

What the public didn't know about the Cuban Missile Crisis

This is 'lengthy' but very interesting, particularly since our base at Karamersul, Turkey (6933rd RSM / TUSLOG 3) is where the story begins.....

By WILLIAM REED With W. Craig Reed

I have read volumes about the Cuban Missile Crisis, but nothing about the Cuban Submarine Crisis. For good reason. That story has never been told. It is buried in the vaults of the National Security Agency. I know. I was there, and intimately involved. I have waited almost forty years to tell this story. It is long overdue. I believe that the general public has a right to know and understand what really transpired between President Kennedy and Soviet Premier Khrushchev: why Kennedy made the decisions that he did during that conflict, and why Khrushchev backed down. It had a lot more to do with submarines and potential long-range missiles than it had to do with medium-range ground-based missiles located in Cuba. Never before revealed to the American public, the Soviet submarine force played a key (if not the major) role in the Cuban Missile Crisis.

Thanks to a NSA Top Secret Codeword project termed BORESIGHT, every Soviet submarine at sea, not only those advancing into Cuban waters, but around the globe, was located and targeted by our own Polaris missiles. Confronted with this sobering reality, Khrushchev had no choice but to back down or face World War Three. This was the secret ace in Kennedy's hand with which he bluffed the Soviet Premier. It was a hell of a strategic poker game, and should not be buried in the graveyard of secret history. The Cuban Submarine Crisis started long before 1962:

In 1956, after Nikita Khrushchev emerged as the new ruler of the Kremlin, he exercised his new-found power by appointing Sergei Gorshkov, a seasoned naval veteran at the relatively young age of 45, as Commander in Chief of the Soviet Navy. Gorshkov, had earned his sea legs early in life, attaining the rank of rear admiral at the age of 31. Nikita ... compelled Sergei to begin dismantling larger surface warships by stating that "these large warships are only useful for hauling around admirals." In the years that followed many of the once proud gray veterans of the Soviet Navy were dismantled and sold as scrap.

Gorshkov pointed his New Navy towards the development of missile-armed small craft and submarines to counter U.S. Naval forces then being augmented especially submarines. That was to be the first-line defense and offense program for the Soviet Navy.

The nuclear-submarine program was put in full swing, but diesel-powered units were also updated, especially the deadly Foxtrot class, which could

stay submerged for ten hours or more, operating on batteries, during which time she was considered to be virtually undetectable.

November, 1960, Karamursel, Turkey

"We've lost them!"

"You're kidding."

"Commander, I kid you not. Been over two weeks now, and not one peep. We've lost them."

"Reed, you can't just lose a Russian submarine ... especially not a few dozen Russkie subs. They're out there all right, and they're transmitting."

"Of course they are. I just can't find them. They have to be in the high frequency range ... somewhere between 3,000 to 30,000 kilocycles ... but I've covered every frequency used for the past thirty years or so by Russian subs, surface craft, and maybe even life rafts ... and not even a smell of a transmission."

Commander Petersen scratched his head, along with the rest of us. I should qualify that. Commander Petersen never scratched his head exactly like the rest of us. He was inclined to baldness, had a skin disease which was to him, I am sure, a constant irritant, and when he scratched his head, numerous obscene flakes emerged from his scalp, and he then carefully removed them from under his fingernails with a small pocket-knife blade, and ate them. It was hard to concentrate on any conversation with Commander Petersen when he was eating his dandruff. As the Head of Operations he was our immediate boss, but nobody took him seriously. He had long since been promoted beyond his level of competence, and would not have dreamed of making a decision without first consulting the senior chiefs. Petersen was later transferred to NSA and kicked upstairs into a policy-making billet where he could do little harm. No good field man paid the slightest attention to official policy. The rules of the game in the field were formulated around experience and balls enough to follow gut-level instincts. We all understood the risk-and-reward factor of such a course of action: guess right and you were a hero; guess wrong and you were crucified. Blindly follow the directives of a Petersen, and you were forgotten.

