. 16 - Lancaster SC - Sorth Carolina Breakfast club at Lancaster (LKR) Call Anne Hawkins (803) 432-9595 or Gerald Ballard, Pres. (803) 663-9900 for more information.

Saturday, Feb. 22 - Dayton, Tenn.

Rhea County Civil Air Patrol monthly fly-in breakfast at Mark Anton Airport (2A0), 7:30-11 a.m. Call Wanda Fulmer at (615) 775-8407 for more information.

Saturday, March 1 - Winchester, Tenn.

EAA Chapter 699 monthly fly-in breakfast at Winchester Municipal Airport (BGF). Call Scott Scarborough evenings or weekends at (615) 967-1991 for more information.

Sunday, March 2 - Clemson Oconee, SC - Sorth Carolina Breakfast club at Clemson Oconee (CEU) Call Anne Hawkins (803) 432-9595 or Gerald Ballard, Pres. (803) 663-9900 for more information.

Saturday, March 8 - McMinnville, Tenn.

Fly-in country ham breakfast at Warren County Memorial Airport (RNC). Call Joe Howard at (615) 668-4806 for more information.

Saturday, March 15 - 10 AM: EAA 690 Hangar (Lawrenceville Airport)

Weight and Balance Seminar. We still need aircradft scales! Contact Greg Jannakos at 770-296-0937

AND For Future Planning----

Chapter Monthly Meetings:

March 14: Chuck Berthe, Contributing Editor of KITPLANES, Test Pilot, Naval Aviator, And CHAMP Restorer will present a program on the INFLATA-PLANE.

April 11: Dr. Arron King, D.D.S., long time EAA member, past officer of the Professional Race Pilots Association, will present a program on aeroplane racing since the end of WWII.

Sunday-Saturday, April 6-12 - Lakeland, Fla. Sun 'n Fun EAA Fly-In & Sport Aviation Convention will celebrate its 23rd year. Held at Lakeland-Linder Regional Airport (LAL), the 1997 "Spring Celebration of Flight" will acknowledge the dedication of the many volunteers who make the annual event possible and successful. Call Sun 'n Fun Fly-In, Inc. at (941) 644-2431 or Internet http://www.sun-n-fun.com for more information.

Joe Reed

Cheetah

N26723

Phone- (Voice) 770-564-2701 (Fax) 770-923-3826; email-jdreed@mindspring.com

The Ultimate \$100 Hamburger

or

It Doesn't Matter Where You Get An Idea by Ken and Sheryl Sharp

It's wonderful when something you remember turns out, in later examination, to be just as good the second time as it was the first. And, if you have reservations about taking suggestions from Frog, maybe you should keep an open mind.

Case in point: I believe it was 1991, when Frank (AKA Frog) Flessell and Harold Stalcup flew down the Mississippi on their way home from Oshkosh. When Sheryl and I heard about it, the immediate thought was, "What a great idea!" That was the year we (gasp, choke!) drove to Oshkosh, so the contrast was striking.

But, while WE were DRIVING home, without realizing it, we also followed the Mississippi, more or less. Through Dyersville, Iowa (Field of Dreams) to St. Louis (Museum of Transportation) to Jackson, MO (St. Louis Iron Mountain & Southern Railroad) to Memphis (Memphis Bell). The closer we got to Sikeston, MO, the more we heard about Lambert's Cafe, "Home of the Throwed Rolls".

So, naturally, we stopped in and had "breakfast". It would be impossible to describe Lamberts in the short space available. Let it suffice to say, "If you're in the area (say, within 100 miles), stop in and try it". The decor is: banners, old-time advertising signs, Model trains, license plates, model planes, and posters. The food is Southern style, and lots of it. We were told while there that Lamberts like airplane people, and give fly in people VIP treatment.

In 1993, on our way to Oshkosh, flying this time, we flew to Memphis, and WE followed the Mississippi all the way to it's source at Lake Itaska, MN (near Bemidji). That was the year of the great flood, and was something to see. In the Northern section, up-river from Minneapolis, the river is very scenic, with forests coming right to the river banks in many places.

Recently, while on assignment in St. Louis, we took the little airplane, and sampled our 1991 and 1993 experiences again. That is to say, we flew from St. Louis to Sikeston, down-river, and went to Lambert's Cafe. The river was well within it's banks on this trip, and you could see more of the feature of the river. There was barge traffic, but no pleasure craft. The bluffs on the west side of the river are very scenic, with an occasional house built at the top where, no doubt, the residents have a fantastic view.

It's not all pretty: some of the barge loading docks are typical industrial landscape. And the limestone mining in the bluffs often leave a scar that only the aircraft's altitude softens. We had a head wind that day (we were flying, there was a head wind - is that redundant?), so it took almost 3 hours to get to Sikeston.

The airport attendant called the restaurant and Lamberts sent out a van to pick us up. We were wondering if our memories of the place would shine brighter than reality, as so often happens. But, no, it was just as good as before, which is to say, outstanding. This time is was chicken fried steak, potatoes, fried okra (are you listening, Mr. Huff?), white beans, corn, blackeyed peas, and the famous "Throwed Rolls".

It's only fair to tell you about the throwed rolls. While waiting for the service person (waiter/waitress) you'll hear the question "Who wants a roll?".

Looking around, way across the room, is a person pushing a cart with a large tray of yeast rolls, all brown from the oven, piping hot, and when you raise a hand, the person with the cart throws you a roll. Never seems to miss, and everyone gets in on the act.

