NATIONAL MUSEUM OF THE UNITED STATES AIR FORCE

Wings & Things Guest Lecture Series

Covert Air Reconnaissance in Europe: USAFE Operations, 1946-1990

Lt. Col. (Ret.) John Bessette, who flew as a navigator and served in air refueling, airlift and gunships assignments, presents "Covert Air Reconnaissance in Europe: USAFE Operations, 1946-1990."

Lt. Col. (Ret.) John Bessette: Thank you for that terrific introduction and let me just get somewhat organized here so we can do all this. First, I have to throw this switch in order to escape from here without the wrath of the organization here upon me. Can everybody hear me now? Okay, good.

Well let's see what happens when I press a key here, see if things come up. Yes they do. Ain't technology wonderful? This is the title of your graph for our talk tonight. And as Doug said, I'm a historian for this veteran group. Actually we have two groups, the 7499th group association of the older FUDS. These are FUDS that essentially flew from the late '40s to 1975. And then we have another group that calls themselves the Berlin for Lunch Bunch, the younger FUDS from 1976 to 1990. We are combining as we speak, and as a matter of fact, we had a reunion here just last weekend in Dayton.

So let's see what it is I'm going to say. I'm interested in this myself; see what I have to see for myself here. Having introduced that, that we do have this group, let me press on and see what we're going to be talking about. First off, you have to set the basic scene for the activity.

At the end of World War II, we had the four major Allies against Nazi Germany that are now facing each other, the Soviet Union, the world's largest country, the country that frankly suffered the most casualties during the Second World War and arguably suffered the most damage to its infrastructure and of course now particularly understood in showing up its influence in what we came to know as the satellite countries, Poland, East Germany, etcetera; against the Western Allies principally the U.S., Britain and France in 1945-46.

Already, the tensions were building between these two entities and a major confrontation was beginning to devolve evil. We knew very little about Soviet military capabilities, very little. And as tensions rose, we needed to find out. So, it was especially important in those years, the late '40s, to find out about their real potential nuclear capability. Now this of course was across the U.S.S.R. and across the areas it was influencing so that we could cope with them if necessary. That's the overall picture.

In Europe especially as the two blocks now emerging were facing each other, it was especially urgent that we collect on the forces right across of us. Here, refreshing our

memories from 1945 is the breakdown in how we were occupying the former Nazi Germany. Remembering the Soviet zone which eventually became the so-called German Democratic Republic or East Germany, and we had the British and French and American zones which eventually became the Federal Republic or West Germany.

Similar structure was going on in Austria. Austria had been part of the greater German Reich and is now going to resume a role as an independent nation, but it still had to be occupied. Zones were set up there; and both nations, Germany and Austria, the capital cities, Berlin and Vienna respectively, had sectors within those cities. There was a Soviet sector, French, British and American sectors in the cities as well. So this quickly became an issue in East-West confrontations, negotiations, and etcetera.

And then next, we can discuss what the different airfields that I'm going to be blathering about, I mean talking about tonight. You can see from the map, there's the Berlin corridors and Tempelhof Airfield, which was the airfield that was supplying the American sector of West Berlin. There was the British airfield at Gatow for their sector and the French airfield at Tegel and its sector, which is where you fly into Berlin nowadays, into that airfield.

The units I'm going to talk about in West Germany started off, one of the American units started at the airfield of Fürth by Nuremberg. I haven't got it all queued up here on the view graph but there it is, Fürth by Nuremberg before it went down to first in Delbruck near Munich. Americans call it Firsty and that's what I'll probably wind up calling it tonight.

Before moving on to Wiesbaden, Germany which was the headquarters of the United States Air Forces in Europe and also we had units at Frankfurt, what is now Frankfurt Civil Airport or Rhein-Main Airfield, right there near Frankfurt City. Those are the airbases we're going to talk about.

And here are the units we're going to talk about. We're going to start with the American occupation. There were two units that became the granddaddies of covert reconnaissance in Europe at that time. The 45th Recon Squadron which was made up in 1945, '46, of P-51 Mustangs rigged out for overt recon. The main mission of them was to patrol around West Germany, taking photos particularly in the American zone of the bomb damaged and for our Marine purposes, and also to help our reconstruction projects that are going to be a huge, huge effort over the next several years.

The other outfit we'll talk about at the beginning is the 19th Photo Charting Squadron, which has B-17s rigged out for obviously photo charting. I'll mention them both in a moment. The covert elements of those two came together in an outfit called 7499th Air Force Squadron in 1948, at the height of the Berlin Airlift, as Intel requirements burgeoned in the late '40s, early '50s, finally reorganized into a group headquarters, the 7499th Group with three squadrons; the 05th, 6th and 7th. 05th was basically the unit that would carry on the function of that 99th squadron, 06th and 07th, the 06th, I'll mention both of these in some detail in a minute. The 06th was going to be an airborne

communications intelligence collection outfit. The 07th was going to be a high altitude imagery collection outfit.

Those three units soldiered on together briefly through the '60s and into the early '70s before the last two were inactive again for reasons I'll discuss, and the '05th carried on. It basically cloned a second squadron, the 7580th in 1983 and together they went on to the end of the Cold War in 1990, '91 as you can see. So we'll go through this in some detail and then tell a few stories of what we're doing.

Let's look at that Photo Predecessor Unit, the P-51 outfit. There it was at Fürth in the spring 1946. We have this from a memoir of a young Army Air Force's captain named Roger Rodarmor, who, by the end of his career became a Major General and a major player in the peripheral reconnaissance business that the U.S. set up. But at this time he is a young captain. He had flown A-26 Invaders light bombers during World War II but he's getting posted to this P-51 outfit. He's wondering, "What the heck am I doing here?" He looks out over the airfield to all these Mustangs.

The squadron commander says, "Come with me Sonny." They went into a hangar, and they discovered there in a hangar was an A-26 Invader, you can see it on the photos here, there being worked on. And they were rigging up a little black camera in the nose of this A-26; and the squadron commander said, "Listen Sonny, you've been brought here because of your expertise on the Invader. You're going to train some crews on flying the airplane and we're going to be collecting reconnaissance out of an airplane that nobody knows has a reconnaissance capability. And that's because we plan to fly to the Berlin quarters, we plan to fly collection missions in odd and interesting places in Europe, and nobody should know about what we're up to."

So, Captain Rodarmor salutes, yes sir, and he proceeds to do that very job. Now you can see in this picture the black camera being stowed there. It was described in his memoir as "rigged up with bungee cords" and what past in 1946 for duct tape, put that thing in there. But it worked. It worked just fine, thank you very much.

The second unit, predecessor unit, was going to be conducting ELINT. ELINT is electronic intelligence and the [Indiscernible] of intelligence people, ELINT is one half of signals intelligence. There's communications intelligence and there's electronic intelligence. ELINT is non-communications stuff and for the purposes of this talk, that's basically radars, the adversary's radars, to try and get the technical information about the radars, what frequencies they operate on, all the fancy words, electronic warfare officers have for the different aspects of radar emissions, target tracking, surveillance radars, missile guidance radars, etcetera.

Learn all about them and you can do major things to a hostile country perhaps with this material. We'll have an example or two in the talk.

Okay, so having said that, this unit, photo charting unit, the attachment A with 810th Recon Group was flying those B-17s. Something happened that its overt mission was just

photo mapping. But something happened, 1946 August, flying this blue route here from Vienna down to Venice and then down to Rome was a scheduled Army Air Force's C-47, twin-engine, DC-3 courier aircraft.

