



The Flightline



Volume 33, Issue 5

Newsletter of the Propstoppers RC Club

AMA 1042

May 2003

Editorial: Members Dig-In at Sleighton Field

In a magnificent effort, planned, programmed and executed to perfection, the Propstoppers have begun the transformation of Sleighton into a new super field.



The "Gatekeepers", Bob Crowell, Charlie Crowell and Chris Catania

Agenda for May 6th Meeting at Marple Library 7:30 pm

- Approval of April meeting minutes
- Finance report
- Membership report
- Field report
- New business
- Show and Tell

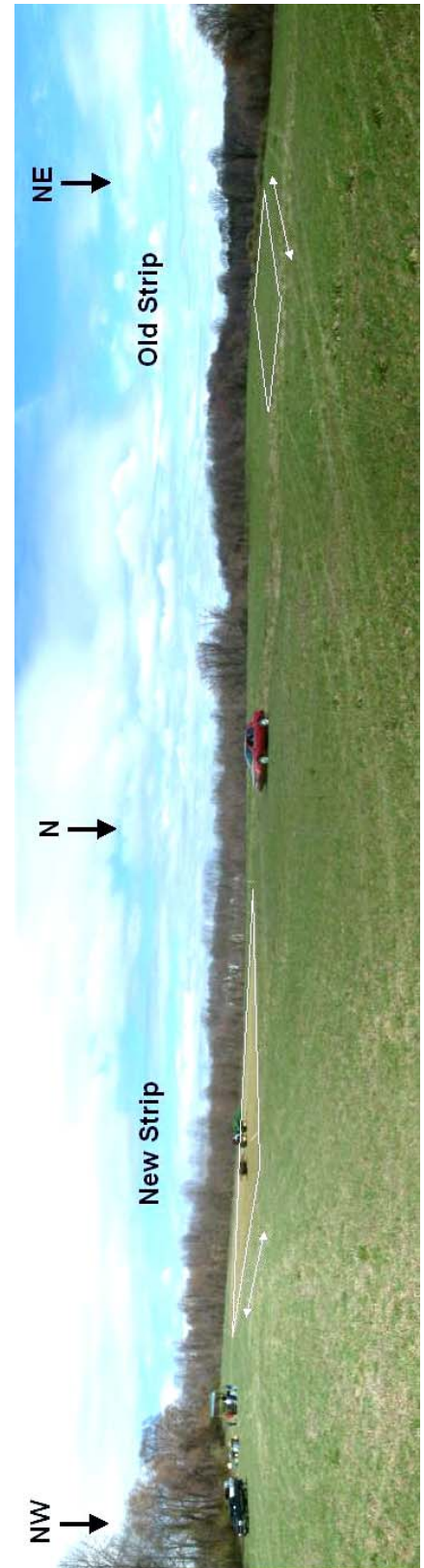
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The key to a great day was the prior effort put in by Chris Catania and Bob and Charlie Crowell in installing a new permanent gate at the new field entrance on Valley Road. This first class gate will allow members access by using their Moore Field key. Remember guys, lock it behind you when you *enter* and leave.

This prior work allowed the full complement of members on Saturday, to accomplish most of the work necessary to layout, mow and roll the new field and to move the shelter to its new location. The new runway is aligned with valley road so it is in a Northwest – Southeast orientation. The sun will be behind you all but for early morning flying.

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The President's Message

Dear fellow Propstoppers:

I would like to extend thanks for a job well done to all who helped with moving our runway and the shelter at Sleighton Field.

I would particularly like to thank Chris Catania and Bob and Charlie Crowell for their extra efforts in installing the new gate.

The new runway looks great and I think we are on our way to a great flying season! Hopefully this will become a popular place to fly and gather to talk.

Please remember that our new entrance is about a quarter mile further down the road, it was the entrance we had originally used. This entrance has a gate that has a lock keyed the same as the Moore field lock. We have been requested to close the gate after we enter and last one out will need to lock up.

John Zebuski

Sleighton,

continued from page 1

The key to a fine new surface is to roll it while it is saturated, this was done to a fair-thee-well with a roller borrowed by the ever-resourceful Vice President, Dick Seiwel.



Charlie Crowell gives "useful" advice to "Mowmeister" Dick Seiwel.

Mike Black happily rolls away in the background

"All hands to the lift". Dick Seiwel uses tractor muscle.