But, at least in this one instance, Commander Petersen was correct. We all agreed that the Soviet subs had to be communicating with their Fleet H.Q. in some manner. Gorshkov didn't trust his sub commanders any more than had his predecessors. Historically they had always been required to check in at least once daily. If they were in foreign waters that could expand to four times a day. There were a lot of Russian subs out there, and that translated into one hell of a lot of signals bouncing off the ionosphere, day and night. And now, nothing. The Naval Security Group, and the National Security Agency, were very concerned, and we field guys were the recipients of that concern or, one might even say, anger. Where were they? We didn't

know. Well, find them!

I had been stationed in Turkey for about one year, on a three-year tour of duty. We maintained a number of military stations throughout that country, and one of these was Karamursel, an Air Force base without aircraft (Air Force Intelligence), located some hundred miles southeast of Istanbul. The primary function at Karamursel was to monitor, by means of massive antenna fields, any electronic emission from Turkey's Big Bear neighbor to the north and east, as well as any transmissions from Soviet fleet units, surface or subsurface. Special attention was focused on major Soviet missile sites, such as that massive one at Tyuratam. By monitoring their transmissions we were able to determine beforehand (by utilizing a number of complex analytical processes) when a missile was to be launched, what type it was, and its probable destination. By maintaining such monitoring stations around the world, we could detect and analyze the special types of transmissions associated with specific types of missiles: short range, medium range or long range. If an unusual amount of long-range missiles were detected in the preparation stage, then we had time to take defensive measures. If it came down to hard ball, we would also have time to launch a preemptive strike. We hoped. Karamursel was important, and the details of its operation very, very Top Secret. A small corner of the station housed a Naval Security Group detachment. I was the Chief-in-Charge of the NSG intercept operations section.

As far as my real boss, Captain Frank V. Mason, was concerned, I was the guy responsible for losing the Russian subs. I was also the guy responsible for finding them again.

Captain Mason (then Commander Mason) had also been my commanding officer some years earlier at the Naval Communications Station, Guam, Marianas Islands. My son was born there, and Mason and I together celebrated his birth. We were old friends, so we could talk man to man in a manner unusual between enlisted and commissioned ranks. It was Mason who arranged for my transfer to Skaggs Island Communications Station outside Napa, California, following Guam, for specialized training, and then to Turkey, to coincide with his takeover there. He had recommended me for a commission; I was his boy. I was letting him down. He wanted to know why.

I said, "Captain, I don't know why. I agree with you that they are transmitting, but if they are it has to be a "burst" signal. That is nothing new, by the way. The Germans used it towards the end of World War Two. They recorded standard Morse-code signals, then compressed them and sent them out in bursts of a few seconds or less. We lost the German subs then, and we've lost the Russians subs now. Given time and enough technological expertise one might expect to eventually DF (direction find) a signal of some sixty seconds ... although highly unlikely ... but if Ivan is

using a burst of under a second, which I suspect he is, we will never DF it, and even if we find it, we can't break it. You know as well as I do that they don't send position reports in any code breakable. It will probably turn out to be a one-time-pad sort of thing, and if we don't have the key we sure as hell can't break the code. And get a DF on a signal of one second or less? Forget it! I am doing all I can, Captain. If he is there, I will find him, but that isn't going to do us a hell of a lot of good, because you will never locate him. Unless, of course you can tell me how we direction find from a recording!" The captain and I both got a good laugh out of that one. Dreamland.

It was Christmas, 1960, when I finally found the lost Soviet submarines. It happened by accident. I had been hearing a "scratchy" sound for some time on various monitored circuits, but had passed it over as some kind of an anomaly, a spurious emission ... whatever. It was sort of like a burst of static ... but not quite. Then, one day, I made a sonograph-enlarged picture of another signal that happened to have one of these scratchy sounds almost on top of it.