Very, very good rolls, too. Then you'll hear "Sorghum for your rolls?" and another person will ladle fine, light, sorghum syrup onto the hot roll. It's a bread lover's delight!

Because we flew in, the van driver took us into the restaurant through the kitchen, and by doing this, we avoided the waiting line at the entrance. After stuffing ourselves, we paid the bill, and the van trundled us back to the airport. As a departing gift, the driver gave us two of the huge mugs which advertise the Cafe, and two "Hubcaps", cinnamon rolls big enough to serve as, yes, hubcaps. I tell you, it's a good thing the FAA wasn't conducting ramp checks prior to that departure.

Another flight along the river back to St. Louis, with improving weather, and of course, a reduced tail-wind! We got back just at dark, with a gorgeous red sun illuminating the Western sky and clouds.

For the world travelers among the readers, Lamberts now has three locations: the one in Sikeston, one in Ozark, MO, near Branson, and a brand new location in Foley, Alabama, about 1/2 way between Pensacola and Mobile. Stop in and see 'em.

It's nice when something you've remembered turns out to be just as good the second time as it was the first. It's not always that way, is it? In this case, flying the river, even such a relatively short section, and re- visiting Lambert's Cafe was just as much fun the second time as the first. We're up to doing it again.

And keep in mind, the entire idea came from Frog.

That's it for now. Keep it coming.

Ken and Sheryl

CHAPTER 690 BUILDS A HOME

by Wayne Whitaker

This article was written at the request of EAA National (Chapter Office) to let other chapter know what it took to build our Chapter House. The manuscript was presented to Bob Mackey in the Chapter Office and parts of it should appear soon in Sport Aviation. It will also be included in an information package that the Chapter Office is compiling for the benefit of other chapters.

Early in 1991 the Executive Committee of EAA Chapter 690 began thinking about a new meeting place for their chapter. Since its formation, 690 had met in the FBO at Stone Mountain Airport. This was a good arrangement at the time, since the airport owners didn't charge for the meeting space, and many chapter members flew out of Stone Mountain. But membership was increasing, and room at the FBO was getting crowded.

The decision was made to form a special committee to investigate the possibilities of a new meeting place. Though one of the chapter's members had offered space in a hangar at his private strip, the building committee favored the idea of the chapter having its own home at Stone Mountain. Their plan was for the chapter to purchase a 40 x 40 foot prefab building and have members erect it at the airport. Based on the committee's recommendations, on May 10th, 1991, the membership made a historic vote: to embark on a meeting-place construction project there at Stone Mountain. A special gathering was held on May 31st to discuss options, and the proposed hangar plan was thoroughly hashed out, particularly the funding aspects. After much debate on the subject, a multi-layer plan was arranged, whereby each member was assessed \$100, and a few members became "underwriters" of the hangar, contributing significant amounts with the understanding that the money would be paid back as the financial ability of the chapter allowed. Activities to raise money were given extra emphasis, with pancake breakfasts being held more often, for example. Other fundraising opportunities included the visit of EAA National's B-17. The Chapter did quite well during the visits of Aluminum Overcast.

In the summer of 1991 work began at the chosen site, a concrete slab conveniently near the FBO and fueling area of the airport. Chapter members came out and cleaned the site, and started work on a concrete block retaining wall and steps leading up a bank to the runway level. Besides the physical labor, the chapter spent a lot of time and energy negotiating with the airport owners to determine exactly what rules and limitations would apply to the new hangar. No one wanted the future to be clouded with misunderstandings between the chapter and the airport management about what could and could not be done. The acceptability of chapter activities like aircraft assembly and repair, pancake breakfasts, and day-long fly-ins had to be determined. After much open and honest discussion, an agreement was reached that was satisfactory to all concerned.

After all this groundwork, the next stage was to select a prefab hangar from among various bidders. A choice was made and in mid-1991, a metal building was ordered. Delivery was anticipated in December of '91. One seemingly harmless notation in the December issue of the chapter newsletter said, "An application for a DeKalb County building permit was made... No problem is anticipated here." Famous last words! After the County discovered that we planned to have "public assembly" in the proposed hangar, the DeKalb Fire Marshal's Office demanded a fire hydrant within 500 feet of the building site. There was no hydrant there, and installation of a water main solely for that bureaucratically-required hydrant was deemed "financially impossible."

After the negotiations with the property owners were complete, the site cleared and prepared, and a deposit made on a metal building, suddenly an immovable object had been thrown in the path of 690's growth.

In the true EAA spirit, the group did not give up and simply return to their familiar roost at Stone Mountain. If anything, the intervening months had shown what a wise decision it was to seek the chapter's own meeting hall: membership continued to grow, and at meeting time the little living room in the FBO shack was packed with all the folding chairs it could hold.

There were a number of options floated at various committee meetings and regular chapter gatherings. For example, there was an old barn on the airport that could be renovated. Or, since the southern part of the airport was in a different county, one with a less-strict building code, perhaps the hangar could be erected there. And there was always the option of leaving Stone Mountain Airport altogether and moving to a different site.

In July of 1992, again after much discussion and input from various members, the chapter voted to rebuild the old barn on the airport. This caused some rethinking of the funding, since money donated by members was originally for a new metal building. Also, another round of negotiations with the airport owners was necessary to reach a lease agreement on the barn. Since the chapter had promised to finish the retaining wall at the former site, work continued on the concrete block structure, even though we knew the site was hopeless.