Minutes of Club Meeting

1st April 1st, 2003

The meeting, at the Marple library, was called to order at 7:30 p.m. by president John Zebuski. The roll call taken by membership chair Ray Wopatek showed 24 members and 1 guest present.

The treasurer's report was given by Treasurer Al Gurewicz and accepted by the membership. A discussion of whether not to publish the complete treasurer's report followed. Dave Bevan moved that financial and budget matters be discussed openly at our meetings and not published. This was seconded and adopted by the membership.

The minutes of the March meeting as published were accepted.

Old Business:

Field Committee Chairman, Chris Catania said that the lease for Sleighton field has been finalized. He pointed out that driving arrangements for the field have changed. The old main gate is now blocked for access. The original entrance approximately 1/4 mile further on Valley Road will be used. The key for its lock is the same as that for Moore field. The entrance gate for the proposed entrance is old, heavy and difficult to move. Several options for revision were discussed. The committee proposed to purchase material for a new gate and this was approved by the membership. The project will be looked at on Sleighton field cleanup day Saturday April 12, 2003 with cleanup beginning at 10:00 a.m.

New Business:

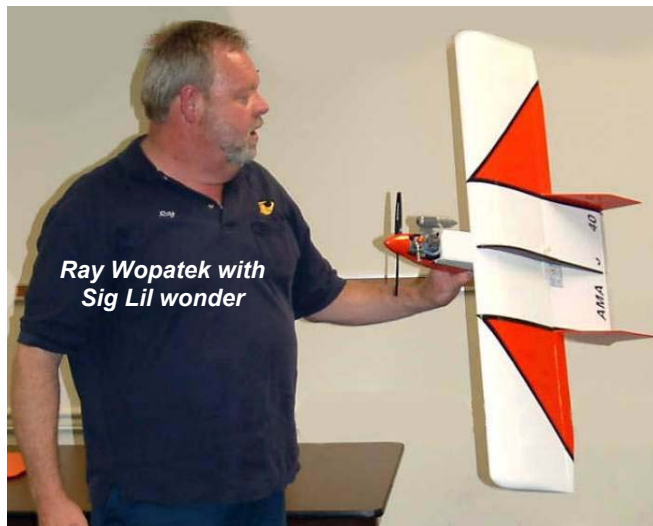
Club picnic-Mark Berkemeyer agreed to organize the picnic with a tentative date of June 7, 2003.

Mickey Callahan found out that the owner at Hobby Town is interested in promoting our activities. He and others plan to follow up.

Al Tamburro noted that the Wildwood fly-in is scheduled for June 15, 2003.

Show and Tell:

Ray Wopatek showed his Sig Lil Wonder with a Megatech .16 engine that he picked up at the Lebanon show. He says it is ready to go.



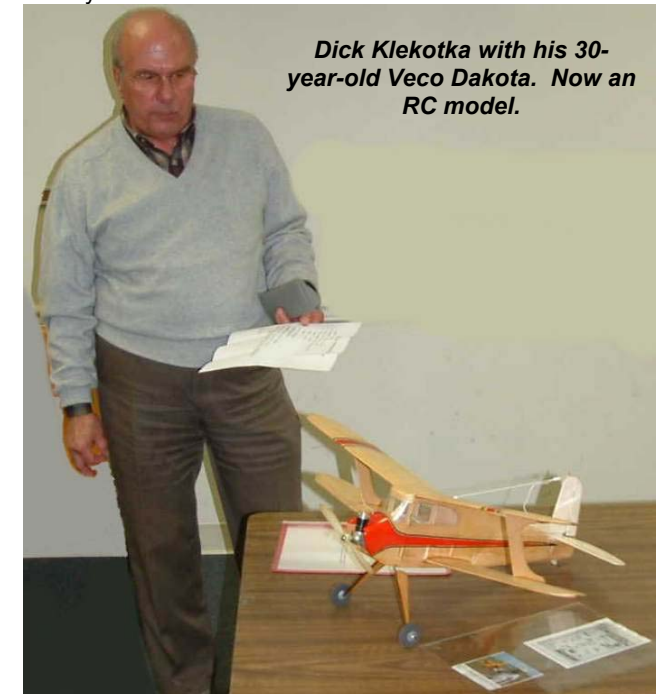
Ray Wopatek with
Sig Lil wonder

Ray also showed the unusual "kit" coreplast delta that he and Marty Bakalorz bought too. Although the kit suggests a .25 as a suitable engine Marty is flying his with a .40!