Years earlier at Skaggs island what we did primarily was to record and analyze Soviet radio transmissions. Everything was signal coded, naturally, so the trick was to break the signal codes in order to "read" the Soviet military or diplomatic or whatever type of correspondence. In the process we used what was called a sonograph machine, which utilized a large drum around which a photographic type of paper was hand wound by the operator for each signal to be analyzed. On playback of a recorded signal, the structure or positive-negative bauds of the signal was imprinted and enlarged for inspection by the analyst. That work required 20/20 vision and the patience of Job. Once we broke a signal code, which entailed figuring out from the baud formations their equivalent letters in the Russian Cyrillic alphabet, we sent this information to the National Security Agency. NSA engineers were then able to construct machines that could read out these messages just as did the Soviet machines. When NSA began to read Soviet traffic in volume, they passed on relevant excerpts to military or political end users. Good information could not be obtained over long periods of time. Like ourselves, the Soviets changed signal codes frequently. Then it was back to the drawing board and start all over again; vital, boring work.

It was the sonograph machine that enabled me to locate and analyze the "scratchy" signal. I spread it out and took a closer look. I'll be damned! It had bauds! Tiny bauds; the most compressed signal that I had ever encountered ... but bauds. It was a man-made signal, and it obviously was not one of ours. Gotcha! It was a burst signal, and it had to be a Russian sub. It just had to be!

We fired the recording directly to the National Security Agency, and they

were ecstatic! All was forgiven. NSA put their best analysts on it and instructed us to concentrate on obtaining as many recordings of this new signal as possible. And suddenly we (and other Naval Security Group intercept stations) began to find them all over the spectrum. Scratchy signals were music to our ears ... now that we knew what to listen for. As we obtained better recordings, I measured them carefully and deduced that the signal had a "trigger" heading, probably meant to activate a Soviet recording device. The trigger was a series of bauds at 345 cycles per second, followed by a series of bauds at 142 cps. Next came the obvious text of the message. NSA confirmed our suspicions shortly. The subs were back! They had, of course, been there all the time.

Captain Mason received a Letter of Commendation from the National Security Agency (he was bucking for flag rank), and I received a Letter of Appreciation from Captain Mason (I was bucking for a commission). We were buddies again.

We had found the Soviet burst signal, but now the question was, "What can we do about it?" Even before NSA put their best code experts and computers to work trying to break the text, I knew that it was unbreakable. If we could read the text of a position report, we would obviously know the exact location of the submarine. The Soviets would never use a repeating or rotating code on such a transmission. There is an old saying in the code business: "Whatever man can make, man can break." That was true in most cases, but if you used a one-time-pad or a random scrambler device, the code was breakable only if you were in physical possession of the "key." Fat chance. Our only hope, I realized, was to devise a means to locate the transmitters by direction finders. With existing technology, that was impossible. A new concept was required.

The reason a spy tried to get on and off the air as quickly as possible was because he knew, as we all knew, that it takes time to get a bearing on any transmission. One direction finder will give you only the direction from which the signal is emanating. It does not tell you how far away the transmitter is. Three direction finders zeroing in on the signal will give you a triangulation, and the approximate location of the transmitter. A number of direction finders will give you a multiangulation and a much closer location of the transmitter. That's what we needed. But the typical burst signal was on the air for less than a second. That was okay for the operator at a Soviet receiving station, since his triggering device would automatically turn on his recorder. Once recorded, the operator had all the time in the world to feed the signal into a decoding machine which contained the key to translate the coded bauds into Cyrillic alphabet and thence to Russian plain language. We could (and did) build a triggering device to record the signal, but that left us with nothing more than an unbreakable code.

Since direction finders didn't have time to get a live bearing, our only hope was to devise a means whereby we could obtain a bearing "after the fact" from a recorded signal. That had never been done before. I didn't believe that it could be done, but I was wrong. NSA engineers did exactly that during a crash program on a par (almost) with the Oak Ridge development of the atomic bomb during World War Two. Within months after intercepting the first Soviet burst signal, we had stations set up and operating to detect, record and direction find Soviet submarines. At first this was limited to areas of primary strategic importance, but soon expanded to cover every body of water in the world.

