



The Beacon

The newsletter of Chapter 54
Lake Elmo, Minn.

JULY 2004

JULY 2004

THIS MONTH'S PROGRAM

MONDAY JULY 12TH, 2003

- **SOCIAL HOUR AT 7 P.M.**
- **MEETING AT 7:30 P.M. CHAPTER HOUSE, ENTRANCE B, LAKE ELMO AIRPORT**
- **Al Kupferschmidt will be the speaker at the meeting. His topic will be: Medical Certificate Loss and Reinstatement; the Experience and Lessons Learned. Al has a wealth of information to share with us based on his own recent personal experience with renewing his FAA medical.**

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B2: UNBELIEVABLE BY: MICK SUPINA

I recently had the great pleasure to meet Colonel Scott Vander Hamm, whose latest assignment was Commander of the 325th Bomber Squadron of B2's at Whiteman AFB located close to Kansas City, MO. Our initial greetings and discussions only took about 30 seconds for Scott to discover I was a pilot and to offer me the opportunity to tour Whiteman - see the B2 up close and personal and to 'fly' the WST (simulator). It only took another 5 seconds for me to accept and offer some dates when I could be there!

Don't hold me to the specs I mention in the following description of my tour since I was not taking notes and was so wowed by the Plane and the Personnel and the Facility that I am sure I did not absorb all the information given 100% correctly.

The Tour:

Whiteman is not a large facility and there are only two dozen B2's in existence. The facility is extremely clean and well organized. Much of the housing is from the 1950's and is currently being renovated. I was initially surprised to see dormitories – just like a college campus. Then, I realized that most of our military personnel are 18 – 21 year old soldiers, so a dorm makes perfect sense. Lunch in the Officers' Club was great and that is certainly top notch. We drove out to the main runway, which is a concrete ribbon over 12,000 feet long. "I could land a Cub on the width of this monster," I thought. Next, we drove by the 'Docks' for the B2's. Each plane has an individual dock (no, not a hangar – hangars are cheap to build and docks are expensive to build). Inside, everything associated with the plane is done in complete secrecy. Once the dock bays open, the plane taxis out and takes off. This plane is invisible 24/7. The dock provides security, fueling, maintenance, arming, and fire protection – everything behind closed doors. The tarmac between the rows of docks is huge. You could park a fleet of C5A's out there and still have maneuvering room. This is a serious facility.

(Continued on page 6)

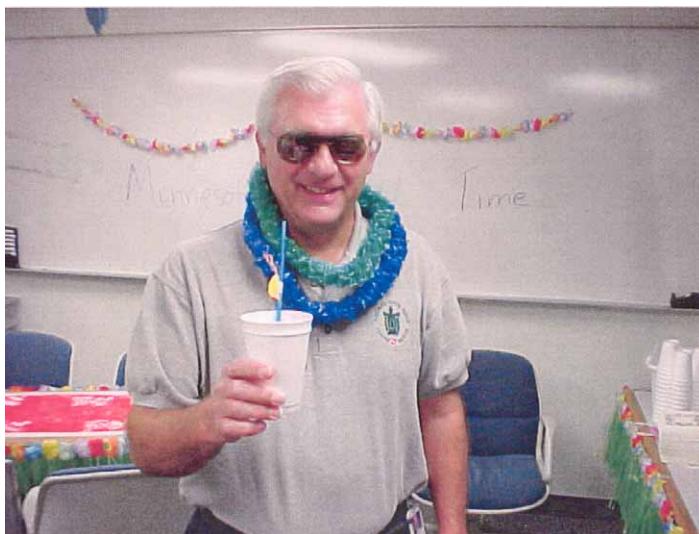


PRESIDENT'S COLUMN
BY PAUL HOVE

Summer has already started and where are the nice sunny days that the almanac predicted? If they ever show up, check out Iowa City, Iowa, featured by AOPA on its Postcards Online in June. Iowa City is noted for its Amish and Mennonite Communities and the oldest established airport (IOW) west of the Mississippi. It boasts having one of only seven remaining Boeing/United airmail hangers in the country. This would be an excellent weekend trip for chapter 54 pilots to consider. It has lots of restaurants to choose from and the Amana and Amish colonies to visit. I printed a copy of the AOPA article and posted it on the chapter house bulletin board.

On a sad note, John Stevenson, one of Lake Elmo's pilots, died of a fast acting cancer in June. John was not a chapter member but hangered and flew an experimental navy blue RV-6. His family and friends have our condolences.

My last day at work was June 30th and as you might surmise I miss my job!



As you can see from this picture I have already begun a new career of leisure and hobbies.