The weather was pretty rotten, it blundered into Yugoslav airspace right in this area here, and it was promptly shot down by Yugoslav fighters. The aircraft crash-landed, everybody survived, but the Yugoslavs interring the crew. Major protests came from the U.S., including the Secretary of State and even President Truman, got a hold of Tito and was in the process of saying, "give our people back." When, guess what happened? A second C-47 on the same route 10 days later also blundered into Yugo airspace. It is also shot down. This time, no one survives, so their bodies are over there now, major tension between the U.S. and Yugoslavia. I suspect what happened then was that Tito, who was probably not already understanding that Joe Stalin wasn't his best friend, was said he better close it up and go west. Next thing we know he'd release these airmen that he had and he even wound up paying some recompense to the families of the survivors.

But, how do you get into the intelligence side? USAFE headquarters will say, "How come they knew where our airplane was, and how come they knew to shoot it down?" So, the call went out in the American zone, find any Ferric as you can find. Ferric became known as EWOs or PROs in my day, Electronic Warfare Officers. They found two guys, a fellow Lieutenant Colonel [Indiscernible] in his memoirs he discusses how he got involved in this.

He was called to USAFE headquarters, told to find some gear, strap them into a couple B-17s and get the hang down to Northern Italy and fly around that area, try and figure out what's going on; ELINT wise. He did that, he discovered a former German Wurzburg radar, part of their air defense system that had been used there by the Germans as a training aide, now apparently being run either by the Yugo themselves or by Germans with the Yugo "supervising."

Nevertheless, they were able to vector those fighters in on those transports. USAFE answered that question with that information and then it thought to itself, the Soviets are beginning to deploy radars. We are told we have bits and pieces of evidence that they are beginning to build up an air defense capability in East Germany. Why don't we continue this ELINT stuff, and so they did. These two B-17s became an important part of the game in Central Europe.

And as I said, these disparate parts, those two units came together, eventually into a squadron called the 7499th squadron, Air Force Squadron or basic composite squadron because it took two different types disparate type birds under one squadron. It was officially activated 1 November 1948. It gained itself some C-47s and those were especially useful during the Berlin Airlift which was going on about this time. That question had started in June of '48 by this time; we're already beginning to fly Intel in the corridors, realizing you could fly in the corridors over Soviet garrison areas, ground and air. You could collect the imagery and if you're smart, some ELINT as well.

And what they did was give these C-47s airlift call signs, put them in the stream going in and out. Besides hauling some coal, they were also hauling information out of their camera systems on what the Soviets are up to. B-17s, some of which are rigged out in photo, but the ones that went into the corridors were ELINT birds. They only flew at night. The idea was not to let the Soviets know. You had antennas sticking up onto these aircraft. It would be very obvious to acknowledge and observe that this airplane wasn't just some VIP hauler.

And thus, it would do this, it would fly into Tempelhof and it had a procedure, because you were supposed to land. If you got in the corridors you were supposed to land at an airfield in West Berlin, and procedure was basically this, they'd go up beside the south corridor, you got to Tempelhof, or get close to Tempelhof and say, "This is Berlin control, we've just lost number 2 engine and we got to declare an emergency, request permission to fly out the center corridor while we straighten ourselves up, emergency landing." So they would do that, get out of dodge and get back to West Germany.

They didn't fly that many missions but that's what they have to do each time. Meanwhile later and actually in the early '50s, C-54s began to arrive and these were specially outfitted with both photo and ELINT capability and eventually replaced the B-17s. By 1953 the last B-17 was gone. Incidentally, there are two B-17s from this unit, from about 1946 to 1953 that are still around, and one of them was flying actively up until a year ago.

Bizarre stories, I'll tell you about later, basically they got sold off to a French photo charting unit actually and by the time they were out of gas, figuratively, the French museum at Le Bourget Field took in one of them and one of them has been on display there. The other one was being flown by an aircraft enthusiast group up until last year when the insurance money, some maintenance problems got to it. But that's pretty impressive, the two B-17s, arguably the oldest aircraft in our entire inventory are still around.

B-26 remained in the inventory until the mid and late 1950s but, that squadron did continue doing its operations and they moved Wiesbaden Air Base out of [Indiscernible] in December of 1950. That did two things, depending on your view of that from this squadron level, it put you too close to USAFE headquarters, but that's what the headquarters wanted. It wanted to have a closer handle on this unit. The second was it put you closer to the corridors themselves. You saw on the map the south corridor is basically where Frankfurt or Wiesbaden is. That was a much more logical location.

Okay, a few words about the corridors themselves. There are a couple of interesting stories that go along with this. Okay, you got the end of World War II. You've got the fact that on 1 July 1945, the Western Allies are going to go in and occupy their sectors in West Berlin. The Soviets, grudgingly, let them in by land and they manage to set up. The next big thing was going to be the Potsdam Conference. Potsdam being a city just to the West of Berlin as it is on the map as you can see it here.

Potsdam Conference is going to involve President Truman and his entourage, Prime Minister Churchill and his entourage and Joe Stalin and his entourage. Stalin was going to come in by train. Both Churchill and Truman were going to fly in. So how do you fly VIPs into Berlin in this environment? It had to work on a lot of ad hoc procedures for the Soviets. They were cooperative. They allowed everybody in. They set up the requisite radio beacons and all that and it worked quite smoothly. Churchill and Clement Atlee, his successor Prime Minister and President Truman and company all got out of dodge and were okay.

But not long after that happened, this happened, July 1945, not long after the biggies have gotten out of town, the Soviets started complaining. You are not flying in the agreed corridors. Please get back into the agreed corridors. We don't like you flying around our airspace uncontrolled. U.S. and U.K. looked at each other and said, "we are in the agreed corridors, darn it. This is what the U.S. and U.K. said the agreed corridors were."

Now, the Soviet corridors were from Berlin out to the Bremen in the British sector and to Frankfurt in the American zone. The agreed corridors the Westerners thought was flying out of Berlin to Magdeburg, a large city, easy to see under VFR conditions, and then out to, in this case Hanover in the British area and Frankfurt in the Western area.

So you can see why the confusion happened here. Now, there's no evidence from the files which I've seen in both the U.S. and the British National Archives on this, any attempts by the Soviets to screw over our minds. It may or may not have been a genuine disagreement on the conditions. But out of this came the thought, maybe we better get our act together and have something we all agree on and get it down in writing. So sure enough, a conference was convened in November 1945, U.S., U.K. and Soviet Union, with some French participation were beginning to set up procedures.

Interesting about the procedures, when they got down it, you had a couple of biggies that we've heard about. Field Marshall Montgomery had an oar in the pond about this and, so with a fellow named Field Marshall Zhukov on the soviet side. There was an American 2-star as the American rep and you'd say "boy is he overpowered?" But as it turned out, we fundamentally got what we wanted out of it, the U.S. did.

The British proposal initially, this is Montgomery himself saying, "Well what we really ought to do is draw a north-south line down to the soviet zone through Berlin like this and Allies could fly anywhere in the West that they wanted, in order to get to Berlin. You can imagine what the Soviet reaction to that was. Zhukov said it in so many word, he says, "We can't accept that. We can't have you flying all over our zone observing our troops." And I'd like to think that the U.S. and U.K. kind of looked at each other and maybe nudged each other on the table and said, "That's an interesting idea."

But anyway, that was rejected. Zhukov had a counterproposal too and that proposal was to; "if we're going to have corridors coming in to Berlin for your convenience, why don't we have corridors in West Germany that are going in to the American British zone for

our convenience and going back and forth for our air?" That was rejected by the Allies; they don't want any of that stuff going on.

So, the final agreement was written and was signed in November, 1945 and here are the basics about it. There are the corridors, as was agreed to in writing, written agreement. They were 20 statute miles wide, 20 statute miles in radius for the Berlin circle to give you ample room to do your; especially your landing procedures into the airfields in the West, and by the way we use statute miles because Field Marshall Montgomery, being a good ground forces commander, and a Brit, said, "It must be proper miles, British miles," so yes sir, statute miles.