Ray Wopatek with
Coreplast delta
"kit"

Rich Klekotka showed his Dakota biplane half A. It is his third attempt building this model and comes in at 13 ounces. He first built it in the '60s for free flight and has recently refurbished it for R.C.



Dick Klekotka with his 30-
year-old Veco Dakota. Now an
RC model.



Mickey Callahan showed his newly built Elexaco glider. It has a speed 400 electric motor with direct drive. He also has several power and battery options that he would love to try.

Mickey Callahan with his new Elexaco speed 400 electric competition model



Mick Harris showed his old timer Gladiator 1941 model that he has converted to electric R.C. He showed a variety of covering materials to provide the old-time look of tissue or silk and still provide a very light covering. He showed a technique of tissue covered Mylar as a strong, light covering with a colored pattern that has the appearance of tissue.

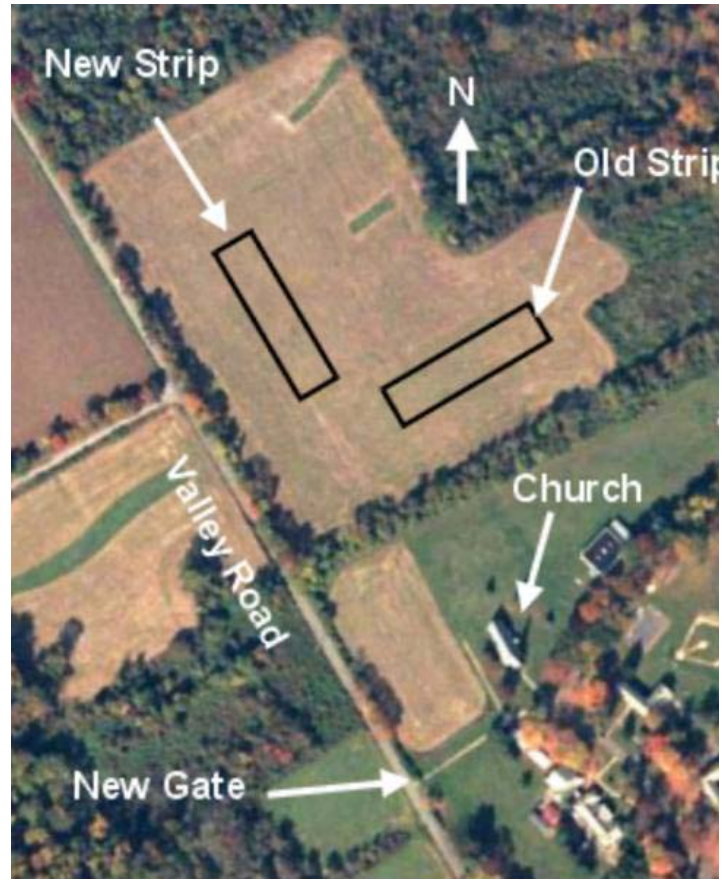


Adjournment: The meeting was adjourned at 9 05 p.m.

Richard Bartkowski – Secretary

More on Sleighton Field Day

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Dave Harding

Mick Harris shows his Gladiator electric LMR competition model to Tom Tredinnick and Mickey Callahan. The covering and finish is tissue doped over thin Mylar film. Stiff, light and able to accommodate free-form color schemes.



Ray Kiker's First Flight

In 1954 Ray entered the Army National Guard as a full-time soldier. Ray was assigned to a 90mm anti aircraft battery that was located at the foot of the Tacony Palmyra Bridge. Ray was a radar operator on this equipment, which at that time was being decommissioned from the regular Army and moved to the Guard. During the summer the unit would move to Camp Perry, Ohio for live-fire training.

Camp Perry was on the banks of the Lake Erie and the unit would practice on OQ-19-D RCAT targets flying over the lake. The RCAT was a big one with a four-cylinder engine.



In the summer of 1956 Ray selected the air transport and experienced his first flight on a Ford Trimotor.



He sat in the forward passenger seat where he could see into the cockpit where the pilots were doing their thing. When aloft, the copilot reached to the ceiling and furiously cranked a lever. The greenhorn Ray thought something serious was up, only later to learn that you must re-trim the ship in the cruise flight condition!