The National EAA is looking for "Youth Reporters" to take pictures and write up a short article about their experience of attending AirAdventure as a young Chapter Member. The member must be between 8 and 17. If anyone knows of a candidate please let me know or bring it up at the July meeting.



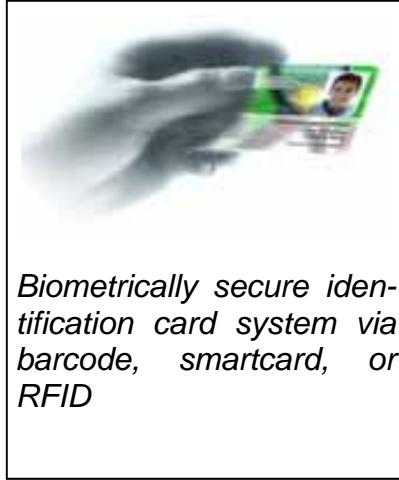
Burt Rutan and Mike Melvill will be telling about their Space Flight at AirAdventure. Rutan will present at four forums and his Theater in the Woods evening program "Fun at Mohave". These are worth the price of admission alone! See all of you at the forums.

GA SECURITY
By: SCOTT OLSON



I have taken on the duties of analyzing security post 9/11 at EAA Chapter 54. I am the Kid Venture Director at Chapter 54 and security dovetails into this position nicely. I have proposed to Doug MacNair of EAA that all 1000 chapters have an official EAA Security Director position at the Chapter level.

I have put together at Lake Elmo – 21D, a collaborative group to look at our airport security at the grass roots level. Almost all 19,000 General Aviation (GA) airports have an airport owner, FBO, EAA, AOPA-ASN to be the nucleolus to advance and elevate the message of GA Security. Our Chapter Clubhouse has "Airport Watch" signs from AOPA, which is one example of how two organizations can collaborate to secure the airport.



Biometrically secure identification card system via barcode, smartcard, or RFID

I have read and studied the Security Guidelines for General Aviation Airports – Information Publication A-001 May 2004. I am very keyed up on helping EAA secure GA airports. I will be involved in presentations at 2004 AirVenture Pilot forums speaking on guidelines that will assist owner's operators, sponsors, and any entity charged with oversight of general aviation (GA) airports with a set of government recommended security enhancements for GA facilities

I am taking on the task of studying security requirements for Lake Elmo 21D which is timely because of the new fence and our August Fly-in.

The team to study security at 21D consists of: AOPA ASN - Robert Zarracina, Airport Manager - Greg Fries, FBO - Gatis Valters, EAA 54 - Scott Olson.

Initial security issues at 21D: Perimeter access control, Aircraft Rental, Special event security.

We will have our first meeting at the Clubhouse after dialogues with TSA, EAA, and AOPA at AirVenture 2004.

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Chapter member meet on the second Monday of every month at the Chapter House, Entrance B at Lake Elmo Airport (21D). The House is at the base of the airport beacon. The newsletter is printed on the first Monday of every month. Parts of the newsletter may be reprinted with appropriate credit.

21D RCO 118,625
21D Unicom: 122.8
TPA: 1932'
Runways: 4-22 (2497' x 75')
14-32 (2850' x 75')

2004 PANCAKE BREAKFAST
By: SCOTT OLSON

This is last years volunteer list for the Pancake Breakfast. Please review and call in any changes or unable to volunteer 2004 to Volunteer Coordinator Scott Olson at (651) 770-2035 or email scotto0125@comcast.net

2003 Pancake Breakfast Volunteer List					
LastName	FirstName	HomePhone	WorkPhone	Email	
Publicity/Advertising		Chairpeople: Jim Michalski			
Anderson	Jim	(651)433-3024		jja@wrmed.com	
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Gibbons	Thomas	(651)777-5887	(612)726-5871-75	TomsFlyingBy@atts.net	
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Kupferschmidt	Alan	(651)777-9257		RaeAndAI@msn.com	
2nd Shift Breakfast Crew		Chairpeople: Craig & Carla Young			
Edhlund	Arthur	(651)439-5912	(651)402-0125	aEdhlund@HotMail.com	
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Snater	Klaas	(651)730-8831	(651)480-5436	klaas@usadutch.com	
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Weston	Lee	(763)572-9055		phrix9@excite.com	

Tear Down		Chairpeople: Marlon Gunderson		
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Lyon Jr	Harry	(651)777-2235		
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Stolley	Nick	(651)453-1621	(651)451-1205	nstolley@attbi.com
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Stright	Richard	(651)-773-7549		
Finances		Chairpeople: Paul Liedl		
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Sarracco	Harriet	(651)429-1049		gsarracco@juno.com

TREASURER'S REPORT *By: PAUL LINNEROOTH*

June's Financial Summary

Cash on hand	\$ 40.00
Checking Acct.	\$ 5,821.07
Investments	\$ 4,000.00
Total	\$ 9,861.07

Income in June consisted of \$85.00 in individual dues and \$20.00 in calendar sales for a total of \$105.00.