That always bugged me when we were in there, why is it statute? What's the reason? There's an imposed maximum altitude of 10,000 feet. That wasn't imposed early on. In fact, the British for example rotated fighter squadrons in and out of their airfield in their sector including during the Berlin Airlift. But by the high tensions of the 1950s, the Soviets said, "Okay 10,000 feet and that's it." I found in those files reference to 10,000 feet is having been proposed in a paper, but it never made it to the written agreement. So we Westerners were saying, "No, no, we can fly over 10,000." The Soviets say, "Niet, you have to stay at 10,000."

It became a big enough issue that in 1959, when the U.S. Air Force was introducing the C-130 airlifter into the theater here, and we tried to send several flights of genuine airlift 130s into Berlin by flying high altitude and then doing a jet descent and approach, the Soviets were all over that aircraft and that was quite dangerous so we quietly went along with the 10,000 foot altitude.

Despite that, from that altitude, you could still get very good coverage of targets in Eastern Germany and I'll show you later on a slide what that looks like. So let's press on having known that.

Okay, lots and lots of missions flown, then we had one fatal crash and among other. The picture on the left is not of an aircraft accident, post-accident fly-by. It was just a young lieutenant in the squadron who died in an automobile accident. They had a funeral at the base chapel at Wiesbaden and they had a fly-by. But being an aviation guy, I just couldn't resist having this photo in the briefing. Sorry about that.

Seeing B-26s and B-17s in the formation, you can't beat that stuff. That must have been one great sight. Anyway, break, break. In 1952, again we have a pairing of two losses. In August 1952 early, about the first or so, we had a mission into the Alps of Western Austria with a B-26 going low level in some valleys, taking pictures of bridges. If the Soviets ever attacked through that area, we try to figure out how to drop the bridges. This was one reason for that imagery.

The aircraft got into a valley it couldn't get out of. The pilot was new in the B-26, didn't have his power up and pancaked on the high slope of this valley trying to get out. Everybody survived that. I managed to interview the navigator before he passed on from

fully other causes just a few years ago, dramatic story there. However, six days later, we did lose one with a loss of life. Our B-26 flying out of Wiesbaden Air Base, taking off to the West lost number one engine, it burst into flames on takeoff and the pilot had little choice. He automatically was going left anyway. There is the Rhine River; there is the City of Mainz.

He managed to put it down between two bridges. You can see one of them here, and pancaked into the Rhine River. He and the navigator escaped with the two photographers in the bomb bay drowned. So that was our first two fatal losses in this game. It was that particular loss. It shook the squadron some of course, but then you press on.

Then comes this program here, and this begins a totally new epic in the game of reconnaissance in Europe. By 1952, CC USAFE was saying, "these airplanes I got, B-17s, C-54s and so on are collecting information but I need a high altitude bird. I need it and I need it fast." He sent out a requirement to Air Force Headquarters, General Vandenberg who was Chief of Staff at the time put together a quick group of people in his acquisition and SMT world at the Pentagon and said, "What do we do about this?" We need to get it done fast.

Out of that meeting and subsequent paperwork flying back and forth was created, a special program office to cut red tape, to organize as quickly as possible, find special ways to get equipment, get it modified, get an aircraft tight and get it modified to take the equipment, get it put together, glued together if necessary and put out to the field.

What they did was choose this high-resolution camera, a 240-inch [Indiscernible]; you could see it on that photo on the right hand site. Incidentally the carcass of that camera exists out here on the floor of the museum, under the wing of the B-36. There was a reason for that. This was intended for a B-36, this camera system. And you could see a B-36 could haul this thing. And it would give you splendid high-resolution photography from a good high altitude.

However, the 36 was already having some problems and it was not going to be around much anymore in the inventory once the B-52 came along. So, it was quickly decided, use that camera, plug it into something. And when this something happened to be a C-97, new transport aircraft, it was quickly realized that A) you couldn't put a B-36 in the Berlin corridors and B) you couldn't land it at Tempelhof, not without a total disaster happening. You didn't want the Soviets to collect the stuff and you didn't want to fly in the East-West German border either because that would be perhaps too provocative. And this is a part of the game at this time to try and ease tensions by having a less provocative aircraft.

So the C-97 was an obvious choice. They fitted that camera into the system and they got it fielded by 1953, about a year. And the outfit that did this went on to other requirements of this nature and it is presently under the name of Big Safari. Now, Big Safari is located here at Wright-Patterson. It was spun out of the RDTNE world and the Air Materiel

Command world of the time and has been going on doing these kinds of projects since this one. This was the first one.

These kinds of projects for the Air Force, you'll see more mentions of this, virtually every airplane I'm going to talk about from now on was modified and put into the field by Big Safari, also maintained with their overall picture. Safari, I can't say enough good about it, it's just a terrific outfit. It has been doing things not only in the recon game but in other high-priority modification projects that had to do with command and control aircraft, ECM aircraft, super VIP aircraft, on into the modern world. In fact it got into the drone business in the 1960s and the drones you see operational now in Afghanistan, Iraq and elsewhere are a result of Big Safari program management going on, so thank you folks from that outfit.

Anyway, back to this outfit. This airplane is deployed to the 99th squadron in 1953 and immediately begins flying on the Rhein-Main Airfield on the East-West German border to altitudes over 30,000 feet. This is an unpressurized aircraft and the camera system required a lot of hands-on maintenance at 30 plus thousand feet, in a European winter, think about all that fun and games that you have to go through as a crewmember. But it produced, it produced very high quality imagery, I love to see some but I haven't found it yet, and was, as I say the first of many fantastic aircraft that we had. So, that went on.

Okay, here comes the time in 1955 when we had to organize to handle requirements that were burgeoning, as the Cold War has deepened in intensity. The group headquarters was set-up as Wiesbaden Air Base, close to USAFE headquarters, and the three squadrons was set up. The 05th was the successor of the 99th Squadron, doing the low-altitude, low-level imagery in photography and ELINT. The 06th communications intelligence and the 07th, connecting high altitude imagery.

I will go into the 06th and the 07th first and then conclude the unit march, if you will, with the 05th squadron because that lasted the longest. 7406th Support Squadron, there's its mission, conduct with the security service airborne COMINT reconnaissance, communications intelligence. What you had were basically two separate crews on board that airplane. The front-enders was the pilots, navigators, flight engineers; you got the basic crew of the basic airplane. What you had in the back were Air Force security service Intel collectors, linguists, people who knew the language that they were listening to and recording, and they were doing instant analysis in some cases and overtime these people got even better. It's a fantastic capability that we finally developed.

And of course this command was not the only one that had it, it was a great consumer of comment people from Air Force Security Service as if it's its own collection, as did the unit in the Pacific, the sister units to these here. The back-enders were called sailors, it was one of those cute names to cover who they were, and the senior NCO head of the crew in the back was called the Admiral. So there's the admiral and there's the sailors. The frontend was not supposed to know what the backend was up to. It was that secure. And that happened through most of the Cold War, if not all, that the front end was not supposed to have a clue about what those guys were doing in the back.

And basically if the Admiral called up and said, "Okay, continue this orbit that you're on for at least another 30 minutes." The frontend crew was supposed to say, "Yes sir," and they did it. The Admiral rules, and that's because they pick up some signal from some particular site and they want to work it as long as they could. That's the way it worked. This has obvious crew coordination problems attached to it. Overall, of course the first airplane they were supposed to get were old SAC RB-50s, the B-50 bomber, the recon version thereof. SAC had been flying these for several years and pretty much beaten not quite to death.

But it took a while for them to get over here from the modification yards in the States and to get operational enough, that they can actually make crews to the aircraft and actually fly missions. It wasn't until a year and a half after the squadron was set up that they're able to fly their first productive operational mission, January, 1957. The squadron did fly, you could see the routes there on the Baltic, on the East-West German border, in the Adriatic, going down to Athens, Greece, was a major location for TDYs where they can work targets like the Adriatic like the Aegean Sea out of Adona or the name of the air base we all worked with was called Incirlik, right there in Southern Turkey, and you can see the routes into the Black Sea and up along the Turkish border with Soviet Armenia.