Then, in February of 1993, the hopes and meticulous planning of the chapter were squashed again. The Stone Mountain airport owners association changed their collective minds about allowing 690 to use the barn, and requested a return of the lease agreement. The chapter had no choice but to comply, which meant we were homeless again. At the February meeting, 690 members huddled in the operations shack and once more pondered their options for the future.

That February the decision was made to move the chapter to Gwinnett County Airport. The Administration Building there was offered to us as an interim meeting place until we decided what to do about a permanent home. The decision to relocate was not an easy one for 690 members. Many of us had a sincere fondness for ol' Stone Mountain Airport, even with its rather run-down look and the bumpy, narrow, weed-pocked 2800-foot runway. Despite its shortcomings, the little airport was a low-key place where grass-roots aviation could flourish. Gwinnett County, with its 6000-foot runway and plans for a control tower, was a much larger and busier airport. It was more of a county aviation facility as opposed to a hobbyist's hangout. Could the sport aviators of Chapter 690 find happiness there?

The March '93 meeting was held at Gwinnett County Airport. The Administration Building was roomy and pleasant, with enough plastic chairs on site to accommodate almost the

entire membership (still growing).

The chapter took a break from hangar plans for awhile, though certainly not from other EAA activities. During this time a former chapter president, Frank Wilcox, received a Major Achievement Award at Oshkosh. The chapter newsletter editor, Jeff Boatright, won the McKillop Newsletter Editor's Award three years in a row (second runner up, runner up and then the whole enchilada). Chapter member Reinhart Kuntz was invited to bring his outstanding homebuilt, a Der Kricket, to an exclusive birthday celebration for Hartsfield International Airport, one of the busiest in the world. And the chapter as a whole won a Humanitarian Award for its Young Eagle efforts with physically challenged children.

In February 1994, after a most successful first year, members voted almost unanimously to pursue a lease agreement with the administrators of Gwinnett County Airport. The hunt was on again for just the right site for our permanent meeting place, and Gwinnett County seemed to have the perfect answer: a new section of the airport was going to be developed, with plans for hangars to be erected on the site. The hope was expressed that in '94 the annual Christmas dinner could be held in our own official chapter building!

Members began to dream about how nice it would be to have their own space to meet in: one central location to store chapter equipment, work on members' aircraft, host fly-ins and Young Eagle Rallies... speaking of the latter, the chapter (even without its own hangar) held a Young Eagles gathering in March of '94 that introduced 635 (that's right, six hundred and thirty-five) happy children to general aviation. All in one day!

Meanwhile, much work had to be done before the land designated to be leased to 690 would be ready. It had to be cleared, leveled and paved. In fact a whole new tie-down ramp was created in front of the proposed EAA hangar area. More negotiations were required with the administrators of the airport, who offered to lease the chapter an area of 60' x 420'. Since this was much more than needed for the chapter hangar, it was suggested that portions of this land be subleased, so seven other hangars could be built by chapter members -- creating a kind of EAA complex on the northwest side of the airport. By October of 1994, a very important hurdle had been crossed, one that had killed the hangar at Stone Mountain Airport: the layout of the entire hangar cluster had been reviewed and approved by the Gwinnett County Fire Marshal, and all fire code requirements were met. Sober reflection on the situation gave rise to a real hope that this thing might just become reality after all. Although, due to the inevitable delays, the hangar was still a dream at the end of 1994, so the Christmas dinner was held in the Administration Building.

As the chapter had grown over the years, so had the concept of its home base. The plan now was for a clear-span metal building 50' wide and 60' deep, with a 12' x 49' hangar door. Provisions were made for a handicap-accessible restroom, food preparation area, tool storage, and of course a large meeting area.

Finally the planning came to an end and the time for digging began. Approval of the lease was assured, and a groundbreaking ceremony was scheduled for January 21, 1995. Except for the ceremony, things as usual did not go as planned! The lease was returned for minor corrections, which also required correcting and resigning the seven subleases held by individual hangar owners. Then the building permits were delayed when the contractor was late with needed documents. There were problems

with utility permits. Finally, the slope of the land was deemed too severe. An engineering survey was performed and the proposed layout juggled to get around this problem.

Various Gwinnett County officials reviewed the submitted plans on February 22, 1995. There were 35 items related to the site plan and 16 with the building plan that needed work. And this was after the plans had been reviewed by a land development engineer (who just happened to be the son of a chapter member). Fortunately most of these items were easily dealt with. In fact, members were pleasantly surprised by their dealings with Gwinnett County authorities, who were friendly and helpful. While no necessary laws or regulations were overlooked, on the other hand no irrelevant requirements were imposed.

On March 10, 1995, the Site Development Permit and Building Permit for the eight-hangar "complex" were issued. Fill dirt was brought to the site and leveled on March 23. At last construction could begin. A plumbing contractor was hired to install the main sewer and water lines. The same contractor agreed to meet with individual hangar owners to discuss their particular hookup needs. Installation of electrical poles, wires, transformers etc. was arranged.

At this point construction began to lag, and the dreams of the chapter encountered yet another delay. By October of '95 all the concrete pads had been poured, framework and roofs were on all eight hangars, but four did not have the back siding applied yet. The main sewer line was in, but the individual hangars had not been hooked up. Some of the contractors apparently had other projects that required their presence. During the long hot summer of '95, the term "two weeks" became a sadly humorous statement, due to the many unkept completion-date promises made by contractors. Whenever anyone in the chapter asked how long a project would take, some wag was sure to yell out, "Two weeks!"

