

Volume 15, Number 4



# NEWSLETTER

"Serving the mace and matador missile crews and all support personnel who fought and won the cold war"



Oct Nov Dec 2013

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## A BRIEF HISTORY OF YOUR TAC MISSILEERS NEWSLETTER

Just an FYI..This is the Fifty-fourth edition of your TAC MISSILEERS NEWSLETTER, Gary Sand the founding editor produced the first 10 editions up through the end of 2001 and your current editor has run-off 44 additional editions since taking over the position 11 years ago. Our total page count is 189 including the three early electronically distributed test editions back in 2005/06.

Though never nominated for a Pulitzer Prize this newsletter has featured many interesting and informative articles, reports and stories. Always keeping with the main purpose of reunion information and reporting plus missile men stories from the long ago, we have also published the occasional real gem that shed light on some lesser known aspects of or Matador and Mace.

And, in this issue, your editor has sourced a great article from the pages of AVIATION WEEK, October 5, 1953 edition, by Irving Stone. The article not only describes in detail the manufacturing methods used for the honeycomb core structural components of the Matador but it also features a very rare picture of one of the 10 original, 1947 wooden zero-length launch test models built by Martin. The woodie is shown perched on the unique, built for purpose non-roadable test launch stand. Also included in the article, which starts on page 2, is a comprehensive side bar, How Matador Developed. Hope you enjoy this great find. In addition, we have the next installment of the serialized article "Only 15 minutes to Atomic Strike" and a wonderful personal contribution from our Secretary Dave DeRain.

### Seasons Greeting and Best Wishes From your TAC Missileers Officers

Sarah and I wish to take this time to wish all Tac Missileers the best for the coming merry Christmas and a happy new year.. Looking forward to welcoming everyone to Boston in 2015. Mr. Executive Director **Joe Perkins** 

### Season Greetings to Everyone in Our TAC Missileer Family

I hope your Christmas was filled with fun and many joyous memories. Another year is coming to a close. They seem to be going by faster than before. We can be thankful for our many blessings and the fact that we were able to successfully celebrate our recent reunion. I feel blessed that I don't have to register for Obamacare. What a mess. So there are a few benefits to being over 65. Our membership remains strong and Russ continues to keep us up to date with the website. Joe is already beating the bushes to find a Boston hotel to host our 2015 reunion. Although we don't meet again for some time it never hurts to get an idea about our options. I want to thank everyone for the support you have shown over the years. We cannot forget the special mission we served in history. At this time of year I always think about our men and women serving our country overseas and the hardships they face daily. Many serve in harms way. I hope our President and Congressional leaders understand the sacrifices they are making to keep our great country free. Best wishes to everyone for a safe and healthy 2014. Mr. President Bill Simpson

### A March 2014 Reunion Anybody?

A March reunion In Florida? **Max Butler** is thinking of putting together a "mini" reunion over at the Cape, Kennedy Space center area, probably sometime in March. It could be a 2 day affair or just a 1 day where we would meet for lunch/dinner, and tell a few lies, or rather a few stories. *If you have any interest of maybe attending get with Max and let him know of your thoughts on this.* Mr. Membership Director/Treasurer **Max Butler** 



**WOODEN MODEL** was used to check missile's zero-length launch characteristics, see the article for details

From AVIATION WEEK, October 5, 1953 edition, by Irving Stone

Matador Prompts Fresh Look at Design A missile is a one-shot affair. That means you want simplicity and predictability. Here's how Martin meets those needs in B-61.

**Baltimore** - The guided missile is a one-shot vehicle. Therefore it accents design simplicity and rapid and inexpensive production more than the conventional military aircraft does. It calls for a new look at design concepts, materials and production methods.

A pattern in this new approach has been established in the evolution of the Matador - the pilotless B-61 bomber designed and built by The Glenn L. Martin Co. Despite its bomber designation, Matador is a surface-to-surface missile, the first production missile of its kind. This production status makes it an important unit in this country's missile group, which embraces a wide scope of design and production thinking.