There was high interest in this area and if it the comms were right, you could pick up some scattered communications intelligence on activity in this area, for one thing, it was an area where the new Soviet ballistic missiles were being tested. This was of course the number one priority for our Intel agencies and for customers like the President.

So, these RB-50s were flying those routes. Now, all along it had been decided these 50s were interim aircraft and the new, brand new troop carrier C-130 was going to be the platform of the immediate future. So beginning in '57 and into '58, we were gradually modifying some of the first C-130s into comment collection birds. There's a picture of one there coming in to land and you can see how much it looks like a normal C-130. That's what it's supposed to look like.

So the training began and it began with flying missions and not only along the border with the C-130s, but also TDYs to Incirlik. However, something happened. 2 September 1958, one of the first C-130s to deploy down to Incirlik to do a mission with an experienced RB-50 crew aboard, was supposed to fly that route, you can see it in black on the view graph here, fly out here, straight line up to Trebs on here where there was a radio beacon, turn right and fly this route in this area, collecting on the bad guys over here.

What happened that day, it actually flew this route here, the dash red line, got too far, turned too late, blundered into Soviet Armenia and was promptly shot down by patrolling MiG fighters. It was traumatic as hell. There was six front-enders on board; there were 11 of those security service guys that were lost. And that became a major crisis again between the U.S. and the U.S.S.R. We knew from some sources in Turkey and our own ground base sources that the Soviets had shot it down.

So, we go to the Soviets, "Could you tell us what happened to our C-130. We lost a 130 in the Turkish area." The Soviet said, "We know nothing. We know nothing. We haven't heard about what you call a C-130." They stonewalled us. The U.S. gets more uppity, Soviets get uppity. Finally the U.S. takes it to the United Nations and in front of God and everybody, they played the tapes of the Soviet ground controllers and fighters talking about to shoot down. That embarrassed the hell out of the U.S.S.R. And finally the Soviets admitted yes. They turn over six bodies which happen to be the front-enders; and we said, "Well there's more on board that airplane." "Well, we know nothing; we can't find any more people or anything like that." So we had to be content with that for the rest of the Cold War.

And immediately, those of us who flew in the Air Force at this time and throughout the Cold War, we're told, look out for this area. The Soviets are meaconing, most likely are meaconing. Meaconing means that they had a radio beacon, which eventually they did have up in this area that was broadcasting on the same frequency as the [Indiscernible] beacon and they were luring us off course.

Well, we were all briefed about that to be real careful in this area and I could remember the first time in there flying, well I was flying, it was a KB-50 tanker, realizing it was big. I'm going to make damn sure I can see this lake down here and make sure my radar is in good shape.

Anyway, long story, not so long, is that the Cold War finally ends and the Soviets and the U.S. and now friendly Russians get together on several levels, one of them is a joint U.S.-Russian effort to try and figure out what actually happened in all of these Cold War shoot downs. There was quite a few of them. 16 of them were reconnaissance related, but there are a lot of others were people blundered across borders and were lost. And this commission is still technically alive today.

In the early md-90s, the U.S. and the Russians and the newly independent Armenia, with the cooperation of the newly independent Ukrainians, got together and they went to the scene; and they found Armenians who had seen the shoot down from their village and that was a major plus. They took this commission to the site of the shoot down, they found bits and pieces of the aircraft, some of them being used for chicken coops and that sort of thing, and they found a few bone fragments of those other people. And they were able to identify through DNA as it was in the early '90s, of a few of those folks. So that was it.

Now of the original six, two of them are buried at Arlington Cemetery, Washington area D.C. Of these 11, there was not enough together to say with the authority, these belong to airman this and this belong to airman that. So it was probably decided to bury them at a common grave at Arlington Cemetery, not that far from where the original six were buried, very impressive when you go there.

Now another thing that happened was while this commission was in place in Armenia, a man walked up and said, "Excuse me, I'd like to be a part of this. When I was 14 years

old I saw the shoot down. And I'm from the village of so and so over here." And they say, "Well tell us more." So he told us more and it turned out he said, "I am a sculptor and I would like to make a memorial to your crew." And so he did. And that memorial is standing on the site of the shoot down where that crash took place.

He said, "I would like to make another one and I would like to have it some place in the United States where you could also remember this crew." So they did with this part over here in the memorial garden here at the air museum. So check it out when you can, very, very impressive. There's a twin thing, there's the Armenian one with an Armenian language, with English words on it, then there's an explanatory one right next to it, very impressive.

Okay, what happened to this? I don't want to spend all night on this but it's a controversial story. Were the Soviets actually meaconing. What was the crew like? It turned out the crew, as I said, flew RB-50s on this crew. The navigators on board knew about the radio beacon business. They knew that the beacon up there at Batumi did operate on the same frequency. They knew that the radio beacon [Indiscernible], like all radio beacons in the west had a three-digit code with it, TRB or whatever it was, and that the Soviet beacon didn't had any code on it, just operated at the same frequency.

So, did the navigator get careless? Maybe, we don't know. There's a book out that I highly recommend if you can find it, it's not in the bookstore here unfortunately, in fact it's on a print. It's called The Price of Vigilance by two men, Larry Tart and something Shields but Larry Tart, T-A-R-T when you Google it and whatever site you use, Amazon.com or ABEbooks.com which I use a lot. That's got all kinds of scholarly bookstores all over at dealing things military among other things.

Anyway, you can find copies of it out there. It concentrates on this topic, but it reveals a lot, one of the first things I read that reveal a lot in the unclassified world about the signals intelligence collection operations worldwide. And he had it cleared by NSA, so probably legitimate what he says in there. He concludes that it was most likely a blunder on the crew's part and/or a mix of problems with the airplane. And when it flew down from Rhein-Main to Incirlik, Turkey the day before, the radar was written up as having a problem and it wasn't operating.

The maintenance crew signed it off as being operational so they launched the mission. Did the radar go out at the wrong time? We were talking about this just before I talked and gee, maybe they should have aborted and got to hang back to Incirlik. They didn't. So there's still a mystery about this thing, still a mystery. But, find that book and read it, it's very educational about this game.

Now, the '06 couldn't shut down forever. It had a mission to do and it flew on with its security service back-enders. The Incirlik TDYs resumed in November, yeah two months later and went on from there for the longest time, flying in the Black Sea, flying on that border, that same border where their brothers have been shot down. And finally those missions seized on December, 1965 and I'll have the reason for that later in the talk.

The passing expanded overtime, first off from Incirlik, we deploy some of these 130s to then-friendly Iran and flew out of Tehran against the Soviet southern area right around in here, which is again right with top targets. And even a few missions in early 1962 against a place called Afghanistan. Soviets were increasing their influence so we wanted to sample that environment and we did.

Missions beginning in the mid-60s out of Athens flew in the Eastern Mediterranean on the routes that you can see here. During the Arab-Israeli War, June, 1967, the unit was especially strict hard, I will show you one of the reasons why in a minute. They were told to fly 24 hours a day on those particular routes opposite the Israelis and the Syrians and Egyptians, et cetera. They just flat couldn't do it, the Navy came in with the EC-121s to cover that third shift and we got the job done.

In 1969-1970, other advancements took place, Gadaffi came to power in Libya in 1969 and by '70, '71 and '72, he's getting quite nasty and he required being watched, thus that started to happen. Then came the October '73 Arab-Israeli War and once again the 06th was heavily tasked to fly these missions at usually about 25,000-30,000 feet altitude, something about that to collect on airborne COMINT.

Okay, here's one of the reasons they were so stretched. Earlier in 1967, in February as a matter of fact, this unit was tasked to send two aircrafts, C-130s and four crews to Yokota, Japan to reinforce their sister unit which was suddenly being occupied by activity in Southeast Asia. The Vietnam War was heated up and we desperately needed airborne COMMINT. Now, what that unit had been doing was collecting against the Soviet area here, Soviet Siberia, Vladivostok in particular along the Sakhalin Islands, the Kuril Islands off Northeastern of Japan and of course North Korea, good old North Korea and communist China. Those are its main tasking areas.