In common with most great discoveries, the concept was, in retrospect, basically simple: it consisted of constructing huge circular antenna fields in areas around the world which would be able to well receive transmissions from critical bodies of water in which Soviet submarines normally operated. These antennae were connected to large banks of receivers, tuned to narrow bandwidths which overlapped and covered the entire spectrum that the submarines might conceivably use. When a receiver encountered a trigger on a burst signal, a wide (two inch) sixty-inch-per-second recorder switched on immediately and recorded the signal, along with a marker, indicating the time to the millisecond that the signal was intercepted. Since the antenna field was circular, and divided into segments every few feet, it was also possible to determine, tangentially, the general direction from which that signal had been received. When combined with two or more other intercepts which provided a triangulation or multiangulation indicating the general direction from which the signal had emanated, one was able to determine, after the fact, the approximate location of the submarine.

Later, when we had obtained ample space at our site locations to construct separate antenna fields for both intercept stations and direction-finding stations, we were afforded the luxury of comparing notes between the two to obtain even more precise evaluations of direction. Ample space on site was a prime consideration since, besides the large antenna fields, the space required for the reception and recording equipment covered an area as large as a full-sized New York apartment, and had to be fully air conditioned, since the receivers in those days still used vacuum tubes, and generated considerable heat. Land area sufficient for construction of a base, with housing and other facilities for the operational personnel, had to be taken into account. Large power plants and ancillary units had to be installed. The project was immense in scope, and was classified Top Secret: CODEWORD. That codeword, which designated the entire program, was BORESIGHT.

What I am saying here is so outdated that it is no longer classified, or shouldn't be. HF (high frequency) systems such as this have been made obsolete by VHF (very high frequency) and UHF (ultra high frequency)

satellite communications technology. The U.S. Navy, for example now uses the SSIXS (submarine satellite information exchange system) for communications between its submarines and shore stations. Other nations have their own versions of this sophisticated and extremely secure communications system. So what I have been saying is ancient history. Interesting and, I'm sure, never before revealed, but history nonetheless. The BORESIGHT system which I have just described is now as outdated as the Model-T Ford. It was, however, extremely critical as a factor in solving the Cuban Missile Crisis.

But back in 1961 we were in the experimental stage regarding BORESIGHT, and we had to train operators at outlying stations what to look for, and how to analyze the signals when they received them. You couldn't mail them a tape, and of course you couldn't describe anything by telephone or radio. The tapes containing examples of burst signals had to be hand carried. That meant by armed courier, with the tape in a briefcase attached to his arm by lock and chain. In other words that meant me, and others like me, who knew the signal first hand and could train operators in the field. During the next few years I circled the globe many times helping to install BORESIGHT stations.

In early 1962 I was notified that I had been selected for a commission in the United States Navy. All those years of correspondence courses, night school, and hard work at my profession had finally paid off. I was directed to report to the LDO School, Newport, Rhode Island, in August, 1962, for "fork and knife" training, where they would teach me how to act like an officer and a gentleman. But I actually received my commission and ensign's bars in Turkey on July 1. Following LDO School, I was assigned to the NSA for duty.

National Security Agency, Fort Meade,
Maryland 1962-1965

Upon reporting in at NSA I was assigned a minor desk in Section A22, the Soviet Submarine or, effectively now, the BORESIGHT section. As the only man in the section with any actual BORESIGHT field-operational experience, I encountered a great deal of confusion and misunderstanding about what the equipment could and couldn't do. We brought in other field-experienced personnel, and eventually worked into a competent BORESIGHT-Control headquarters.

In September 1962, our U-2 over-flights finally confirmed what had been suspected: the Soviets were installing missiles in Cuba. As far as I know, that's all the American public ever heard about. I'm not sure that this has ever been officially acknowledged, but I can assure you that there was a Cuban Submarine Crisis going on simultaneously. We had received evidence of Soviet submarine-pen construction in Cienfuegos, Cuba. How much of this came

from air surveillance and how much from on-site penetration would be pure speculation on my part, but we were advised by reliable sources that it was so. Soviet submarines with potential long-range missile-launching capabilities (boomers), stationed that close to U.S. shores, with the resultant increased ability to range up and down our coasts, posed a much greater threat than medium-range fixed missiles in Cuba. That danger had to be eliminated at all costs. We were told to maximize efforts to locate the position of every Soviet submarine possible. We did so, and started to get hit after hit on BORESIGHT.