The asphalt contractor, however, was punctual and worked quickly. Ramps tying the hangars to the taxi and parking areas were promptly poured in late November 1995. But construction of the hangars themselves was still progressing slowly, until an earnest chat with the contractor by the designated chapter negotiator significantly speeded progress!

On Friday, January 19, 1996, Gwinnett County awarded chapter 690 the coveted Certificate of Occupancy for hangar number 1 of the EAA Sport Aviation Hangar Cluster, 690 Airport Road, Lawrenceville, GA. But, like an aircraft project that seems practically finished when it's covered and on the gear, much work remained to be done. The interior had to be configured and many small details had to be worked out.

Finally, in April of 1996, Chapter 690 held the first regular monthly meeting in their new hangar. Work continues on the hard-won meeting place, including niceties such as sheetrock, a "mezzanine" storage area with a stairway leading up to it, partitions for various areas, a glass-front display case donated by a chapter member, and magazine racks to keep track of the growing publication collection which makes up the chapter library. However, the hangar is now being utilized much as those visionaries of five years before had anticipated: Oshkoshstyle teaching workshops are held, annuals are performed on members' aircraft, Young Eagle flights originate there, the resources of the chapter are now centrally located (instead of being spread among many

members' basements), and the annual October fly-in, the Biplane Fall Classic, has a permanent site. An additional benefit of having all the hangars owned by EAA members is that we now have a defacto Sport Aviation Center on Gwinnett County Airport. In those eight hangars several major EAA divisions are represented: aerobatic aircraft, a warbird, three kit-built aircraft, a restored classic, plus an in-progress antique restoration.

The difficult decision to move away from charming, quirky little Stone Mountain Airport proved to be the right choice. During the '96 Olympics the airport was closed and used for automobile parking for a nearby tennis complex, which had been built right off the northern end of the only runway. Airport owners decided not to re-open the field after the Centennial Games left town. Rising property taxes, suburban sprawl and other factors led to the demise of yet another general aviation airport. The loss of an airport, no matter how small, is a blow to sport pilots everywhere. Certainly no one in Chapter 690 feels smug about our decision to leave Stone Mountain. Yet we do feel fortunate -- for a variety of reasons -- to have our new

home at Gwinnett County Airport. And we hope the process we followed, and the obstacles we overcame, will prove educational as well as inspirational to fellow EAA members.

In retrospect, completion of the hangar required much of the same creativity and tenacity that mark a successfully finished aircraft. The massive whole project must be broken into smaller sub-assemblies that can be dealt with individually. Each problem encountered is solved, one at a time until, despite various setbacks, finally there are no more problems and no more sub-assemblies. Instead you have a completed project. And just as with a homebuilt aircraft, alterations, improvements and refinements will continue over the years. But the bottom line is that an idea -- a hope, a dream -- has been combined with raw materials and hard work into a concrete and steel reality. We hope that when other chapters see 690's home, it will have the same effect on them that aircraft displayed at Oshkosh have on prospective builders. In other words, inspiration: "Hey, I bet I can build one of those!" Sure you can. We did.

Cyberair

by Joel Levine

My original intentions were to write an article about the aviation news groups on the web until someone pointed me to "www.cyberair.com". I got side tracked. "Cyberair" originates from the Chicago area and if interested you can listen to several of the AWOS, approach or tower frequencies, including O'Hare, in real time. As interesting as that might be, it's not the main attraction of this site. Cyberair currently has four very interesting aviation related lectures complete with audio, slides and even an occasional cough. Since the content is largely provided by the DuPage FSDO, the content is primarily safety oriented.

The Effects of Fatigue on Pilots is a "radio style" program about fatigue and insights on what we all refer to as "being tired." A Psychologist and a Medical Doctor discuss the effects and how to recognize them. The lecture is 42 minutes long but is broken up into four segments. Of course the nice thing about Internet lectures is that you can always stop the "professor," back him up or turn him off altogether. Just try that with your local FAA Safety Seminar specialist. If you're participating in the Wings Program, there is a CyberQuiz for program credit with each of the lectures.

Lecture two is on <u>Pilot Judgment</u>. Again, this is a multimedia program that introduces "human factors" to the pilot. The lecturer covers attitudes, poor judgment, stress, and proper decision making techniques and takes about 21 minutes to complete.

How FAA Evaluates Pilots is perhaps the most interesting of the series and a mystery to most of us. In two segments the speakers Allan Englehardt, a pilot examiner and Dennis Caravella, an FAA Safety Program Manager, discuss how the FAA maintains

standardization from examiner to examiner. A portion of the lecture is edited from an address to a group of about 60 flight instructors. The second part of the program consists of comments by three Pilot Examiners and an FAA Inspector and offers further insight on standard pilot examinations.

Stress and Expert Pilot Performance may not sound interesting but the lecture and visuals used by Dr. Russ Hoffman are informative. Hoffman introduces the listener to what stress is, how to recognize when stress is building up and how to keep it down to safe levels. (I thought that was why the mile high club was formed.) The lecture is 44 minutes, broken up into four segments with audio and slides.

Having attended many of the local FAA safety forums, and frankly finding most of them pretty basic and out of date, these four lectures were almost exciting. The topics and visuals were current (which coming from the FAA is a first) and as I indicated, you can listen at your own pace, print the visuals for later reference and even ask the lecturer questions by e-Mail. You get all this for the low, low cost of tying up the kid's phone line for an hour or so. Don't try that with the wife's line unless your a computer professional or willing to risk life or limb. The prerequisites are simple - an Internet connection and Real Audio software, which in case you don't already have it, is free for the download on many web sites including Cyberair. Try it, it's interesting and educational . . . but not as educational as the binaries.