Key Considerations - Basic philosophy behind designing for production was to do a maximum amount of work in sub assembly and to have a minimum of detail parts. Castings rather than forgings were used to avoid potential bottlenecks. Use of non-critical materials was stressed - resulting in considerable use of magnesium. The Matador wing and tail, particularly, highlight the simple design and high producibility required for a one- shot aerial vehicle. Application of castings and adhesive metal bonding in these parts is a key point in the desired high-producibility makeup of the missile.

The engineers had to design specifically for adhesives from scratch, consider tooling requirements and associated problems in laying out the basic structure. If bonding were to be used at all, it had to be used in a big way, they reasoned. Little advantage would be gained if the combination of conventional assemblies and bonding were not kept to an absolute minimum. How well Martin succeeded in carrying out this reasoning is seen from study of the wing and tail makeup.

**Wing Construction** - The wing incorporates aluminum honeycomb slabs extending between upper and lower skins, Preparation of the honeycomb core material is a fast operation. Slabs are contoured by a special, semi-automatic tool, utilizing a high speed bandsaw for cutting the slabs to shape. Originally one rough cut and then a finish pass were required to produce the contoured honeycomb sections, but now the contouring is done in a single pass of the material past the bandsaw.

Four of the honeycomb sections are used in the center box



core, which extends from the 20% chord line to the 70% point. Honeycomb core material is also used in the leading and trailing edge assemblies. Core sections are metal-bonded to each other and to the covering skins.

Only one type of metal-bonding adhesive, Bloomingdale Rubber Co.'s FM-47 compound, is used in "glued" portions of the Matador structure. This feature also simplifies production procedures. The necessity for using tapered sheets was avoided by using regular skins of varying thickness, lami-



nated along the span of the wing box section from root to tip. Thus there are three sections of different-thickness skins metal-bonded to each other as well as to the box section honeycomb core. This type of metal-bonded structure has been used advantageously by European airframe builders, Fokker has used it in spars. Bristol has used it in copter fuse-

lage skins and in wing bulk heads on the Britannia passenger plane.

Center Splice Casting - Connection of wing panel to wing panel is accomplished with two large center splice castings. The wing skin of each panel is bonded to the casting's as-cast surface. This is the most satisfactory means of holding the wing to the center splice casting. In the early development stages of the service-test bonded structure, the adhesive was used only on the skin-to- skin and skin-to-core attachment. Bolts were used to fasten the skin to the center splice casting on the wing and rivets were used for the same job on the stabilizer. This mechanical-fastening arrangement involved additional assembly steps and boosted the weight. Thus, if bolts were used for attaching the skins to the center splice casting it would require 425 of these units in drilled and tapped holes. This obviously would mean a tremendous amount of additional production hours, space and tools. These considerations prompted the switch to the production step of bonding the skins to the center splice casting. In addition to cost, time and space saving, a major advantage of this procedure is that the operation required to complete the skin-to-casting bond involves no more steps than if this were not done, in effect, the bond is a "for free" when the bonding is done on the rest of the structure. Bonding Sequence - Wing components are bonded together in a final operation in an ingenious fixture which applies heat and pressure. Heat is applied by resistance wires embedded in a rubber blanket backed up by an air bag for application of pressure. Skin-to-skin and skin-to-casting bonding pressure is many times that required to effect a bond of skin-to-honeycomb core. In sequence, the leading edge and trailing edge cores are bonded to their skins as subassemblies. The center box core (intermediate core) is attached to the leading edge core. These are then positioned in the final bonding fixture. Next, the center splice casting is positioned in the tool. The center box skins are then positioned in relation to the casting, leading edge and trailing edge skins. The entire assembly is then bonded together to give the complete panel. This procedure permits a high rate of wing panel production with only one final-assembly tool.

**Logistics Consideration** - The wing panels are joined by mating the center splice casting with tension bolts. This arrangement is used to insure easy handling and shipping, an important logistics consideration. This joining scheme introduces part of the casting's weight together with that of the splice bolts as a penalty. This penalty could be avoided if the entire wing were made in one piece, but logistics considerations were controlling. Wing tip closure is accomplished with a simple, wooden rib.