In late October we obtained BORESIGHT fixes, and later visual sightings, of four Soviet Foxtrot-class attack boats converging on Cuba. We suspected more on the way. That's when my boss, Commander [McPherson], who was Chief of Section A22 (Soviet Submarine Section) at the NSA, was called to the White House. The president and his inner circle had previously been briefed on BORESIGHT of course, but in light of these new developments they wanted an up-to-date confirmation of just how good it was, and a technical explanation of precisely how it worked. Should the U.S. decide to blockade Cuba, a Wolf Pack of near-silent Foxtrot submarines carrying nuclear-tipped torpedoes could spell disaster ... unless we could find them.

Commander [McPherson] was a sharp, competent, naval officer, but he only knew BORESIGHT second hand, mostly from me. In fact, he and I together had worked up his presentation. Operationally he was on solid ground, but he was a bit intimidated by some of the technical aspects.

"I'm sure I've got it, but I don't want to get hit with a surprise technical question and have to tell the President that I'll get back to him on that later. You'd best come along Reed, just in case."

A lowly ensign in the U.S. Navy invited to the White House? Unheard of. What the hell, I thought, before I was an ensign I was an old grizzled Navy Chief. Nobody screws around with a Navy Chief ... right? Sounds tough, but to tell the truth, I was as nervous as a seaman recruit on the first day of boot camp.

The briefing was actually held in the "little" White House, or annex, off to the right side of the White House proper. I was disappointed that it was not to be held in the Oval Office, but when I saw the size of the crowd attending I realized why it was not. The Oval Office is in fact a small office in size.

Commander [McPherson] gave a very good presentation, but as the briefing progressed and the questions became more technical and precise, I was called upon frequently to amplify. I had brought along charts and graphs which I had previously prepared for use in a BORESIGHT manual which I was in the

process of writing. Most of the questions came from the panel of technical experts from various agencies of the Defense Department. But there were also occasional queries from a group of quiet "grey" men in the outer gallery. I didn't know who most of them were, and did not especially care. We were here to brief the President. If he wanted someone else present that was his decision to make. I later discovered who the grey men were after reading a book by Robert Kennedy (written in 1967 and published in 1969) titled: Thirteen Days. Robert Kennedy was present at the briefing as well as the other members of President Kennedy's Advisory Committee (ExComm), which in Robert Kennedy's own words included:

"... Secretary of State Dean Rusk; Secretary of Defense Robert McNamara; Director of the Central Intelligence Agency John McCone; Secretary of the Treasury Douglas Dillon; President Kennedy's advisor on national security affairs, McGeorge Bundy; Presidential Counsel Ted Sorenson; Under Secretary of State George Ball; Deputy Under Secretary of State U. Alexis Johnson; General Maxwell Taylor, Chairman of the Joint Chiefs of Staff; Edward Martin, Assistant Secretary of State for Latin America; Llewellyn Thompson as the advisor on Russian affairs; Roswell Gilpatric, Deputy Secretary of Defense; and, intermittently at various times: Lyndon B. Johnson, Adlai Stevenson, Ambassador to the United Nations; Ken O'Donnell, Special Assistant to the President; and Don Wilson, who was Deputy Director of the United States Information Agency. This was the group that met, talked, argued, and fought together during that critical period of time. From this group came the recommendations from which President Kennedy was ultimately to select his course of action ... The general feeling ... was that some form of action was required ... I passed a note to the President: 'I now know how Tojo felt when he was planning Pearl Harbor.'"

President Kennedy asked very few questions. He appeared to me to be tired. Secretary of Defense Robert McNamara, a man whom I had always admired and respected, seemed to be pretty much in charge ... at least at the beginning of the briefing ... but as we began to cover the more detailed technical aspects of BORESIGHT, he looked like he was falling asleep; head down, almost on his chest. We had put in a hell of a lot of work on this thing, and I was annoyed that SECDEF didn't seem all that interested. I learned that my fears were totally misplaced. When the presentation concluded, McNamara's head came up. The first question (or rather review) came from him. He said, "Now let me see if I understand this ..." and proceeded with the most precise and comprehensive explanation of BORESIGHT that I have ever heard. He had memorized just about everything that we had presented in a two-hour briefing. And he had the ability to make even bauds and bits and radio-wave-propagation theory sound interesting. Robert McNamara was (and probably still is) one scary guy.