-Joel

CESSNA HOSE A.D.

An FAA Airworthiness Directive effective February 3 requires owners of Cessna piston models from the 150 up to the 421, plus the turboprop Caravan, to check for faulty fuel, oil or hydraulic hoses. AOPA issued a press release reminding owners of the AD and the fact they can perform the required inspection themselves.

Letter to the Editor:

At the January meeting we began to discuss the idea of renting the Chapter House hangar to bring in revenues. The following is an opinion from one of our members. If you have an opinion on this matter and would like to share it, please feel to send it to me (address is on back page) for disbursement to the membership.

To the editor:

At the January meeting a motion was made to rent the Chapter House to one or two aircraft owners for the purpose of raising money so that "we would not have to work so hard." Fellow members of 690, I submit to you that hard work is a major component of the glue that holds this chapter together. Unless my memory fails me, when presented with the proposed uses for the Chapter House, the membership agreed that aircraft storage was not one of them. I think that aircraft storage will stifle any of the other activities like the annual dinner, the pancake breakfast, the Biplane Fall Classic, the B-17 tour stops, and the other events yet to come. I chose 690, after becoming involved in three Chapters, because of its comradeship, the willing to accept strangers, and the Chapter attitude. To stifle these attributes will be a grave mistake. I am very much opposed to the motion to rent the CHAPTER HOUSE for any purpose.

Respectfully, David Posey.

Such a Deal....

General Aviation News & Flyer is offering a FREE 6 issue trial subscription to all EAA chapter members. All you have to do is call them at 1-800-426-8538 or write to Flyer, P.O. Box 39099. Tacoma, WA 98439. Just tell them you are a Chapter 690 member. The offer is good through May 1997 and also applies to current subscribers. At the end of the 6 months a renewal form is sent if you want to continue the subscription. If you do not, no response is necessary.

Chapter 690 Classified Advertisements

For Sale: Half interest in 1962 Cessna 172. 2300 hrs TT and 600 hrs SMOH - good condition. Dual nav/com, loran, DME, plus more. Instrument certified and 9/96 annual. Hangered at Briscoe Field. (770)277-1222 or cmiller@calc.vet.uga.edu.

FS: Half interest in a Beech Musketeer. Full VFR with lots of TLC. Bill Bailey 770/934-7756; 770/934-1414 (FAX).

For Sale: Two folding bikes. Great for X-ctry travel. Selling as a pair for \$300°°. \$100°° of sale goes to Chapter 690 Hangar Fund. Jim Estes 770-938-3515.

For Sale: Bill Bowers award-winning plans-built Fly-Baby. Approx. 45%. Have all plans and invoices. All ribs complete-brakes, wheels, and tires-also, converted Javelin 1.0 liter, alter., starter, with all engine instruments. \$4500. Frank Settle 770-923-6149.

For Sale: 4 star rated vacation pkg in Sugar Mtn NC. Paid close to 11K will sell reasonably or trade for what have you. Any interest call Frank Settle, 770-923-6149

For Sale: 1968 Cessna 150, 350 SMOH Approx 5800 TT, AT-50XPDR + ACK Mode C; Intercom; ADF; King KX-145 (720 ch); Audio panel/MKR BCN REC; Wheel pants - red and white but needs paint; 7/97 annual. Lots of TLC, and is a traveling machine as well as a trainer. \$15,500 firm. Call to see where we are. Use an AT&T line and dial 1-500-677-4169 - Ken Sharp or Sheryl Black

VARIEZE, 90% complete rebuild, O-200 300 SMOH. Warnke prop, IFR instrumentation and radios. In law school, no time to finish. \$7950 firm. Terry @ 404-257-8794.

COZY 3-seat project, 45% completed. Wings, canopy, wheels, canard done. First layer of micro part sanded. Builder died; widow will sell for \$14,000 OBO. Also, RV-6A wing kit still in crates. Paid \$3245 new. Will sell for \$2500 OBO. Both located in Atlanta-Alpharetta. Call 770-740-0606.

For Sale: Tri-Q Project (160 MPH on 65 HP) All major construction completed - wing, canard, fuselage and control surfaces. To be finished - assembly, systems and engine installation and finishing. All materials, fittings and hardware to complete including instruments, prop and new Revmaster 2100-D engine (65HP). This is an original factory kit. All factory newsletters and Quickie Builders Association newsletters, drawings and instructions. \$13,000 invested. Make offer. Frank Wilcox, 770-978-2403.

For Sale: Garmin 55 AVD GPS Receiver: Yoke mount with est. power plug, remote antenna cable: \$250. Alan Langford, 770-339-3674

For Sale: Like new 150,000 BTU propane torpedo heater with 100 # propane cylinder.... Used only one winter during hangar construction. \$400.00. Call Terry or Sue Adams 770-613-9501.

For Sale: One year old 75,000 BTU Rheem gas furnace and 2 1/2 ton air onditioning condensor. Works perfectly...\$1200.00 Call Terry or Sue Adams for details...770-613-9501.

For Sale: Garmin GPS-45 hand held GPS receiver. Perfect condition. Includes external antenna, wrist strap, case, and owners manual. \$195. Stan Huntting, KF0IA; Email: stan@mutady.com; Fax:303 444 2314

Space Surfing Continued from p.1

An orbit near a libration point is considered stable if a spacecraft in orbit needs little or no "station keeping," small nudges from positioning rockets to keep the craft on the right track. Howell has investigated many orbits near libration points throughout the solar system.