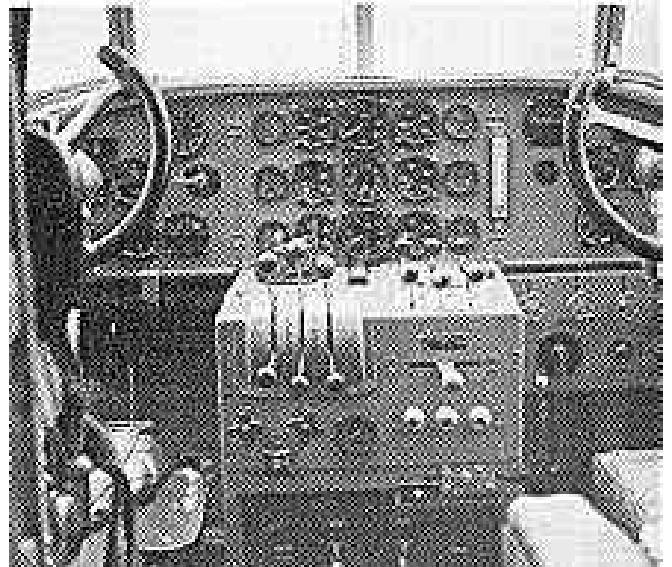


During their spare time the troops would go to Cedar Point amusement park, which sat on a point out into the lake. Access to the park was either by a long circuitous road, a short high-speed boat ride or an airplane flight.

International aviation history was made at the resort on August 31, 1910. That was the day pioneer aviator Glenn Curtis set a record for the longest over-water flight of his day: 63 miles over Lake Erie. The one-hour, eighteen-minute flight began at a Cleveland amusement park and ended on the Cedar Point beach. The pilot was protected by little else than a bicycle inner tube in the event of a water landing. But he survived and picked up a \$15,000 check from Cedar Point for his success. Curtis' flight was such a sensation he and fellow aviator Tony Jannus returned to the resort over the next few years for exhibition flights that fascinated park visitors.



Glenn L Curtis before his record flight from Cedar Point



Ray's AA unit eventually phased out the 90mm guns, which were replaced by the Nike Ajax missile. He served at the Nike site in Edgemont on West Chester Pike. Summer practice firing of these monsters took place at Fort Bliss, near El Paso, Texas, but that's another story. **Ray**

Tangmere

I am visiting my mother. It's early evening following a glorious spring day and I am driving across the low fields, near the coast of Southern England. The skies are still clear but cooling temperatures are drawing the ground-mist that is thickening to a thin layer of fog. Above us, a watery full moon is rising, causing the top of the fog to glow in a soft silvery light. Behind me the spire of the 13th century Chichester Cathedral pokes through the mist. The scene is timeless. The surrounding farm fields indicate it could be anytime in the last eight hundred years, although the paved road suggests the last century. Soon the moon will be high and strong over a clear landscape;

"A Bomber's Moon"!

Under a Bomber's Moon, from 10,000 feet the ground looks like a sharp relief map, every detail is clear, navigation is easy and targets vulnerable.

The phrase seeps through my consciousness and I become aware that I am driving past Tangmere towards the coast.

Tangmere was one of the few Southern England forward fighter aerodromes of WWII. Beyond, just down the coast past my mother's house was a Chain Home station, all are facing the Normandy coast just 65 miles south.

It is spring 1940 and the British and French are fighting a losing battle against the Nazi Blitzkrieg. The French, despite their army's 100 divisions and a strong modern navy, are losing heart and resolve, the British undecided whether to throw in their remaining forces. More squadrons of Hurricanes are deployed to France, but to no avail. Churchill makes numerous trips to France trying to stiffen the French resolve to fight. He is terrified at the thought of unilateral surrender and German control of the French fleet. The modern French fleet added to that of the Germans would give Hitler control of the seas as well as Europe. It would, in Churchill's mind, be the last straw in handing Europe and maybe the World to the Germans.

Amazingly, in late May the German advance hesitates allowing the residue of the British and many French troops to close on the ports of Dunkirk and Calais. The waters of the usually turbulent English Channel are calm and the call for help produces an armada of small boats that make wave after wave of cross-channel trips to evacuate the troops. Over the period of the first week in June more than 300,000 troops make it safely to England providing the first element of hope that the British Isles may be defended.