**Stabilizer, Fin** - The stabilizer is a simple honeycomb-core structure bonded to a single-piece skin bent to airfoil contour at the nose section. Right- and left-hand panels have skins bonded to the as-cast surfaces of a single-piece center aluminum casting. The entire metal-to-metal bonding operation on the stabilizer is accomplished in a single heat- and pressure- cycle requiring only a relatively short time.

The fin leading and trailing edge assemblies also incorporate honeycomb construction and are attached to the center fin structure by metal-to-metal bonding. Here again, the core-toskin and skin-to-center fin structure joining is all done in one operation. The fin center section has a sheet metal front spar, casting-and-sheet center spar, and a cast rear spar for attachment to the stabilizer hinge point.

Bonding Steps - Key considerations in the general bonding





process are as fol lows:

• **Cleaning** of the sheet for cast parts by anodic or chromicsulphuric bath. The honeycomb core is left relatively clean from the bandsaw cut.

• Drying is an important consideration.

• As soon as possible after drying, the material is sprayed with adhesive.

• Spraying is followed by force-drying for 1 hr. at 225F to remove some of the solvents in the adhesive.

• Bonding cycle consists primarily of getting the glue lines to 300F (mini mum) for 4 hr., with 100 psi, on the metal-to-metal surfaces and 15 psi. on skin-to-core applications.

Flat metal-to-metal bonding can be done in ordinary plywood press. Over the top of the work (between it and the upper press head) a layer of "Press- to-Flow" is used to give uniform pres sure distribution. The same type of press can be used for flat honeycomb panels. On honeycomb the adhesive is rollercoated on the core. The material is dried for 2 hr. at room temperature in a ventilated room. The skin for covering the honeycomb is sprayed and then covered with a sheet of adhesive film. Because inspection of the finished article is limited, process control is of primary importance. In the bonding cycle, skin external temperature is checked by having temperature plotted against time automatically. Pressure values also are closely watched. Inspection check of the glue line on critical metal-tometal joints is done by cutting a number of 5/16 in. "buttons" out of the lamination. This is done on every production wing panel as well as on the stabilizer. The button can also be used for a qualitative shear evaluation on the glue line. There is no evidence that there have been any operational difficulties stemming from the bonded construction.

**Fuselage Features -** As in conventional aircraft, the Matador's fuselage is broken down into three sections—nose, center section and tailcone. Magnesium is used to a considerable extent in both the center section and the tailcone. According to a released photograph, the magnesium applications appear to be in the form of skin. The photograph also shows what appears to be an air intake opening in the belly skin of the center section's

aft portion. It appears as if the belly skin forms a portion of the air intake duct feeding the missile's prime powerplant, an Allison J33-A-37.

Forward of the air intake opening, the belly skin reveals what appears as a large removable panel - obviously for equipment, since there is no space in the wing to accommodate it.

**Bottle Dropping** - Release of the Rato bottle used for the powerful push in the Matador's zero-length launch is accomplished without any mechanical linkage or other actuating devices.

Support is by two simple fittings and the bottle is held in close contact with them during flight by the Rato thrust. With propellant burnout, the thrust disappears and this lack of force allows the bottle to drop away from the tailcone by air stream pressure.

Interchangeability—As would be expected with a vehicle where ground- handling can pose troublesome damage problems, the Matador design has effectively stressed the vital consideration of components interchangeability.

The missile is designed so that it may be broken down into seven basic cormponents for easy handling and shipment. All the airframe parts involved—wing, stabilizer, fin, tailcone, center section and nose section are interchangeable. This philosophy of interchangeability also has been extended to functional components as well.