"Libration points are located at places in the solar system where very interesting things are happening, such as the environment between the Earth and the sun," Howell says. Spacecraft placed in such regions can gather data over a longer period of time than other missions, such as flybys, and can collect data from various regions of space, without being limited to the space near planets.

Getting into a libration point orbit can be half the fun.

Currently, space missions are planned by calculating a specific trajectory, or path, to a destination, a complicated mathematical process that has to be repeated for each new mission.

But by applying sophisticated mathematics to what is essentially an engineering problem, Howell, in the past three years, has discovered that a spacecraft could "surf" into a libration point orbit. She and her colleagues have found that the complicated gravitational fields in space can form two-dimensional "surfaces" around libration points, surfaces that extend out into space. These surfaces, some of which pass relatively close to the Earth, contain gentle curves and bends, like the surface of a sheet billowing in the wind. If you can get a spacecraft anywhere on the sheet, she says, it will naturally get into orbit around a particular libration point, without having to use fuel to steer the craft. And once you find a sheet, you don't have to perform the calculations to find it again.

"It's kind of like a marble rolling in a funnel," she says. "All I have to do is get on the sheet and I can 'ride' to a libration point. We can also 'shift' from one sheet to another to get to a destination, not necessarily a libration point. This is an entirely new way of planning a mission. It's a tremendous tool that if nothing else will clearly cut down on the computational misery associated with designing libration point mission trajectories."

Howell says that riding a surface would be slower than using high-powered engines to go directly to a destination, such as Jupiter. However, a mission utilizing the surfaces could be a "low-thrust" mission, meaning much less powerful engines would be needed on a craft, less fuel would be consumed on the journey and smaller spacecraft could be used.

Howell and her graduate students are looking for such surfaces in the solar system, determining where they go and then plotting them on a computer. They are among the first to use the surfaces to plan possible future missions being submitted to NASA. For example, they are putting together three surfaces to build a path for a spacecraft that will collect and bring back to Earth samples of material being swept out of the sun.

Eventually Howell would like to provide mission designers with a complete data base of surfaces, enabling them to click on the starting and ending points of a mission and have the computer quickly and automatically plot a trajectory using the sheets. She is working with engineers and mathematicians at the Jet Propulsion Laboratory in Pasadena, Calif., to determine how the surfaces can be used most effectively.

Libration point orbits also could help lower the cost of planetary and exploratory missions. "Instead of launching five individual spacecraft from Earth, which is expensive, we could launch five spacecraft all in one craft and send them to a particular libration point orbit," Howell says. "From there, it would take much less fuel to send each craft off in a different direction, to other libration point orbits or possibly to other planets."

The practicality of having spacecraft in libration point orbits was demonstrated just last month. Between Jan. 6 and 10, two satellites in libration point orbits between the Earth and the sun, called SOHO and WIND, detected and recorded data from a major space "storm" that originated from a huge eruption on the sun. The disturbance hurled particles and radiation from the sun into space, sweeping past the Earth.

"Solar activity such as this and solar flares can interfere with power stations and disrupt satellites in Earth orbit," Howell says. Earth-orbiting satellites control everything from telephone and television signals to sensitive global positioning systems used extensively for air, land and sea navigation.

"Not only can satellites in this region help us better understand the environment around the sun and Earth, but they also can provide advance warning for possibly crippling communications and power disturbances," Howell says.

Communicated by Joel M. Levine. Source: Purdue Science News; Writer: Amanda Siegfried amanda_siegfried@uns.purdue.edu

BOT Report

Continued from p. 2

that they approve the use of the building with appropriate conditions.

Much time and effort is being devoted to the development of interior concepts for the building. Three configurations including estimated costs have been extensively reviewed. All include a food preparation area, lounge, technical library, flight planning area, tool storage and a small office. One plan placed all these facilities in a one floor configuration and two in a two floor configuration. Using the two story idea would, of course, allow more room on the main floor. Because of this and the fact that we now have some second floor storage in place, the two floor plans are being considered. Discussions with the Gwinnett County Fire Marshal's assistants indicate very little

problem in meeting fire code requirements. A detailed cost analysis is being made of a two story configuration having the best features of the original plans. Tim Fulmer has been appointed as the Board's coordinator for this project.

As we move into the first full year of use of the chapter hangar, it is expected that it will be the site of new activities as well as those we have already established. All members should be proud of what our chapter has accomplished in providing this outstanding facility where these activities can take place. The word is spreading that Chapter 690 is a "can do" organization. I have been in conversation with and supplied information to two EAA chapters who want information about our building program, EAA Chapter 2 in Fort Wayne, Indiana and Chapter 240 in Newcastle, Delaware. It feels good to be at the head of the pack; don't you think?