Churchill speaks to the Nation on the 14th June;

"What General Weygand called the Battle of France is over. I expect that the Battle of Britain is about to begin. Upon this battle depends the survival of Christian civilization. Upon it depends our own British life, and the long continuity of our institutions and our Empire. The whole fury and might of the enemy must very soon be turned on us. Hitler knows that he will have to break us in this Island or lose the war. If we can stand up to him, all Europe may be free and the life of the world may move forward into broad, sunlit uplands. But if we fail, then the whole world, including the United States, including all that we have known and cared for, will sink into the abyss of a new Dark Age made more sinister, and perhaps more protracted, by the lights of perverted science. Let us therefore brace ourselves to our duties, and so bear ourselves that, if the British Empire and its Commonwealth last for a thousand years, men will still say, 'This was their finest hour.'"

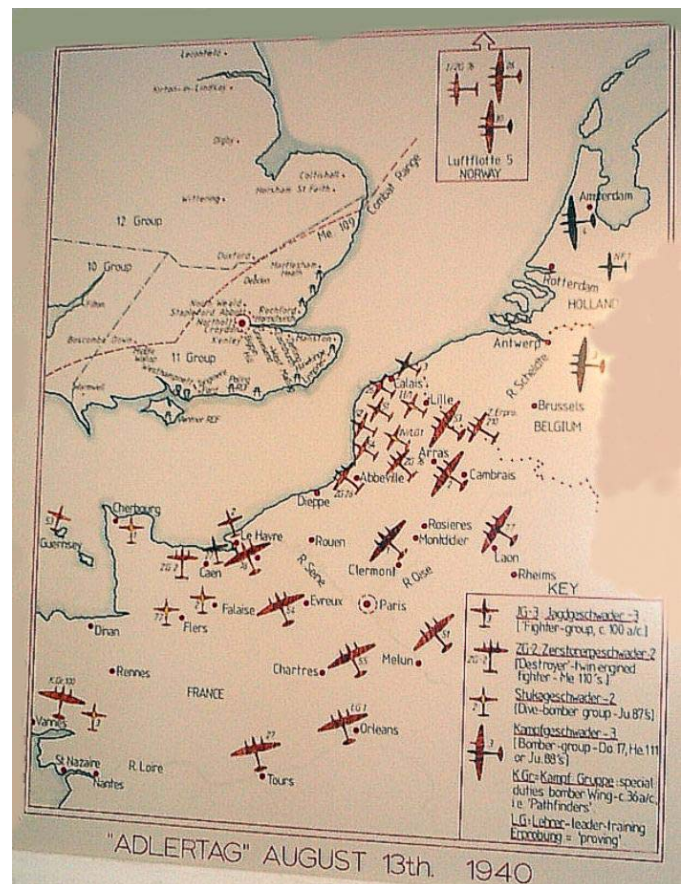
Hitler meets with his military staff and asks for plans for the invasion of the British Isles. The Navy, recently consumed with the campaign to invade Norway, state they could not be ready till 1941. The Army's plan calls for the insertion of 250,000 troops, 30,000 vehicles and 60,000 horses into a wide swath of the south coast British ports. Both plans call for the neutralizing of the RAF and Goering assures Hitler his Luftwaffe can do it.

"My Luftwaffe is invincible. And now we turn to England. How long will this one last - two, three weeks?"

Hermann Goering in June 1940.

Hitler urges his navy to scour Europe for all available ships for a September 1940 invasion, knowing that he intends to break his treaty with Russia and attack them in the fall. On August 1st OKW, the German High Command, issued the Seelowe Directive, calling for all preparations including the neutralization of the RAF by the Luftwaffe, to be complete by September 15th. From the results of the Luftwaffe's attacks, Hitler would make the final invasion decision at the end of August. These decisions set the stage for the events leading up to the Battle of Britain.

The Luftwaffe, now in full control of continental Europe, move their forces forward to airfields in northern France, Belgium and Holland. Their most forward squadrons are only 30 miles from the British coast and 80 miles from London. Missions will be measured in minutes rather than hours. Defense of Britain necessitates stopping these raids.

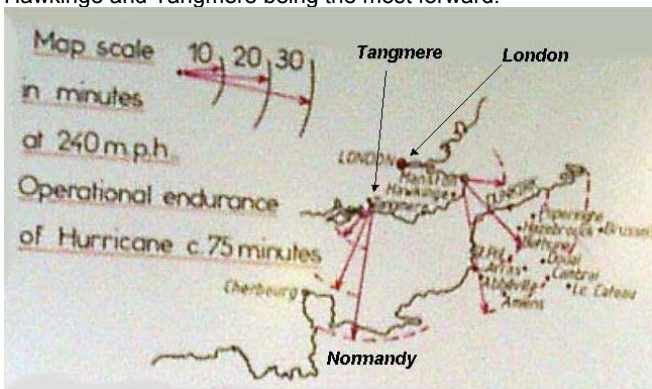


The invention of Radar in the 1930's and the deployment of the Chain Home network of early warning sites around Britain's south coast provided the essential linchpin of defense.