Expenses for the same period were \$110.84 and consisted of \$66.06 for newsletter publication, \$37.60 for utilities, and \$7.18 for refreshments.

CLASSIFIEDS

1957 V35 Bonanza

TTAF: 4580, SMOH: 709 (times are approximate but close)

Speed slope windshield, added third window

Original navigation equipment

Corrosion free, has always been hangered

Price: \$25,000

Call Harriet Sarracco, 651-429-1049 or email, gsarracco@juno.com.

B2 (Continued from page 1)

The 325th squadron's mascot is the cartoon character 'Alley Oop' riding a tiger and swinging his big rock ax. Naturally, Scott's call name is wing!

'Caveman'. Over the years, the 325th has flown B17s, B29s, B52s, F111s and now, the B2. They have a rich tradition and are justifiably proud of their history.

Their current missions are long. Scott has flown multiple missions to the Mid East which are 38 hours round trip, non-stop. This will become even more amazing when I get to the mid-air refueling story later on!

lem. The biggest impression is the lack of verticality: no tail – this is a horizontal machine – when they say flying wing, they mean flying his big rock ax!

B2's are called Spirits, just as F18's are called Hornets. I assume 'Spirit' in the connotation of pride and soul – like the 'Spirit of St. Louis'. But I had a second connotation: 'Spirit' like a ghost. Think about it, it is invisible for all intents and purposes, scares the hell out of its enemies and has an unworldly appearance when it is seen. I think both definitions of Spirit apply!



Mick, the B2 and Col. Vander Hamm carrying Photo courtesy of USAF Alley Oop's big Ax.

The Plane:

Scott told me with a smile that I should not leave his side anytime during the tour of the plane or I would be shot. Smile or no, I was staying within whispering range for sure! He led me through a couple of security checks and through some armored doors requiring a scan of his ID card. Finally, we opened the last door and there she stood – The Spirit of Mississippi. I did not know what to expect about size. I knew it was a bomber so it should be big, but I knew that you don't need a huge bomb load with today's smart bombs so maybe it would be small. Actually, it is somewhere in between. The wingspan is about 175 feet so Swifts could park along the wing with no prob-

After meeting some of the crew, I was able to walk right up and touch the beast. The feel of the surface was instantly recognizable – it feels

like a Teflon coated pan – not a metallic feel at all. In making her radar invisible, Northrop also made her incredibly slick. The drag coefficient has to be fantastically low. There is not an open seam or protrusion of any kind anywhere on the entire surface. All access panel edges are covered with a UV cured radar absorptive tape. Panels that have to open in operation, such as bomb bay doors, crew hatch and gear doors, have overlapping flanges that seal totally flat with flush mounted sensors on upper and lower sections measuring incremental pressure

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B2 (Continued from page 6)
changes.

Scott mentions that the anti-lock braking system is the best system on any machine anywhere – period. I found it odd to be talking about the brakes when there were so many interesting flying related points of discussion. Next, we looked inside the two open bomb bays. They are pretty massive and work with a center mounted rotating shaft around which smart, dumb, standard or nuclear weapons – or combinations thereof can be mounted. I can't remember the exact weight capacity but we're talking lots of 500 and 1000 pound bombs. At the front of each bomb bay are two heavy white perforated grates extending into the air stream. Scott explains that they create air turbulence when the doors are open. Otherwise, the air stream is so smooth and laminar that bombs would have a tendency to drop into the air stream and then ride along with the plane rather than proceeding to target. A good and necessary design fix!

I am able to climb a large ladder to view the plane from above. It is at this point I identify what she reminds me of – a Manta Ray. She is unusual but seductive; streamlined and perfectly functional in her role. Whereas the

F117's bounce radar waves in a myriad of directions, the B2 focuses the energy in set patterns; like routing the flow of a water stream where you want it to go. Without a vertical tail, there are new terms to learn about control surfaces. Items like 'elevons' are utilized. In the traditional aileron location are very sophisticated air brakes with a scissor opening mechanisms that operate independently via computer control when turn inputs are made on the stick.

On the left topside is a glass lens facing straight up. This is an astronomical instrument to take readings from the stars – even in broad daylight. I suppose someone could jam GPS signals or even destroy the satellites, but nobody can manipulate the stars! This is an ultimate redundant system. OK, let's get an inside look!