As we were leaving the conference room Commander [McPherson] said to me

in an aside, "Now what do you suppose that was all about?" I knew what he meant: SECDEF engineers must surely have known how BORESIGHT worked. They shouldn't have to be told that again. In hindsight, I think what they really wanted to know, and what the President had to be assured of, was: What did a BORESIGHT position report translate to in terms of precise target location? Was it 100 yards, or 500 yards, or five miles? A big difference to one of our ASW weapons. If this came down to a shooting war, could we take out one or two of the subs moving in Cuban waters, or all of them, if needed, with one concentrated strike?

The point that we made to them, over and over, was that we had a very limited number of BORESIGHT stations installed and operating. We would be lucky to get a simple triangulation fix. That would put them in the right ballpark, but it would not guarantee (without luck) the precise base pad. Once in the ballpark, it was up to their ASW forces to find the base runner. Given more locations, which would provide us with multiangulation fixes, maybe six or seven DF line bearings converging on the target, we could tell them Who was on first and What was on second.

The Cuban Missile Crisis:

My son, William Craig Reed, spent six years aboard nuclear submarines (late 70's and early 80's) as a fire control technician, espionage photographer, and SEAL-trained navy diver and was involved in the most devastating collision between a U.S. and Soviet submarine during the Cold War (documented in the Writer's Press book CRAZY IVAN now available at Barnes & Noble). Together, we compiled a precise day-to-day account of U.S. Naval operations during the Cuban Missile Crisis, including the vital role that BORESIGHT played in bringing that operation to a successful conclusion. In the details of those day-to-day operations of the U.S. Naval ASW forces, we point out time and again how the ships of our fleet were directed to the precise locations of various Soviet submarines. They had made the mistake of raising their antennae and sending off position reports by the burst signals that they were convinced were undetectable, and BORESIGHT nailed them.

There was no militant exchange involving Soviet submarines, because by this time Khrushchev was having second thoughts. His Fleet Commander, Admiral Gorshkov, continued to assure him that the Foxtrots, operating on battery power, were invisible. They could not be detected by the Americans! But Khrushchev was receiving reports hourly from his submarine commanders contradicting this assurance. His "invisible" Foxtrots were being prosecuted around the clock by U.S. ASW forces to the point that they were often forced to surface under threat of depth-charge attack. Khrushchev began to realize that he could no longer back up his threat to "sink the American naval vessels" should they try to effect a quarantine of Cuba. On the contrary, his Foxtrots were in imminent danger of being sunk! The deciding factor in this exchange was, of course, BORESIGHT.

Admiral Anderson later commented in his unpublished memoirs:

"... we concentrated our whole area antisubmarine coverage to the point that every Soviet submarine in the western Atlantic was made to surface at least once, or several times in some instances. I had excellent cooperation from [Admiral] Dennison in that regard, and I did follow very intensely our successes in that respect. One incident occurred. We knew where one of these particular submarines was located. We had that information from the most highly classified intelligence that the Navy had at that time [BORESIGHT]. We were very anxious to preserve that intelligence, and very few people knew about this type of intelligence. We had a destroyer [USS Charles P. Cecil, DDR 835] sitting on top of this submarine [Foxtrot pendant number 911]. One evening, McNamara, Gilpatric [sic], and an entourage of his press people came down to flag plot and, in the course of their interrogations, they asked why that destroyer was out of line. I sort of tried to pass it off because not only were there some of McNamara's people there who were not cleared for this information, but some of my own watch officers were not cleared for it in the general area of flag plot. After some discussion, I said to McNamara - he kept pressing me - 'come inside,' and I took him into a little inner sanctuary where only people who had clearance for that particular type of classified information were permitted, and I explained the whole thing to him and to his satisfaction as well."