Typical East Coast CH station

But, even with early warning of impending raids the time to intercept them is dangerously short. You need to intercept the attacking force as soon as possible and this means forward basing. The British established such bases for their defending fighters on the coast of Kent, Essex and Sussex; Manston, Hawkinge and Tangmere being the most forward.



Tangmere was the home to three Hurricane squadrons, 601, 603 and 43, which had supported the ground forces in France and the Dunkirk evacuation. Now they prepared for the all-out Luftwaffe assault on Britain.

The Hawker Hurricane destroyed more German aircraft in the Battle of Britain than all the other aircraft combined.



Comparative Strengths of the Luftwaffe and RAF, August 10, 1940

	Luftwaffe	RAF
Fighters	1,029	749
Dive-Bombers	261	0
Bombers	998	471
Total	2,288	1,220

The Luftwaffe began their campaign with raids on shipping and coastal facilities attempting to draw the RAF fighters into a battle of attrition. When this did not work they began to attack the airfields and Chain Home stations, reasoning if they could defeat the RAF there, the rest of Britain would be open to the threat of extensive bombing.

At the forward fighter bases crews lived with their aircraft in a constant state of readiness. Although standing air patrols would provide the shortest reaction time the number of aircraft and crew to provide such coverage was vastly more than available. Typically, flights would be scrambled on receiving warning of an enemy raid forming up over the Channel.

By the end of August the Luftwaffe strategy had almost achieved its aim. Tangmere and the adjacent Chain Home stations were subjected to continual bombing and suffered extensive damage. Tangmere received its share of direct raids. On the 16th August a flight of attacking JU-87, Stuka's, were intercepted at 12,000 feet. This raid was successfully beaten off but the fight resulted in the loss of the first American "Volunteer" as Billy Fisk, flying Hurricanes with 601 squadron, made the supreme sacrifice. Billy was a true American hero, as the US Champion Tobogganer, he carried the American flag at the 1934 Olympics. He was the first RAF American volunteer in 1939. At the time of his death he had only one month of front line experience.

Hitler had forbidden direct attacks on London and the civil population hoping that the British would accept a "peace treaty" and become an ally of Germany! However when the RAF launched a successful raid to bomb Berlin Hitler became enraged. Goering had assured him this could never happen. The result was an immediate and fatal shift in German strategy to the bombing of London and other cities. On 7th September the Luftwaffe began the first raid of the Blitz with a massive attack on the London docklands. They continued these raids for over three months.

The RAF fighter command were thereby given the gift of respite to repair and re-arm so they could continue the defense against the might of the Luftwaffe's attacks.

The result, we know, was the Luftwaffe's failure to neutralize the RAF and achieve the conditions necessary for success of Operation Seelowe. On 15th September Hitler cancelled his plan to invade Britain and was never again in a position to do so.

About these fighter pilots, Churchill told the British people;

"Never in the field of human conflict do so many owe so much to so few"

Tangmere, following long and glorious service from WWI through WWII, was decommissioned in the 1970's and is now a museum where you can experience the Battle of Britain and many other endeavors of the RAF. Much of the museum is housed in the original WWII aerodrome buildings.

The aircraft, both original and replicas, cover the Battle of Britain period and the immediate post war activities. There are replicas of the Supermarine XH 0-4-095, Spitfire prototype and a Hurricane Mk 1 with its two bladed fixed-pitch wooden propeller as well as replicas of later models of both aircraft.

Also on display are two World Speed Record jets from the post war period that made their flights from Tangmere. The Gloster Meteor set the record at 616 mph in 1946 and then the Hawker Hunter, in 1953, which Frank Duke flew to a record of 727 mph on a sea-level course off the south coast.

Definitely worth a visit if you are in the area.