Feb. '97 NavCom Page 9

Chapter 690 Video, Book, and Plans Library

- 1. EAA BASIC WOOD-WORKING
- 2. EAA BASIC AIRCRAFT WELDING
- 3. EAA COMPOSITE CONSTRUCTION (M)
- 4. DUANE COLE VFR TIPS FOR PILOTS
- 5. SAFE PILOT, OVER-WATER FLYING, WAKE
- TURBULENCE, BASIC RADIO, START (M)
- 6. PRESCOTT PUSHER ELEVATOR TRIM TAB KIT #102
- 7. AOPA PINCH HITTER COURSE
- 8. TO FLY (M)
- 9. F-4 MISHAPS, AERONAUTICAL MISHAPS, HISTORY OF RIGID AIRSHIPS
- 10. VOYAGER
- 11. STITS FABRIC COVERING (#62 DUPLICATE) (0)
- 12. BLUE RIVER COVERING
- 13. KING WEATHERWISE
- 14. KING COMPLETE AEROSPACE REVIEW
- 15. KING RULES TO FLY BY (M)
- 16. KING COMMUNICATIONS
- 17. KING PRACTICAL PILOTING (M)
- 18. KING FLYING THE CITATION (M)
- 19. KING VFR WITH CONFIDENCE
- 20. KING IFR WITH CONFIDENCE
- 21. KING COMPLETE JEPPSON CHART REVIEW
- 22. KING TAKEOFFS AND LANDINGS MADE EASY
- 23. KING HANGAR FLYING WITH A POINT
- 24. ABC WIDE WORLD OF (WWF) FLYING V1#1 MALIBU, TAKEOFF TECHNIQUE, LORAN-C, B-17.

LANCAIR

- 25. ABCWWF V1#2
- 26. ABCWWF V1#4 (M)
- 27. EAA OSHKOSH 87
- 28. EAA OSHKOSH 88
- 29. EAA OSHKOSH 89
- 30. EAA EAGLE HANGAR DEDICATION "A CALL TO WINGS"
- 31. EAA WELDING, WOODWORKING (BACKUP OF #1 &
- 32. RUTAN COMPOSITES, SAFE FLYING(BACKUP OF #3 & #5)
- 33. ABCWWF V1#1 & #2 (BACKUP OF #24 & #25)
- 34. How To Fly The B17
- 35. Time Flies- Warbird Journal- B17 at LZU

- 36. B29 Frozen in Time
- 37. EAA Building General Aviation's Future
- 38. EAA General Chapter Address(P. Poberezny)
- 39. EAA SALUTE TO SPORT AVIATION-SUN-N-FUN 90
- 40. EAA BASIC AIRCRAFT PAINTING
- 41. BLUE RIVER COVERING (BACKUP OF #12)
- 42. ABCWWF V1#3 LEARJET, STEREO INTERCOM,
- SKYLANE, NDB, LASERTRACK, TSUNAMI 43. SPORTY'S WHAT YOU SHOULD KNOW (SWYSK) VOL.2 (2 TAPE
- SET) PRACTICING LANDINGS (NOTE: ONE OF TAPES
- AND BINDER LOST)
- 44. SWYSK) VOL.3 (2 TAPE SET) YOUR FIRST SOLO
- 45. SWYSK VOL.5 (2 TAPE SET) YOUR DUAL

CROSSCOUNTRY

- 46. SWYSK VOL.6 (2 TAPE Set) YOUR SOLO CROSSCOUNTRY
- 47. SWYSK VOL.7 (2 TAPES) Your Private Pilot Test
- 48. TACTICAL TECHNOLOGY- A OVERVIEW OF
- TACTICAL SYSTEMS DIVISION (TSD)
- 49. TSD AGM-130 SMART BOMB
- 50. TSD HELLFIRE MISSILE
- 51. How to Fly the B17 How to Fly the B29 The Last Bomb
- B29 Frozen in Time
- 52. AOPA WEATHER, FLIGHT PLANNING, THE PILOT
- (SEE BOOK #2)
- 53. AOPA GO/NO-GO WEATHER DECISIONS
- 54. AOPA EVALUATING INFLIGHT WEATHER
- 55. COSA CARBURETORS BY REX TAYLOR
- 56. MURPHY AVIATION "RENEGADE" (M)
- 57. ABCWWF V2#5
- 58. ABCWWF V2#6
- 59 ABCWWF V2#7
- 60 ABCWWF V2#8
- 61. ABCWWF V3#9
- 62. STITTS FABRIC COVERING (BACKUP OF #11)
- 63. THE PETREL AMPHIBIAN
- 64. VFR APPROACH TO OSHKOSH
- 65. BUILDING THE RUTAN COMPOSITES (M)
- 66. EAA MEMORIAL WALL
- 67. EAA OSHKOSH 90
- 68. EAA OSHKOSH 91
- 69. EAA Oshkosh 92
- 70. EAA Oshkosh 94