But then with the Southeast Asia war, oops, guess what their primary job became? Take the 06th, get it out to Yokota to help relieve the pressure. That happened not long before the Arab-Israeli War so you can see why this squadron was really tasked hard at this time, but they did the job. They got the collection done that was necessary.

After all of that took place, something else started to happen, which was actually a relief. SAC was gradually getting RC-135, 707 equivalent, airborne COMINT and ELINT collecting aircraft into their inventory. They were able to expand their collection operations into areas formerly done by USAFE and by PACAF in the component units. So, in the early '70s, our mission in the Baltic has seized, and to a large extent, on the East-West German border, so they could concentrate more on what was going on in the Mediterranean, as you could see, nearly all the operational flights were going to be out of Athens, in fact the security service guys went PCS down there.

The 06th still was PCS at Rhein-Main but has been peacefully doing their TDYs out of Athens, flying those routes in the Eastern Med, Central Med off of Libya and as Algeria turned not very friendly, we were flying missions off of the Algerian coast as well. Again

at those altitudes, looking for air defense information, other kinds of COMINT information.

Gaddafi got more and more hostile. He had decided, because he was Gaddafi, and he was in charge in Libya, he decided that the Gulf of Sirte here was not international waters and the airspace over it was not international airspace. This was all his and he's self-proclaimed to the world. The United States, NATO and other westerners said, "No, its international waters." And so we put aircraft into there to assert our rights to fly in there. We put Navy ships in there, to assert the rights to sail there and we kept collecting information on the Libyans.

Libyans were getting armed with some interesting aircraft, including air defense fighters and the hostility level was gradually increasing. So the back-enders of the C-130 were the main collectors on this increasingly hostile level. You are getting coms about possibly shooting down escort, the bad guy and if we tell you, you got to shoot it down. So it got real tense. One day, 21 March 1973 came the breaking point when the controller told the Libyan fighters, "Shoot it down, now." So the fighters converged. The Admiral in the back of the aircraft whose guys had picked up this conversation says to the frontend, "Dive, dive, dive," and I suspect the aircraft commander might have said “we are not submarine,” well yeah, basically shut-up and get this airplane down.

And so he obediently did his dive, one person at our reunion last weekend told me that it approached critical Mach in the 130 before they folded out into a cloud layer. They escaped, got back and reported what went on. It could have been another major loss for the '06. But it kept patrolling. As the 135s arrived though, finally it looked like the '06 mission had run out. The 135 could fly higher, could fly faster and it was a bigger airplane so you could jam more collection equipment on it.

So it made logical sense for COMINT and for ELINT eventually to see those missions to SAC and its 135s. Then finally in June 1974, the 06th was inactivated, having done a darn fine job for almost 20 years.

The 07th Squadron was based at Rhein-Main at this time and it was high altitude imagery. What are they going to use? These are the two platforms that were being used and these are the program names for those two platforms, Slick Chick for a reconnaissance version of the F-100 fighter and Heartthrob for the recon version of the B-57 bomber which was itself an Americanized British Canberra light bomber, so they remember those birds. God for sure; right?

And the RB-57, the Slick Chick RF-100s, some of the first 100s off the production line were quickly grabbed and modified. Notice the bulge under the cockpit area, and that's where the cameras where, also the sighting equipment. I'm told the pilot had to straddle out like he was riding a horse, but he had it right in front of him, outside in the air with mirrors that gave you a vertical view so it could line up over an imagery target, get it shot; move on. And that's basically what it did for about mid-1955 through mid-1956,

flying at 50,000 feet plus, that combat radius you can see deployed there, covering most of East Germany, Western Czechoslovakia, et cetera.

If they deployed down to [Indiscernible], they could extend that radius to cover more Czecho and also getting also getting into Poland. This was interesting, for both of these programs, flying these missions, the very first ones were extremely productive, not only in the sense of collecting the photography from this huge altitude, if the weather allowed you, but because it tickled the Soviet air defense system. They tracked these aircraft, although we didn't think they could at the time. That's one of the things we learned. Oops, they're not good because they can track these airplanes. They didn't have anything to shoot the airplanes down.

But, that also told us a lot, but ELINT and COMINT about their air defense system, radars we didn't know about came up, communications links we didn't know about came up. So, this was a great collection for both ground-based and air-based aircraft in the COMINT world. So this was very productive. Side story, a guy from this unit, when he arrived with the Slick Chicks, discovered that the 100 guys, of course they landed and they quickly taxied to the far end of the airfield into a hangar way down there and they were told to shut up and don't talk to anybody in the club because the 86th fighter jocks were just all over them when they found them.

“What are they like, is this airplane we're going to get?" Because the 100 was the dream machine coming out of the pipe. And these guys are supposed to shut up and say, "We know nothing," you know, that line. And they basically did, I am told.

Okay, but notice the program ends in 1956, the over flight part of it anyway, the Eastern Block over flight program. That is finally inactivated in 1958 because they kept it around to do occasional missions in the West over Spain for one thing as the U.S. was establishing airfields down there.

The Heartthrob program with its RB-57s, specially modified slick RB-57As, as a navigator I am somewhat offended by the fact they took the navigator out of these airplanes in order to lighten the load. Who needs another 200 pounds of a frapping navigator? I am personally offended, but hey, you do these things. I guess the rationale was even the pilot could navigate in clear weather forever when the visibility is clear, because that's the only time they'd launch, and you can see through your apparatus where you are.

So it worked, it worked, and six of these aircraft flew about 19 missions that we know about and you can see the combat radius and the altitudes there, much higher than the Slick Chicks and covering most of Poland not that far. Beautiful program, it ceased in 1956 as well. There were some of these same aircraft deployed in the Pacific. They did missions there, but they ended and by late 1956, and the project again in '59 like the Slick Chick ended and the aircraft redeployed.

Now, the 07th didn't go away when that took place because there was still a peripheral mission to be done with these high altitude birds. First off you see the top where it says sharp cut peripheral. That was an RB-57A that was especially modified to do peripheral recon along the border here at altitudes in the 60,000 area. Sharp Cut took that huge camera, that Boston camera; the technicians were able to take that into the miracle of mirrors, able to shrink that basic camera with a lot of effort. They were able to put it in a B-57 bomb bay. I don't know how they did it, but they did it and they were able to use it on the border from those extreme altitudes.

This aircraft, the Sharp Cut, exists today, it is out at Hill Air Force Base, Utah, in their collection inside, being very well taken care of, I am told, haven't seen it since we first started curating over there that it was this airplane, it was the Sharp Cut peripheral. We provided some data from our organization and I am told that they've got it displayed at Hill Air Force Base. Check out that museum when you get a chance.

Now, the A models went away and they were replaced by the D model RB-57s with those humungous wings. You can see it right there. That increases lift and carrying capability and they were used happily along the borders as shown in this map up until 1964. But in that year, the wing spar started acting up on some of the aircraft in the States, they started losing a few of these birds and it was discovered there were cracks in those wings. They weren't engineered well enough apparently and so they had to ground the fleet.

It was okay basically because the F model RB-57 was coming along and you'd see a picture of it right down here, had an even more bizarre wing and higher, more powerful engines including auxiliary jets besides the main ones, you can see one poking out from the wing there, to get another increment of altitude out of the bird. And they flew the borders on those routes right up until 1968, until the unit was deactivated.

Now we lost one of them, 14th of December 1965 and you can see where it was in the Black Sea in this location here. The aircraft was launched out of Incirlik and was going to fly up into the Black Sea and fly missions here. I've seen an article which talked about possibly they were doing telemetry against Soviet missile tests, but I can't back that up with anything official. But that's what it was supposed to do. But something happened to the bird.