The cockpit is surprisingly roomy. The two positions are completely redundant for every instrument and glass panel. There are even two sets of throttles for the four engines. I had imagined a small armrest mounted control stick, but there was a beefy standard stick right where it should be. I liked that! The inside resembles a standard commercial airliner in appearance except for a couple of giveaways. One is the bright yellow ejection seat lever and the other is the set of buttons and switches in the center console area associated with removing the cargo in-flight. The power seats allow up/down, forward/back positioning to suit the pilot and the pedals adjust forward and back for a custom fit. The windshield has an imbedded mesh, similar to a screen door fabric, which is obviously designed to absorb and/or break up radar waves. Since the cockpit is at the very front of the aircraft, the visibility is superb forward and to the sides. There is no backward visibility. Behind the two seats there are storage areas and a toilet (which answered my first question about 38 hour missions!). With the hatch closed, there is enough floor room to lay down an air mattress so the crew can take alternating sleep breaks. Scott explained the multiple computer systems on board and the redundant hydraulic systems. She even has an on-board PC and printer than



Inside the Mississippi's cockpit. Note yellow ejection handle!

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B2 (Continued from page 7)

can send emails practically anywhere on earth in under 10 seconds. I am totally psyched to fly this bird!

The Weapons Systems Trainer (simulator)

After more security checks, we get to the simulators. Mine has to be 'sanitized' before I can enter. The Walter Mitty in me says they must have an upcoming mission programmed in that has to be removed! The simulator is like an island with a drawbridge access. Once you cross the bridge, you chain the gate behind you and the bridge is withdrawn. Now the system can rock and roll to my inputs with its nearly full motion capabilities. The cockpit is identical to the Mississippi in every respect I can see. The view is from the tarmac at Whiteman. Once I am buckled in, Scott starts the engines and asks me to taxi her out. I remember all my instructors always telling me to keep it on the center stripe. My feet scrambled for the pedals. I add power to the engines and we are moving. I realize she is directly over the nose wheel. So, if I keep me centered, she is centered. As we taxi, off the first attempt. I notice that every muscle in Scott mercifully programs in dead calm winds. The computers analyze density altitude, gross weight (I am carrying a full bomb load and speed to rotate – about 145 knots as I recall. I have my feet ready to dance the pedals. There is a short spool up time and the plane accelerates down the runway. I am happily able to keep her centered nicely and soon the magic rotation speed is there and I pull back on the stick.

Wow, what a rush. I try to keep her at 10 – 15 degree climb angle and once we are a few thousand feet up, Scott tells me to play with turns to get the feel. With the fly by wire systems, all required. There is nothing back there resembling a rudder to manipulate anyway. After I am

able to make fairly decent turns while holding altitude, we head back to make a low level pass over the docks at Whiteman. We descend to about 500 feet AGL and make a strafing run of the base – what a hoot! Scott tells me this is so I can appreciate the resolution of the simulator images, but I know a strafing run when I am in one!

Now, the Colonel decides we need to refuel, so he directs me to 20,000 feet at a heading to intercept our tanker. Sure enough, the tanker soon comes into site with its refueling boom dangling behind. We retard speed to 220 knots and I attempt to move into position. This is really hard stuff. The boom connects behind the cockpit to a blind spot; you have to be matching speed and distance exactly and precisely during the maneuver. The exhilaration of takeoff is from the whole routine. The exhalation of landing is from the tarmac at Whiteman. Once I am down as possible to get a better upward view. So, here I am – a SEL guy - trying to tweak four big GE engines with one hand and make precise ballet moves thru the stick with the other hand. I am too high and too fast and we break off for another attempt. I'll spare the details, but suffice it to say, I never got us to rotate – about 145 knots as I recall. I any gas up there. Scott takes the controls for a couple of minutes and effortlessly hooks us up. I am amazed. This is a really difficult maneuver –

her out! I apply full power to the throttles and believe me. To get my morale back up, Scott has me fly stationary with the tanker for a few minutes and then

keep her centered. The magic has the tanker start flying various twists and turns and instructs me to fly formation with it.

When I over fly her at one point (I have lots of power at my command here, guys!) we switch to some fighter tactics and Scott has me making moves to intercept my slower foe. Cat and mouse between tanker and a B2 – not your normal mission assignment! Anyway, enough fun, we have to land this baby.