#### **How Matador Developed**

Specifications for the Matador's mission were laid down in 1946, when the military was trying to stimulate interest in the industry for guided missile development. The specifications given to Martin—one of a number of various mission types laid down at that time—was for a medium-range, surface-to-surface missile (SSM). Martin engineers studied a number of missile-powerplant-guidance combinations to arrive at a most favorable system. In this choice of combination, Martin was encouraged to exercise a free hand. This was a deviation from past practice as established for conventional aircraft, and pointed to a policy of stimulating systems— engineering on the part of the prime contractor. Aim of this centering of responsi bility was to promote early availability of a production tactical missile.

**Zero-Length Launch** - One of the early observations was that the launching means would be one of the more difficult phases of the missile development. A zero-length (no ground run) launching arrangement finally was chosen because of its tactical superiority.

It is claimed that this was the first time this type of launching was applied to a flight vehicle.

In 1947, Martin built 10 dynamically similar, full-scale, wooden flight-dummies of the missile and one non-roadable launching platform to prove the theory of the zero-length launch. The success of this method as established for the Matador is indicated by its adoption for similar missiles in the industry.

The Rato bottle used in the launch scheme—a 40,000- to 45,000-lb.-thrust, 2- sec.-duration unit—literally hurled the model into the air. The big problem was to confirm the theoretical calculations of flight trajectory performance with respect to rocket misalignment. Aim was to get the thrust axis of the rocket through the missile's center of gravity.

**Flight Tests** - After several successful flights (ground range, 1,800-2,100 ft.) intentional mis-alignments of the rocket's axis were made to determine off-tolerances permissible.

The first seven model-firings pretty much established the engineering validity of the missile configuration and its launching capabilities. Five of these flights were on the heavily instrumented rocket firing range at Aberdeen Proving Grounds, to cheek the trajectory with exactness. Two flight tests also were made at the Martin Airport, followed by confirming shoots at Holloman, for range indoctrination. Concurrently with the 10 dynamically similar models, Martin built 15 experimental (XSSM) versions with adequate, readily available components modified to suit requirements. These components were not the ultimate desired, but Martin wanted to get a missile into the air quickly to uncover the big, basic problems. These 15 experimental articles were flown at Holloman in 1949-1950. The configuration of the missile was aerodynamically similar to Martin's XB-51 jet bomber.

**Role Of Avionics** - Meanwhile, development of the guidance systems for the missile was under way, with a B-29 being used as a carrier. These guidance systems were introduced at the tail end of the experimental flight-test program, which previously had been conducted by command-radio control from a chase plane and a ground station.

Development of the guidance systems was brought about by setting up a new, broad phase in Martin's engineering activities. In 1946-47, company feelers showed that the avionics industry was not inclined to take on the development of the guidance systems in limited, military quantity. Martin took on the job itself. It pulled into the organization a large number of avionic engineers to work up the required systems. This was the first time this category of engineering talent was brought into the Martin organization in quantity—to supply an important "missing link" for the establishment of a complete- weapon capability.

This situation was not limited to Martin—it was also being instituted in industry organizations with problems similar to Martin's. The job of blending this "new breed" of engineering technology with established engineering categories called for a new coordinating approach—the use of systems engineers, who would be required to integrate the activities of the various technical specialties, from aerodynamics right on down the list.

**Into Production** - Service flights with the YSSM article were begun at Holloman in 1950, then were continued at Patrick AFB in 1951 and 1952. Results indicated the feasibility of going into full-scale production

Engineering redesign for high-quantity production had been begun back in 1951. The latter part of the service-test flight program was devoted to proving some of the engineering changes anticipated for production. For example, an allmovable stabilizer was introduced, instead of the fixedstabilizer-and-elevator combination, to provide greater pitch control. First flight of a production model was in November 1952, less than one year after complete engineering release in December 1951.