| 71. C'MON GEESE | 94. S-12 Tape 1 | |
|---|---|--|
| 72. Sun-N-Fun 92 VFR Arrival Procedures | 95. S-12 Tape 2 | |
| 73. Morton Buildings | 96. Avemco/EAA Insurance Handbook | |
| 74. ARRL NEW WORLD OF AMATEUR RADIO | 97. King Special Student Pilot | |
| 75. Super Cubs | 98. AOPA Flying Friendly | |
| 76. Young Eagles News Conference | 99. Wonderful World of Flying -Flying Spartan Executive | |
| 77. Kit Planes (2 tapes) (M) | -Engine Failure After T/O -Performing The Loop- | |
| 78. Ghosts of the Sky-Flight of B25 | 100 Worderful World of Eliter Eliter | |
| 79. The Quiet Challenge (Soaring) | 100. Wonderful World of Flying -Flying Spartan | |
| 80. Running On Empty(Soaring) | Executive -Engine Failure After T/O -Performing The Loop (Same as 99) | |
| 81. Young Eagles (1st copy) | ■ AME SOLVER MANAGEMENT ■ | |
| 82. Young Eagles (2nd copy) | 101. Jeppson CFI Renewal Program Vol.3 - #4 | |
| 83. King Instrument Commercial | 102. Jeppson CFI Renewal Program Vol.3 - #5 103. *Jeppson CFI Renewal Program Vol.3 - #6 | |
| 84. King Instrument Written Exam Course Tape 1 | 104. *Jeppson CFI Renewal Program Vol.3 - #7 | |
| 85. King Instrument Written Exam Course Tape 2 | 105. *Jeppson CFI Renewal Program Vol.3 - #8 | |
| 86. Kolb Aircraft Firestar, Firefly, Mark III 87. Van's Aircraft | | |
| Total Performance RV3, RV4, RV6 | 106. *Jeppson CFI Renewal Program Vol. 4 - #1 | |
| 88. RV6 Fuselage Construction Part 1 | 107. *Jeppson CFI Renewal Program Vol. 4 - #2 | |
| 89. RV6 Fuselage Construction Part 2 | 108. *Jeppson CFI Renewal Program Vol. 4 - #3 | |
| 90. RV6 Fuselage Construction Part 3 | 109. *Jeppson CFI Renewal Program Vol. 4 - #4 | |
| 91 Adventure Air Amphibian Wing Construction | 110. *Jeppson CFI Renewal Program Vol. 4 - #5 | |
| 92. Andy Anderson's EAA690 Hangar Construction | 111. *Jeppson CFI Renewal Program Vol. 4 - #6 | |
| Docmentary Part 1 | 112. *Jeppson CFI Renewal Program Vol. 4 - #7 | |
| CONTRACTOR | 113. *Europa | |
| 93. Andy Anderson's EAA690 Hangar Construction | 114. *WARBIRDS- THE FEEL OF COMBAT | |
| Docmentary Part 2 | Note:(M) indicates missing video | |

LOST VIDEOS

The following chapter videos are still missing after contacting the last borrowers as listed on the charge-out cards. Most people contacted indicated that they have return the videos and apparently they have been re-borrowed with signing them out out on the charge cards. All members are requested to review their archives for these titles. EAA690

VIDEO

| NUMB | ER TITLE |
|--------|---|
| | |
| 3 | Composite Construction |
| 5 | Safe Pilot, overwater Flying, Wake Turbulence, Basic Radio, |
| Start | |
| 8 | To Fly |
| 15 | King Rules To Fly By |
| 17 | King Practical Piloting |
| 18 | King Flying The Citation |
| 26 | Wide World of Flying Vol 1 No. 4 |
| 33 | Wide World of Flying Vol 1 No.1 & No.2(back-up) |
| 43 | Sporty's What You Should Know About - Practicing Landings |
| Note: | This is a two tape set in a special binder and we have |
| Tape I | No 1. The binder and tape No. 2 is missing and the binder probably conf |
| 56 | Murphy Aviation "Renegade" |

ntains another of the missing videos.

56 65 Murphy Aviation "Renegade" **Building the Rutan Composites**

77 Kit Planes (2 Tapes)

Also, does anyone know of the where-abouts of Stephen Galtin or Ben Jefferies. They have apparently moved and I cannot track them down to have them check. If you find any of the listed videos, please return them the next meeting or advise me if you still need to keep them.

Video Custodian: Barney Barnes (770)-923-7896 e-mail:barneyb@compuserve.com

Homebuilder's Laws

- 1. Some unconventional wisdom about the conventional
- 2. Boob's Law You always find a tool in the last place you look.
- 3. Rap's Inanimate Reproduction Law If you take something apart and put it back together again enough times, you will eventually have two of them.
- 4. Golug's 2nd Law of Homebuilding A carelessly planned homebuilding project takes three times longer to complete than expected. A carefully planned project takes only twice as long.
- 5. Horner's Five Thumb Postulate Experience varies directly with material ruined.
- 6. Baruch's Observation If all you have is a hammer everything looks like a nail.
- 7. Brorberg's Law of Tool Use When the need arises, any tool or object closest to you becomes a hammer.
- 8. The Roman Rule The one who says it can't be done should never interrupt the one who's doing it.
- 9. The "90-90" Rule The first 90 percent of a project takes 10 percent of the time and the last 10 percent takes the other 90 percent.
- 10. Eng's Principle The easier it is to do, the harder it is to change.
- 11. Schmidt's Law If you fiddle with a thing long enough, it will break.
- 12. Bungey's 1st Law The nut won't go on until you utter the magic word.

Communicated by Joel Levine

February NavCom Honor Role

Joel Levine Wayne Whitaker Larry Bishop

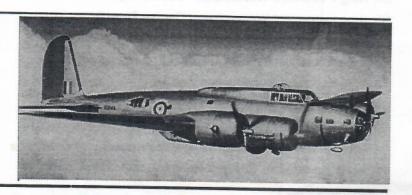
Frank Settle

Duane Huff David Posev Ken & Sheryl Sharp

Joe Reed

Barney Barnes

Frank & Margaret Wilcox



We need AC scales! 10 AM Chapter Haus (LZU) Sat, 15 Mar. Weight & Balance Seminar

> David Posey gets hot with a TIG welder. 8 pm at Chapter House (LZU) Friday, 14 Feb (St. Valentine's Day!) -ebruary Meeting

> > boatri@emory.edu Editor: Jeff Boatright 2293 Sanford Road Decatur, GA 30033 Newsletter of EAA Chapter 690