Dave Harding, Hawker Apprentice

Rutan and His Modelers Reach for Space

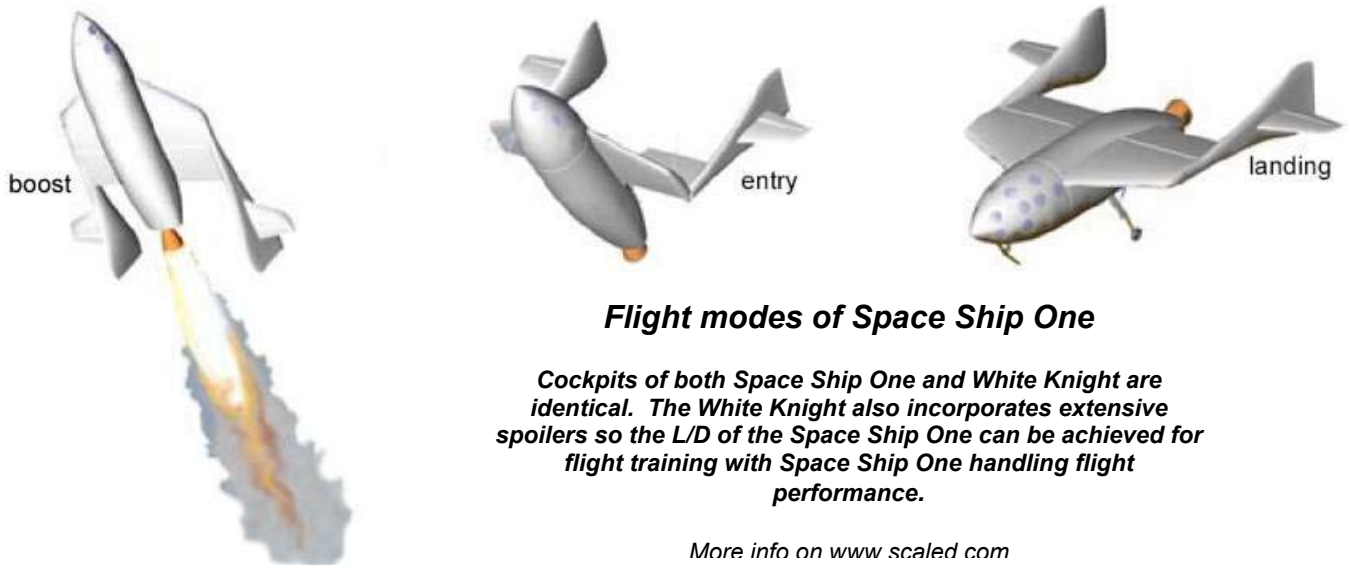
On the 18th of April, I was privileged to attend the rollout of Burt Rutan's new, privately funded space program. Just think about it, privately funded, no Government to tell him how to spend our money. Naturally, with this kind of situation you would expect Burt to do something completely different, and he has not disappointed us. The "system" consists of a "first stage" airplane, the White Knight, (WK) which carries the "space ship", aptly named Space Ship One, (SSO) to 50,000 feet, whereupon the space ship, with its crew of three, is launched or dropped.



The space ship known as "Space Ship One", Burt on right.



Project Engineer and modeler Cory Bird with his latest, the launch ship White Knight



Flight modes of Space Ship One

Cockpits of both Space Ship One and White Knight are identical. The White Knight also incorporates extensive spoilers so the L/D of the Space Ship One can be achieved for flight training with Space Ship One handling flight performance.

More info on www.scaled.com

Using its own rocket for power, the space ship turns to the heavens then accelerates into space, reaching an altitude of 330,000 feet, or 100 kilometers.

At this point the space ship activates a "dethermalizing mode", or at least that is what us modelers would call it (Burt doesn't agree with this description because the aft portion of the wing, as well as the tail, flips up). In this configuration the spaceship falls in a stable, high-drag attitude (like a

dethermalized model). As the speed diminishes during re-entry and descent to lower altitudes, the spaceship is re-configured to the more conventional glider configuration and is flown at low speeds to land at the starting point; ride over! But at this point, with minor refurbishment of the thin ablative layer on the spaceship, the whole thing is ready to go again, NASA's dream a quick turnaround reusable space ship!

All of this would be applauded as a magnificent engineering achievement, but the fact is, it has all been built and tested to an advanced level. Every piece of hardware has been designed for the actual flight system, no iron-birds here.

The White Knight launch plane that is powered by two J85 turbo jets has been flying for some time and has over 60 flights and 80 flight hours to its credit. Indeed, it was flown with abandon during the rollout ceremony. The Space Ship One is complete and rocket motors from two competing small companies have been tested many times.