### Only 15 Minutes to Atomic Strike... Continued Part Seven ... Part Six is in Issue 15-2

During the Berlin crisis, if the war would have broken out, the Mace would be among the first nuclear weapons if not the first, that would have gotten to the other side, George Mindling and Robert Bolton wrote in their book, "U.S. Air Force Tactical Missiles 1949 -1969 The Pioneers". Next would have followed the Matador which needed a little longer to launch, and - if weather permitted - The single-seat F-100 fighter-bomber. Obviously, the objectives of the Mace at the time, was especially airfields and air defense stations of the Soviets. The first wave of American nuclear weapons should open the air corridors for long-range Strategic Air Command bombers, which could in only about six hours after the outbreak of the conflict be over their targets. "

The Mace A with its low-altitude flight characteristics once in the air was considered nearly impossible to intercept. The other side knew, in the event of war, that they had to catch the Mace while still on its launcher. So far it is unknown, what resources the Soviet armed forces had to try this with. Nevertheless, it makes one wonder what plans were being made behind the Iron Curtain as well. In a surprisingly honest report, "According to a study by the staff of the Tactical Air Force Command of the United States because of the concentration of the Mace A in their launch positions in the region of Rhineland-Palatinate 17 nuclear weapons with a power of one megaton each would be sufficient to destroy all the launch positions, i.e., the 38thTactical Missile Wing squadrons could be destroyed.[27] And elsewhere it says about south of Sembach's particularly closely spaced positions: "Thanks to their concentrated position they can be destroyed by using a nuclear weapon of 50 kilotons of TNT, or two nuclear weapons between ten and 20 kilotons of TNT."[28] A nuclear bomb of 50 kilotons of explosive force at that time were carried by the IL-28, and one of 20 kilotons of TNT by the Sukhoi Su-7.

#### There Was an Emergency Every Minute

For both the Soviets and the Americans it seemed there came an emergency every minute. The U.S. armed forces were using all means in working to shorten the launch time of the new Mace A. In a first step, the count down was reduced from 45 to 27 minutes. Next, they sited four missiles into a flight section, in which the countdown ended nearly simultaneously. The new concept, in which a group of four missiles was started simultaneously was called Rapid Fire Multiple Launch (RFML) and required a complete rebuild of the launch sites. Under RFML all four missiles in a flight could be launched within only twelve and a half minutes. Quick Enough? The answer finally delivered the Mace A. Previously there were some reclassifications. Leftover Matadors were converted into Mace like launch training vehicles. The dedicated training facility at Sembach served to improve launch crew coordination and reaction time. By the end of September 1962 two new operational squadrons appeared at Sembach Air Base. No longer called flights, but were designated independent Squadrons that took over the old positions and operational responsibility: the 822nd Tactical Missile Squadron at Mehlingen, the 823rd Tactical Missile Squadron at Enkenbach, and the 887th Tactical Missile Squadron at Grünstadt. In Hahn Air Base the 405th Tactical Missile Squadron, controlled the two the existing positions at Hecken and Kastellaun, and the newly created 89th Tactical Missile Squadron, was in position at Wüschheim. The former Tactical Missile Groups were eleminated as intermediate organizations. From now on the Tactical Missile Squadrons were directly subordinated to the 38th Tactical Missile Wing at Sembach. The Missile Maintenance Squadrons formally at the old group level, now instead, were created under the 38th TMW as the 38th Missile Maintenance Squadron, at Sembach, with detachments posted to the individual missile squadrons.

Above all, the technical development did not stop - and this meant another new, now the fourth guidance system. It was called Achiever, and was a product from the AC Spark Plug Company. It was an inertial navigation system and it ended the low-flying phase of the Mace. Instead, the new Mace, TM-76B flew at a height of up to 12,000 meters (39,400 feet), and because much less air resistance is encountered at that altitude the range increased up to 2200 kilometers (1,367 miles). Moscow was now within reach of Bitburg. Suddenly, the original tactical cruise missile, had become a strategic medium-range weapon. To protect such a valuable addition missile, they were sited in a bunkered positions, theoretically that could survive the impact of a nuclear weapon strike. So the reaction time argument had lost its meaning: Theoretically the Mace B could still be launched after surviving a first strike.