There was no evidence and signals intelligence, either ELINT or COMINT. No evidence from Turkish or U.S. radars in Turkey of a Soviet involvement in the loss of the airplane. No fighters came out that we know of. The air defense possibilities from the SAM sites in the area, along that Soviet coast, couldn't reach out that far. The presumption still remains that it was an operational loss that something happened in the airplane, canopy crack and at 70,000 feet, you didn't have time to say even mayday. So it was a quick loss.

Pieces of the aircraft were found at sea in about that location and that's how the accident report reads, that location there. Both Soviet ships and Turkish ships got to the scene about the same time, started madly collecting pieces. There's still people out there that

firmly believe the soviets did the shoot down, but again it's one of those mysteries, still a mystery what happened there.

As a result of that shoot down though, the Turkish government who have been hounded by the Soviets for several years about these evil Americans using their airbase and using Turkish air space to collect on the nice, peaceful Soviets, Turkish government finally said, "Look, I think you better stop using our airbase for these missions."

I remember flying in in October-November of '65 and even then there were some tensions. This was in a C-97 and we're going to fly some ELINT in the Black Sea. And we had RB-47s flying there at that time and all of that stopped. Fundamentally that wasn't a huge loss to us fundamentally, because by this time our satellite reconnaissance capability, both photography and the electronic signals communications intelligence were beginning to pick up the load from these peripheral units.

So, it wasn't a huge loss to us and the interest of keeping the Turks on our side, we did cease recon in that area. And eventually the unit, the whole 07th unit was finally inactivated in 1969, and it produced lots and lots of great imagery on their tracks that you can see here. The photo in the upper right by the way was done by a German civilian photographer on the approach to Rhein-Main airbase on an aircraft coming in for landing.

Now onto the 7405th Support Squadron, the one that took over from the 99th Squadron, in 1955. I'm going to talk first about the ELINT mission, the Electronic Intelligence Mission; and then we'll go on to the imagery. ELINT mission, A flight of the 7405th was that outfit and this was the one I flew in, was this mission here. They had two specialized C-97s and notice, I call them overt because they couldn't be anything other than some sort of weird collection, there's a tub under here. It looked like a canoe attached under the bottom, like you're going on vacation, except you should have it on the top if that's the case and various antenna along the top.

Two of those aircraft we flew peripheral missions in the Baltic on the East-West German border, Adriatic, et cetera, and you can see the routes here on the map, a lot like the 06's aircraft. In fact, I dare to say, we partnered in a very quiet way on these missions, in some of the areas, the two squadrons. And they flew missions up through 1969, but then again the SAC 135s took over the peripheral mission of these birds, and the birds went on to other missions.

One of the photo C-97s that we got and about the same time also had some EWOs positions, Electronic Warfare positions in the aircraft, specifically so we could do that kind of collection in the Berlin corridors and not look like we were collectors. And in fact the EWOs had positions down in this part of the Stratocruiser here. Anybody in the audience either fly a Stratocruiser airliner? I haven't found anybody yet but in the late '50s, was there a hand? Okay, do you remember that there was a bar in that part of the Stratocruiser? There was a small spiral staircase down to a little bar. So, we always joked that the EWOs down there were still sniffing the fumes from the bar of that aircraft. Actually these were converted tankers so these are SAC fumes.

Anyway, the aircraft, we had two of these dedicated photo C-97s that flew in the Berlin corridors as well as on the East-West German border taking photography. Eventually as I said, the peripheral ceased in '69 and the mission was ceded to SAC RC-135s. I threw this in here as an example of the kind of collection you could do in a potentially harass-full environment. This is a painting I was on the scene for. One of our C-97s up in the Baltic, 25,000 feet, flying along, was intercepted by two Soviet MiG-17s out of the base in Estonia called [Indiscernible].

They came out like they often did, flying off the right wing, between us and their homeland, as if they are signaling to tell us, "Don't fly over our airspace. We're here to shoot you down." And my job as a straight navigator was to say, "Yes sir, I'm on my track and I'm going to be a good level person and we're going to fly but we're going to --" I didn't say this of course, "We're going to collect as much as we can off you." And we did, we collected on the airborne radars of the fighters that came up, not only the MiG-17s because there were some more advanced ones and we were collecting on the ground based radars that we're doing the vectoring and there was a partner aircraft in the vicinity that was doing the COMINT collection on the same operation. Enough said about that.

But, when we had this painting done, I told the artist, he gave me a sketch and I said, "They never did that, two MiG-17s, two whoever, would always be a pair off of the wing." And he says, "But you have to understand, I'm an artist, I need ballots on my …" so we got back and made off the reason that's not supposed to be.

Incidentally, another time I was up there, and this happened several times, the Swedes of course owned the west side of the Baltic. They were a neutral nation and they were coming up and intercepting us too, partially to keep us honest about flying over Sweden I think and also partly as an indirect aid at least against the Soviets. One time when we flew up there, I remember personally, the two MiG-17s came out of the Soviet side, two Draken delta wing interceptors came up from the Swedish sides. Boy did those MiG-17s get the hell out of there. They didn't want to tango with the Swedes. And I've got stories about that two.

Anyway, it was a very valuable thing to have happened, it was these intercepts. It happened not just to us; it happened with all kinds of aircraft around the Soviet periphery, particularly the SAC collectors and happening in the Pacific too, to the PACAF collectors as well. This was a major thing you had to contend with in the Cold War era.

Another operation involving C-97s was an airplane that we nicknamed Creek Flee. And this happened in the early '60s. It was part of a CIA directed project to help develop the new successor to the U-2 aircraft, what eventually became the SR-71 through several air agencies, and was not run by the CIA, it was run by the Air Force eventually. CIA wanted a design that was stealthy as possible, but it needed to know about this humungous new threat, the SA-2 missile system that the Soviets had developed, a missile that had successfully shot down Francis Gary Powers and was beginning to be deployed around their periphery and their target areas including in the satellite countries.

And it -- they developed a system called the Precision Power Measurement System, PPMS, which was a fine grain ELINT collector and don't ask me any questions about this because I'm not that technical. But with this collection system on board, this particular C-97, you could collect really good information on the SA-2 missile systems and all their radars. The four red dots on the map there show you four SA-2 sites that you could fly directly over. The only part of the world where you could fly legally and safely over Soviet missile systems was in the Berlin corridors. This became very productive.

Now, eventually the CIA's version of what became the SR-71, and the SR-71 itself, were not particularly stealthy, but this became unusually useful, couldn't perceive this in the early '60s. By the mid '60s, we are now at war in Southeast Asia. We're flying in North Vietnam and our aircrafts were getting shot down all too often by Soviet SA-2 systems and of course there are other anti-aircraft systems took away, et cetera.

What we were doing here was collecting information which allowed us to learn much more rapidly how to jam those SA-2 signals, how to deceive them and most interestingly, how to develop missiles that could go air-to-surface and take the radars out, Standard Arm was the name of one of them and this made it happen. I remember we were highly motivated to do these missions. I flew a bunch of them as a Nav and we knew we were protecting our comrades in Southeast Asia.

The aircraft itself with a dedicated crew went to Southeast Asia, flew out of Clark, Philippines in 1967 against the North Vietnamese SA-2 sites, with that fine grain ELINT capability. However, we didn't take that airplane over the north. We kept it out over the Tonkin Gulf with fighter collection while we collected on their missile systems. And it worked out just fine. It told us a lot about what differences, if any, there were between the ones that the North Vietnamese got and what the Soviets had. The project continued for the C-97 until 1975, and continued from then on as I'll talk about in a minute or two.

Imagery missions. Imagery now is a fancy word which covers not only photography but infrared radar, side-looking airborne radar and such fancy gadgets as that and that's beginning to happen in the photo field as early as the 1950s. Okay the 05th inherits the imagery birds from that 99th squadron in 55 and soldiers on. It also inherits the operations and the pipe phase C-97 which continued operation on and off until finally in 1962, summer of, it was declared redundant and sent back to The Boneyard.