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JUNE MEETING MINUTES
By:BETTIE SEITZER

The meeting was called to order. Treasurer's Al Kupferschmidt asked for volunteers to fly report was presented and approved. The club Young Eagles – he has a waiting list. The new has three EAA calendars remaining – current EAA goal is to fly 100,000 Young Eagles per year; they also plan to develop new add-on and selling price is \$5.00.

Chapter 25 is sponsoring a raffle, prize is a new Harley Davidson motorcycle. They invited our chapter to join in the raffle. We would sell tickets and receive part of the proceeds as a fund raiser. There was no interest in participating, the matter was tabled.

A tour of the Cirrus facility in Duluth is being planned for August. More details to follow.

2004 is an election year; members are reminded that they can be reimbursed for donations to political candidates. Mike Beard, Andy Westerberg, and Mike Jungbauer have all been very supportive of General Aviation and would appreciate your support. \$100 will be reimbursed. Contact one of the club officers if you need further information on the process for requesting reimbursement.

Dale Seitzer presented a summary of the proposed changes to MSP Class B airspace. The proposed change would lower the floor of Class B out to the 30 mile ring. Pilots should contact the Minnesota Office of Aeronautics to comment on the proposal and to be notified of future meetings on the subject.

Valters Aviation has an on-line registration/scheduling tool to facilitate lessons and rentals. Members report that is very quick and easy.

Art Edlund plans to hold a ground school beginning in February of 2005. Classes will meet two nights per week.

The annual Pancake Breakfast will be held August 15th. Committee chair people are already hard at work. Pat Driscoll has volunteered to be head chef this year. New additions will include brief seminars on obtaining a private pilot's license, building a plane, and other topics of interest to the community. The theme for this year's event is "Flying Saves Lives".

Scott Olson is the volunteer coordinator for the pancake breakfast. He is asking all members who volunteered last year to perform the same duties this year. If you were unable to help out last year – please contact Scott to find out where you are needed. This is a big event and requires many people to make it run smoothly.

Kidventure at this year's pancake breakfast will include activities similar to last year's event. Activities are geared to the kids ages. This area needs plenty of staff to make sure that all of the kids get to participate. This is a fun area, please consider volunteering.

There is now a unicom at the clubhouse which can be used to monitor radio traffic at the airport. Contact Dave for further information.

Scott Olson previewed a new technology that will be available at MSP allowing frequent fliers to move more quickly through security. Media announcements will be appearing soon.

Meeting was adjourned. The guest speaker's subject was "How to build your own Spacecraft"



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3275 MANNING AVE. N. SUITE #7
LAKE ELMO, MN 55042

B2 (*Continued from page 8*)

Scott shows me all the IFR and autopilot controls and mechanisms available to get back on the ground. I remind him I am a VFR guy and would prefer to try to do it visually/manually. Not a problem, he brings up the VASI lights at Whiteman and we are set for my first attempt. I am lined up and remember to lower the gear - everything looks good. Scott is encouraging me onward. I

bring all power off and pull back on the stick just before touch down. Now, I am certain most everyone has flown a Warrior at some time. So, you know how the ground effects with the low, large wing surface plane can cause it to float down the runway interminably until you get the knack? OK, now consider wing surfaces a couple of orders of magnitude greater --- got the picture? I pull back on the stick shaker goes off – that grabs your attention quickly. On another, I forget the gear, but a computer voice reminds me to get it down. One hard bounced landing and finally – on the fifth try – everything works and I set the mains on the runway and keep them there. You have to fly the

nose wheel down. Forward stick pressure brings it down, and then I step on the brakes and realize why Scott was so enamored of them. She stops in a heartbeat; I still have a mile of runway left! I look at Scott and ask “are the brakes really that good?” “We could have stopped a lot sooner if you had really stepped on them”, he replies with a smile.

So, there you have it – my big adventure with the Air Force and the B2. Scott had just received his promotion to full colonel a couple of days before my visit, so I truly appreciate his taking time to show me the ropes with all his new responsibilities. I know there is lots of controversy about the B2 and its cost. But let me say this, I am darn happy she and the crew that supports her are in too much and she floats endlessly as runway is our arsenal and not someone else's. It is an indisappearing runway until you get the knack? OK, now consider wing surfaces a couple of orders of magnitude greater --- got the picture? I pull back on the stick shaker goes off – that grabs your attention quickly. On another, I forget the gear, but a computer voice reminds me to get it down. One hard bounced landing and finally – on the fifth try – everything works and I set the mains on the runway and keep them there. You have to fly the

As a postscript, Colonel Vander Hamm presented me with a poster of the B2 signed by several of the pilots. One interesting signature was from Lt. Col. ‘Nuke’ Tibbets, grandson of a rather famous bomber pilot from a different era.