#### Newel and Naurath were Eliminated

Worldwide, only six of these unique often called "coffinlike" launch complexes were developed. Four launch sites were installed on the Japanese island of Okinawa and two in the German Federal Republic at Rittersdorf (site VII) and Idenheim (SiteVIII) both out of Bitburg Air Base. Each position contained eight missile. Originally it had been planned to have four launch sites in Germany also - a third in Newel and a fourth at Naurath. But after the election of Kennedy in 1961, in one of the first acts as his new Defense Secretary, McNamara ordered the additional two sites, site IX and X to be axed. Instead Mehlingen, Enkenbach, Grünstadt and Wüschheim were upgraded with four additional Mace A launchers. McNamara apparently had even then, a more flexible nuclear strategy in mind. The German construction administration got a big headache, however, from the cancellations of the two additional sites because the contracts had already been awarded for the huge steel doors blast doors, and land was already being cleared at Newel and Naurath.

#### To Be Continued...

A reminder. The entire unique article, as originally published, in German, is available online on our TAC Missileers website

### Adventures of an Airman in Germany By Dave Derain

This story while not being directly about the MACE, it is about one of my many great adventures while being stationed in Germany and working on the MACE guidance system and the influence the Air Force had on my life.

Before joining the Air Force I had never been far from my home state of Michigan. My first great adventure after being sworn in was my first ever train trip from Detroit to Lackland AFB. Of course going through basic at Lackland was more of a challenge than an adventure. But, seeing for the first time in my life, cactus in Texas, mountains in Colorado and the ocean in Florida made me realize that there is a big world out there and made me want to see as much of it as I could. One of my few claims to fame in life is that I have visited or lived in every one of the 50 states. During my time at Flugplatz Hahn, I worked at the maintenance hanger in the Test & Repair shop with an outstanding group of guys, several of whom come to our Missileers reunions today. The last week or so of training at Orlando, Bill Simpson (the current Missileers president) showed up as an instructor after just rotating from the Hahn T&R shop. He filled me in on what to expect when I got to Hahn. While at Hahn I bought a brand new blue VW from Autohaus Ernst Scherer. My travel buddies Frank Page, E. J. Anderson, and sometimes Tony Valovich and I took many trips in and around Germany, France, and even a trip to across the channel by ferry to England and Scotland. One of the more memorable trips was to Verdun, France and the near by Lorraine American Cemetery at St. Avold, France.

My mother had two brothers, one of whom was killed in action in WWII and today rests at the Lorraine American Cemetery in France. Although I was very young when my mother's two brothers, Bill and John, went overseas, my dad had taken 8mm movies of them with me and I remember watching those movies when I was a teenager. It made me wonder about the circumstances surrounding my uncle John's death. None of the family seemed to know much about where or how he was killed, just that he was Killed in action. On my trip to St. Avold, I visited Sgt. John McPherson's (my uncle) grave and took some 8mm movies (I was famous for taking 8mm movies wherever I went) and sent them back home to my mother and grandparents. None of them had ever been to the cemetery before, so it was a very emotional thing. Somehow I seemed to feel a connection to my uncle. We were both off in a foreign land serving our country, all but in a much different time and circumstance. I left St. Avold still wondering how my uncle was killed in action, and where.

Many years later in 2004, my son Eric, my best friend Rick, and I made a long planed trip (complete with my famous Excel spread sheet itinerary) to France and Germany for a WWII history adventure. During the trip we also studied the local food, beer, cognac, and calvados. My son being a PHD History Professor did a great deal of research for the trip, including finding some of the now declassified battle reports from the 35th Division, 137th Infantry Regiment, the outfit that my uncle, Sgt. McPherson was with.

Included is an article that my son and I wrote for the newsletter of the Reunion organization of the 35<sup>th</sup> Infantry Division.

Before leaving Germany, we made a stop at what is left of Hahn AFB (which is now a commercial Airport) and had lunch at the 1<sup>st</sup> G, the rigatoni and bier was just as good as it was 50 years ago, but the atmosphere is very different.

I am looking forward to seeing everyone in Boston in 2015.

My name is **Dave DeRain** from Detroit, Michigan where I worked for DaimlerChrysler as an electrical engineer; I say worked as I just retired after 27 years of service there. In my younger days, I served seven years active duty (1962 – 1969) with the US Air Force and spent three years in Germany repairing the guidance system on the MACE missile.