The system includes a comprehensive simulator; so extensive flight crew training has been possible. One of the clever ideas Burt has incorporated is to replicate the crew station, flight controls, and even the flight characteristics of Space Ship One into the White Knight. This means that the flight crew can get extensive flight training for SSO while flying WK. This is made possible by incorporating a whole series of wing spoilers into the WK, thus enabling an increased drag mode to achieve the same L/D as SSO.

The next stage of development is to fly the WK with SSO attached. Gliding flights of the SSO will follow this. Launches at modest altitudes will be made first to check out and tune the low speed flight characteristics. Higher altitude launches will enable high speed gliding flight exploration by diving to the necessary speed. The SSO will fly supersonically during portions of its ascent and descent, although this will be at high altitude where the dynamic air pressure is much lower than at sea level so the forces will be low.

The SSO has three flight control systems, one for each flight regime. The low speed system uses conventional elevators and the upper rudder segment controlled conventionally via cables using stick and rudder pedals. Supersonic control is via electric actuators that control the elevator trim and the upper rudder segments. Extro-atmospheric control is via a series of high-pressure air fed reaction control nozzles.

Characteristically, Burt will not provide a schedule for the events leading to the first space flight. He has a philosophy about flight-testing which has served him well with the thirty odd new airplanes he has flown. It is that there should be no schedule pressure to cause hasty decision. The moment of flight should only occur when all possible hazards are considered and accommodated, no matter where the concern arises, even if it is from the floor sweeper! So we can just watch and wait.

The occasion of this rollout was a wonderful event with several notable space industry persons involved as well as hundreds of media types. The master of ceremonies was the actor Cliff Robertson, a long time friend of Burt's.

The astronauts Buzz Aldrin, the first "space tourist" Dennis Tito and the designer of most of the early NASA space ships, Max Faget, were very much in evidence. So was Dr. Peter H Diamandis, the instigator of The X Prize. The X Prize, which is funded by a group of St. Louis business men (and others) is for the first person to launch three people into space and return, then to repeat it within two weeks using the

same hardware. This \$10m prize is in many ways similar to the inducement afforded Lindberg in his pioneering flight.



Burt Rutan, shows Max Faget his pride and joy. Here the Space Ship One is mated to the White Knight in the configuration that will take it aloft.

So why is Burt doing this? Is it for the X Prize? He claims not. He laid out a detailed roadmap comparing the early development of the airplane with the development of space flight. The early airplane developments, once the Wright's showed it could be done, was replete with prizes of many kinds and people said to themselves "I could do that", and many did. Most of the configurations we now use were tried (and others abandoned).

Government programs on the other hand, have dominated space flight. Cost has been no object. Once the next system had been developed, the old one was abandoned and so on until we now have the Shuttle that costs over \$1billion per launch. Burt believes that this situation has caused the people, and particularly our youth, to "turn off". There is no glamour or draw for dreams of our youth.

So, Burt says that if his effort stirs the interest of others to think "I could do that" then his effort will be worthwhile. Now Burt is certainly a visionary and a missionary, not to mention a superb engineer, but he is supported by an amazing crew, who make all this happen. And most of that crew are modelers! The project engineer of the WK is Cory Bird, shown in the heading picture. He is one of the eagle-eyed pilots who dominate the Scaled Full-Contact Slope Combat sessions. The structure of both WK and SSO was designed by Burt and our "own" Dan Kreigh, of IFO fame.

It has been my privilege and pleasure to work with these people for the last fifteen years of my time with Boeing. I will certainly be watching them for the next fifteen.



Burt Rutan, Max Faget and astronaut Buzz Aldrin.



"IFO" Dan Kreigh with your humble servant.

Dave Harding

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Propstoppers R.C. M.A.C



The new "Official Main Gate" to the "New Sleighton Field". Remember to keep it closed and locked, in and out.



You can't pry the tractor from Mike Black's hands. Dick Bartkowski wonders when it's his turn.



John Tullai gets a turn

Club Picnic, Saturday June 7th

The annual Propstoppers picnic and fun fly will be held on Saturday, June 7 at the Sleighton Field (rain date Sunday, June 8). This year, a competitive fun fly with prizes will be held. All events will start at 10am and are designed for novice as well as more experienced pilots. There will also be a specialty event for electrics only.

If you wish to help out or have questions about the day's events, please contact either Mickey Callahan at mcallahan@usainc.com (610-213-2792) or Mark Berkemeyer at berk83@aol.com (610-459-0109).

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