Two thirds of the way back to The Boneyard came the word of the Cuban Missile Crisis, October, 1962. The aircraft was quickly diverted and became and unsung part of the intelligence collection process against the Soviet problem in Cuba that we were facing. After the crisis died down somewhat, the aircraft was released and went on to its fate in The Boneyard. Notice the photo here that shows the pie face aircraft at Tempelhof Airfield. Notice also the field of elevation is 163 feet. Photography later you'll see this field of elevation 164 feet, somehow, the earth moved in Berlin.

Okay, and the imagery missions were again, they were flown in a vague way like the ELINT missions but they hugged the borders more closely for the peripheral missions.

You can see the tracks again, into the Baltic, Adriatic, et cetera, down to Athens. Another aspect of the imagery that happened was we got four of these T-29s that are down at the bottom. These are navigator training aircraft which are modified to look totally like courier aircraft and indeed that's what they were. We had an unclassified mission to carry people and cargo, light cargo up to Berlin, and it was widely publicized.

So if you were staff officer, you know Major Bozo, from USAFE headquarters, how do you get up to Berlin? You go to base option, sign on and go in this airplane up to Tempelhof, do your thing. Now, what people weren't supposed to know was that in the back of the aircraft, behind the bulkhead there was a camera operator with some sophisticated systems, getting vertical photography in the corridors. The load master involved in giving you coffee and making sure your seatbelt was fastened was a highly qualified army photo interpreter who knew the targets like the back of his hand.

And he would sit on a blister and talk with the navigator about, "Oops look like some new activity that we need to monitor in so and so training area, take some pictures." And they did. That kind of thing was happening and Major Bozo and Mrs. Bozo or whoever were supposed to be totally unaware of that happening.

C-97s, I mentioned that in the corridors taking imagery, one of them had a 66-inch focal length camera, another 48-inch and the other one worked throughout the rest of its time in theater, up until 1975. Covert recon in the corridors. All other missions were supposed to be overt like I mentioned. We wanted to keep these covert, we wanted to keep these quiet. We wanted to keep the Soviets either unaware of what we were doing or minimally aware and to a point where they wouldn't bother us.

Legally, we had the right to fly in the corridors. There was no specific prohibition against reconnaissance but we didn't want to test them in a major crisis either, and we got this happening. The Soviets were fundamentally not deceived though. There are some examples I'll mention in a minute or two. They tacitly accepted the mission, probably for a couple of reasons. One was the quid pro quo because we were tacitly accepting without major protests, for the most part, Soviet Aeroflot aircraft flying on funny routes, it happened to coincide with overflying NATO airfields in Western Germany and Belgium and places, and also even in United States, on supposedly Aeroflot routes.

So there was a trade-off there, perhaps. There's also the thought that they would sometimes do stuff on the ground that they didn't seem to mind us taking pictures of. There's some activity, like they are almost trying to tell us this is how capable they were, so please don't attack us because we will whip your ass sort of thing. Some of the material we gave out was the same sort of message to them, Cold War, peculiar thing.

Very rich target environment, those red dots are just airfields. There were over 400 targets that you could reach from the corridors, even with that 10,000 foot limitation. This is our training areas and there were a lot of them. These are just a couple of examples that you could collect on. You could overfly this one. This is a major training

area, and there you could pick up on all kinds of ground tactics. Ground folks love imagery from the tiny areas in that area. So, it was a very rich target environment. This is a photo; it's a chart just off the area around Berlin to show you the targets we had in that area. The three blue circles are the three western airfields in West Berlin, Tempelhof here, Gatow, the British airfield right on the edge of the border with East Germany and Tegel, the French airfield up here. All the red ones are Soviet targets, East German targets that we were definitely interested in. And I could go on too long about what they were, but you can see the ring around Berlin. And there's plenty of guards army that you see the headquarters of in the northeast there. Its main job was very evident and if the Cold War turned hot, was to take these units and take West Berlin.

I showed this once this briefing with this graphic to a German audience in Berlin, at a place called the Allied Museum and you can see the gasp out of the viewers, they remembered what it was like in the Cold War when it could have been like -- they didn't need 1945 all over again. So, that was pretty impressive.

Here's a couple of vignettes. Those German civilians were at it with their cameras outside the borders at Tempelhof airfield and here are pictures they took of our aircraft, although they didn't know that it was an intelligence collection aircraft overtime. And notice the buildings here, don't notice the buildings here, let's go back here, yeah. Down here and here and here, that's the same location on the approach to the runway 27. Notice the C-97 landing along that avenue in Berlin heading towards Tempelhof.

And here's the view from the cockpit. This happened to be a nice clear day, 1959 from the pipe face, you could see the approach of the 27 left and you can see furthermore there are those same apartment buildings here. The approach could take you down below the levels of those buildings. There's a similar series of buildings over here, so this was a major level of ground truth for flying into Tempelhof if the weather was rotten too. Sometimes the first view that you ever had of the airfield, it was your first flight in as a pilot would be that cemetery, that's what's down here. That's a graphic reminder of what could happen to you if you didn't stay on centerline and keep a correct altitude. I've seen pictures more or less as it is now and darn it that cemetery, tree structures all grown up, you can't see the cemetery anymore. Oh well, that's life.

Okay, the collection operation went on from 1976, that's when the 97s disappeared and went back to Willy's Havens including The Boneyard in the United States, and the 05th's mission was basically concentrated on the corridor operations. They did some extra missions around. It was mostly corridor from here on in. And it got three C-130s to do that mission. And the squadron moved to Rhein-Main, it integrated itself at least in the open with a purely airlift C-130 outfit there, got the same markings, made it look everything like a normal C-130 airlifter. However, it was collecting imagery.

And there you are when the better-sized airframe, cargo compartment was various palletized compartments as you could put on board with the different elements, photo, infrared, COMINT, ELINT, et cetera. And you can -- to some degree you could mix and

match but for the most part, it was pretty well fixed from airplane to airplane what they had, between the three of them, they covered the waterfront.

These are the three airplanes involved, 1828, 19 and 22, these are all E-models, and the codenames, I don't want to bore you with too many details, but this shows you that there were lots of different interesting equipment on board these birds. FLIR looking in for radar, comet, RITs is a sort of an EWO function which involves picking up RWR signals. That's a radar warning systems on board airplanes. More on that if anybody's interested but I hope not because I don't know too much more than this.

But it was increasingly sophisticated operation; it took place right up until the advent of the United Germany. And indeed that did happen. First off, a group headquarters was created in 1977, the 3575th that operate this outfit in a basically unrelated squadron, special ops squadron of C-130s at Rhein-Main. And that maintained control over those two squadrons, joined by a third one which was cloned from the 05th, the 7580th ops squadron which was basically the back-enders of these 130s. They were so technical, they had so many maintenance people, crews, [Indiscernible] and so on, but they had to have a separate unit flown.

The last operational coordinate mission was flown, and you can see the date, 29 September 1990, four days later, a united Germany looks to begin. The corridors would go away, the control of German airspace would revert to the new United Germany and the need for the squadron was passed. And there were still Soviet forces remaining to be watched but the Germans took over the aerial surveillance that was necessary on those units until they finally left in 1994. These units though inactivated January 1991 and the units I'm talking about then passed into history.

Now, here's a photograph, it's actually a British photograph. The Brits and the French both had similar programs, not as sophisticated as ours but I managed to work deals with the British folks that have a briefing on theirs. And if you want a totally crazy briefing sometime General, all kinds of British, I can throw that at you and try and get the guy over from England to tell British jokes. It's a wild-west outfit.

Anyway, this is the sort of thing you could do when you watch a ground forces unit for days, months, years, however often you wanted to take imagery. [Indiscernible] is in the south corridor and was the home of the Soviet motorized rifle unit and here's what you could see, overtime given the vehicle types and so on, you could get out chapter and verse how that unit was organized. You could see it going off to training areas and so on. You can see that this was consistently vacant, what's it up to?