One of my mother's two brothers, Sgt. John McPherson, served with the 35th Division, 137th Infantry Regiment, Company K. I was only 3 years old when my mother received the returned V-Mail letter informing her that John had been reported missing in action; I was too young to have really known him. I do remember him from old family 8mm movies and photos. John died in action on December 15 or 16, 1944 and today rests high ground on the German side of the Blies River. resting place.

ment, my son, a friend and I went back to France of battle going on all around, but it is impossible to after much research on both the D-Day landings imagine for someone such as myself who has never and the movements of the 137th Infantry leading been in combat. On the other side of the Breiterup to December 1944. Starting in Normandy, we wald near the town of Bliesmengen we found a spent a week roaming the invasion beaches, the German military cemetery which reminded us that museums, and the now famous towns and places of brave young men from both sides lost their lives D-Day. From Utah Beach and Ste-Mere-Eglise to serving their countries. Omaha Beach, Point du Hoc and the cemetery at I left the woods wondering if I had tread on any of Coleville-ur-Mer, we could scarcely contemplate the same ground as my uncle. I wondered what the challenges these brave men faced from the stories he could tell me of this place had he surnatural terrain and the bristling network of defenses vived. I wondered if anyone would again visit the comprising the Atlantic Wall. We toured inland as grave of Sgt. John McPherson. His brother and siswell, staying in Caen, and later at the Chateau of ter (my mother) are both gone. I am the oldest of Vouilly located just west of Columbieres, the cha- all his nieces and nephews, the rest are all too teau served as press corps headquarters for the young to really remember WWII and the impact it months of June-July 1944 following the D-Day had on men and women and the families that went landings through the battle for St-Lo. After leaving through it. I wondered if governments would ever Normandy, we went to St. Avold where we visited learn the hardships and misery that war causes. the grave of Sgt. John McPherson. It was a beautiful spring day in Lorraine and the park-like sur- Below, the author by his uncle's grave in St. roundings belied the heavy fighting that took place Avold France in the region, represented in the 10,489 American soldiers buried in Europe's largest American military cemetery. A retired vet working as a support person at the cemetery took us out to John's grave. As is customary, he rubbed the white marble grave marker with sand to bring the lettering into better contrast; he said they ceremoniously use sand collected from Omaha Beach.

After a peaceful and emotional time at St. Avoid we then spent the rest of the day tracing the movements of the 137th during early December 1944. In particular, we wanted to see the area where John spent his last few days. According to the action reports, on December 15 and 16 Co. K of the 137th Infantry was in a back and forth struggle with the Germans for the Breiterwald woods, a section of

in the Lorraine Military Cemetery at St. Avold in We crossed the bridge from France to Germany at France. I went to St. Avold in 1964 during my Frauenberg and drove out of the Blies river valley USAF service to see John's grave and to pay trib- to the edge of a state park containing the Breiterute to him as well as all the other men and women wald. We walked up the path. It was very peaceful. buried there who gave their lives for their country. The only sounds came not from heavy artillery or I took 8mm movies of John's grave and sent them P-47's overhead, but birds singing. The Breiterback to the States so my mother and John's mother, wald today is a wildlife preserve but looks perhaps dad, and brother could see the cemetery and grave. not so different from the way it did 60 years ago. That was the first time any of them had seen John's Walking in the woods one tries to imagine what Sgt. McPherson and his men were doing and think-This spring (May 2004), in preparation for retire- ing on that December day in 1944 with the chaos



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### Grünstadt's Chief Administrative Missileer George Glaush

Here's a pix of yours truly at one of the American Legion yearly functions. We have a Flag Disposal ceremony and burning every year. In one year we accumulated more than 500 flags to be disposed of. People bring in their old/tattered/worn out flags to us and we store them until the next burning day. We had 5 burn barrels and 10 guys burning which took us a little over 2 hours to complete. The public is invited to attend, but since it was so early in the AM, not many were there. **George** 