Two major crises, the Warsaw pact, the invasion of Czechoslovakia in '68 and the almost invasion of Poland in 198, these units vacated their garrisons and we didn't know anything about it until we saw this imagery and in the case of Czechoslovakia, that unit was involved in the attack. In the case of the Polish one, the Soviets were ready perhaps to do that sort of thing. That's what this imagery could do for you overtime, both on a battle and possible indications and warning.

Here's an air defense battery outside of [Indiscernible] at Barnaul and here are triple A units and TELR, that's Transporter Erector Launcher Radar acronym. Boy, the military loves acronyms, and we Air Force types get upset with Army acronyms, they get upset with ours, one of those deals. But that's what those units were like. Notice the three soldiers off over here watching this crazy airplane flying low-level and getting its picture taken.

Now, these are three examples of which you could do overtime with targets, with imagery targets. In this case, [Indiscernible] Airfield was in the south corridor. It was a major soviet fighter base for most of the Cold War and overtime if you watched it once a week or once every two weeks or a crisis, maybe once a day, you could see the activity of the fighter unit involved, if it deployed perhaps.

And also overtime you could check on construction. You could see new buildings being erected, or buildings being modified. Construction equipment, maybe repairing the runways, and if you watch you could see how they repaired runways, and maybe you could figure out how to bomb those runways, that sort of thing. You can see in this particular example that overtime of course they lengthened the runway considerably for modern fighters and they built this ramp, apron area over here. That housed the PAC helicopter unit, when those were formed in the forward area, beginning in the late '70s.

The SA-2 missile site photo there is generic, it's not from our unit unfortunately but it exemplifies what we had. In the early days, late '50s, as the SA-2 was beginning to be deployed in the Soviet Union, we had very little coverage; it was just U-2 coverage. And then of course came the shoot down and that stopped. But in 1959, a year before that coverage, the soviets deployed their first unit to the forward area that is to East Germany, to a place called [Indiscernible]. And what we saw happening at [Indiscernible] in this imagery that we were shooting was the beginnings of this.

At first we wondered what the heck was this road construction like? And what's this going on? And what's this going on? Finally it dawned on people it was some sort of AAA site and then finally we got actual missiles and missile launch devices and it became what we knew as the SA-2 missile system. So we knew how an SA-2 system was built, and we could see that in other parts of the world as the system proliferated.

The hardened aircraft sheltered business, 1970s, mid-'70s the Soviets hardened their airfields, put these shelters up to shelter their aircraft like we were doing in the West and we could see these being built from ground up day after day, week, month after month. And you could figure out from that how to bust them, and we did that. We figured that if the war ever came, we developed special munitions that go in there and take those shelters out and whack whatever was inside.

And this came to be practically useful in the Desert Storm operation because the Iraqis built their shelters to the same standard. And thus, when it came time to take those shelters out, we had the munitions and we had the tactics down and we took them out. I

think some of you may have seen photos of those shelters with big gaping holes in the roof structure. It's because of this collection.

Now I got a couple stories to entertain you with because dawn doesn't come -- not that Dawn over there but she's about to yank me off the stage I think. But I don't want dawn to appear in terms of the sun before I finish here, but these are two stories that exemplify something and I'll tell them and we'll see what happens.

Encounter in the Antarctic seas. What the heck is this about? We're talking about the Berlin corridors. Okay, this is a post-Cold War story, happens in the late 1990s, a retired Air Force officer's life taking an Antarctic Cruise and aboard a Soviet research vessel. This research vessel had been a former icebreaker and was designed also for collection against the United States East Coast.

Anyway, the Russian captain of the ship has its welcoming line to welcome the passengers on board and it comes to our friend, we'll call him Tom Smith, "Oh Mr. Smith what did you do in your life?" "Well I was in the U.S. Air Force." "Oh you were, what did you do?" "I was a navigator," and he said, "Oh, my engineer officer is a former Soviet fighter pilot, would you like to talk with him?" "Of course."

So the next thing we knew, in the captain's cabin comes Tom Smith, Soviet fighter pilot/engineer and an interpreter. And after a few minutes of basic stuff, and they started doing this, they didn't need the interpreter anymore. The aviation guys are doing their thing.

And before long, the story comes out, Soviet pilot says, "I understand you're a navigator, yeah, what did you fly navigator?" He said, "Well I've flown courier missions in West Germany and including flights to Berlin." He said oh, "Which you fly, electric bird or photo bird?" "Oh," is the answer to that.

Okay, so they knew it. The Soviet pilot said, "Yes, I was stationed at Zerbst Airfield." There is that airfield here, oh get back there big fellow. There is the airfield here, right in the south corridor, another airfield we could watch incessantly. And they -- and especially in the late '50s which is the era we're talking about here, they would launch airborne fighter patrols for daytime patrols off the edge of the corridors, waiting for us to screw up and get out of the corridors and give them a chance to shoot us down and he said that. "We had orders to shoot you down. Aren't you lucky?" "Yes I'm lucky, thank you very much, have another beer or whatever." And that was that story.

Another was I call the tale of the frozen antenna, another illustration of the same thing. That Greek fleet that's going against those special SAM targets is flying in 1966 out of Wiesbaden into Berlin, trying to catch these SA-2 radars. It's December 1966. It's cold, it's misty, those of you that have ever been in Germany at that time can understand. Temperatures at altitude are right around freezing. They take off one morning in this bird, like say it's a Tuesday, head out to the south corridor, they flip a switch, out comes various antenna out of the aircraft in order to do its collection operation. Fly the mission,

get close to Berlin, start to descend, hit the switch to retract those antennas, don't want the Soviets see it, and they don't retract. They don't retract. They're frozen in place.

So what do you do? Modern version of that earlier thing I talked about, "Berlin control, Berlin control, this is 30106 and I've got number 3 engine is out and request emergency heading back to West Germany, on the other side of the corridor." So he goes out, he sends to below freezing level, eventually get the doors closed and land at Wiesbaden. Fly a mission the next day, same airplane, same thing happens, "Berlin this is 106 and number one engine is out today," not a lot of creative stuff here. And it has to abort and head off the central corridor.

The next day, same thing happens, airplane up the south corridor, frozen in place, can't get the antenna door shut, "Berlin, number two engine, blah, blah, blah." Soviet controller in the Berlin Air Safety Center turns to his American counterpart and says, "What's the matter with your spy plane? That you have engine problems?" So, there you are, again.

They knew. We knew they knew. They knew we knew they knew. But it was one of those things you kept quiet. You didn't want Aviation Week to know. That was fundamental, because you didn't want to overly embarrass the Soviet Union. This was the motif of the time. You didn't want them to embarrass us; we didn't want us to embarrass them. So keep it quiet, collect, that helps us do our thing in the West, building better systems, deploying our people better, et cetera, collecting intelligence, but we need to do it quietly. So that's those tales.

And that effectively ends my part of the briefing except for one thing here and that's a thank you to the people involved. You know I have hardly any picture of actual people and this of course is what make things work like these are the people involved over those many years, not just aircrew, but the maintenance people, the supply people, the ground support equipment people, the whole bit across the line, admin support, et cetera. We have thousands of people over time; who were just fulfilling those rules.

I like to quote a crew chief from a C-97, "I think we tend to overlook the offices and airmen who keep our aircraft going. To fly an aircraft like the C-97, it takes a maintenance team that’s dedicated, and knows the aircraft inside and out. I feel a well-trained maintenance staff is the backbone of any flying squadron.” Any aircrew member I ever knew would hardly second that. The most rewarding comment I ever received was from the wife of a long retired pilot. Quote, “Thank you for the safe aircraft you supplied my husband.” And that’s basically the end of my talk. Thank you very much.

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