At 10:30 AM on October 27, 1962, Secretary of State Dean Rusk turned to McNamara and spoke words that would make history, "We're eyeball to eyeball and I think the other fellow just blinked." All Soviet ships headed toward the quarantine line had stopped or turned toward the Soviet Union. The Essex received her next orders: do not fire, allow the Soviet ships every opportunity to turn around!

What made the other fellow blink? Volumes have been written trying to answer that question. Aleksandr Fursenko and Timothy Naftali suggest in their book: *One Hell of a Gamble*, that it was because of a Russian immigrant from the Balkans named Johnny Prokov, a bartender at Tap Room in the National Press Club, Washington, D.C.. They contend that Prokov passed to Anatoly Gorski, a KGB officer, information that he had overheard during a conversation at the bar between two celebrated American journalists, Robert Donovan and Warren Rogers, both correspondents of the *New York Herald Tribune*. "Apparently Donovan was supposed to fly south that very night 'to cover the operation to capture Cuba, which is expected to start the next day ...'" The story was that the KGB passed that information immediately to Moscow, and Khrushchev had it on his desk within hours. He was finally convinced that Kennedy was serious about going to war over Cuba, and that was why he backed down. Khrushchev backed down because of a conversation overheard at a bar? That smacks of a pretty desperate bid to find an

answer.

To this day, I contend that Khrushchev almost surely received and understood a message from Kennedy in words to the effect that:

"We can find your boats, you can't sink our blockading ships with your Foxtrots, and you won't be able to hide your submarines in Cuba. We know about the submarine base that you are building in Cienfuegos, but it will do you no good, because we will make sure that no Soviet missile-capable submarine ever gets near Cuba again!"

Khrushchev knew as well as Kennedy that if we had their submarines pinpointed, the ball game was over. The land-based medium-range missiles sited in Cuba could damage a considerable segment of the United States, but the use thereof would result in massive retaliation against both Cuba and the Soviet Union. He stood to lose all of his Foxtrot subs now converging on Cuba, and he would lose his submarine pens in Cuba from which he had planned to service nuclear-powered boomers in the future off the shores of the U.S..

Khrushchev fully expected to lose the fixed missile sites in Cuba during the first missile exchange, but he had counted on the long-range missiles aboard his boomers to tip the balance, since those submarines (like the Foxtrot under battery power) were heretofore considered to be undetectable. Suddenly, it appeared that none of his submarines ... not only in Cuban waters, but perhaps around the world ... were undetectable! He was playing a losing hand. It was poker that Kennedy was playing, but it was good poker:

I can visualize the scene: Khrushchev bet Cuba. Kennedy said, "Call and raise. We're going all the way on this one Nikita," and pushed the world into the pot. It was the highest stake poker game ever played. Khrushchev threw his cards on the table and said, "Fold!" His ace-in-the-hole had been exposed.

Khrushchev discovered to his regret that he was now dealing with a new Kennedy, not at all the Kennedy of the Paris fiasco. This was a man who had assuredly grown into his presidency, and a president who was obviously backed by a United States Congress ready and willing to risk World War Three. The Soviet Politburo, on the other hand, was not, and prominent members thereof were pressuring Khrushchev to ease off. This was a reckless game that he was playing! They did not wish to risk all-out war at this time. Khrushchev was left with no other choice but to turn his ships around or face World War Three ... and probably a bullet.

And World War Three it would have been had there been one small miscalculation by either side. After that hair-raising confrontation and a short cooling-off period of rational exchange, Khrushchev agreed to pull out

all offensive-capable weapons systems from Cuba in exchange for an assurance that the U.S. would not launch or back an invasion, and would also remove missile sites in Turkey which were targeted on the Soviet Union. The Cuban Missile (and Submarine) Crisis was over. I'm sure Kennedy didn't trade off any BORESIGHT secrets to the Soviets, because we used the equipment to good effect for some years to follow, but I can't doubt that he told them the exact number and the exact location of their submarines in Cuban waters ... and probably elsewhere. How we knew must have driven Ivan crazy! There is no doubt in my mind that Kennedy did it right. We owe him.

There is also no doubt in my mind that two technological breakthroughs, one called RADAR (developed by English scientists for combat operations just prior to the German aerial assault against Britain in September, 1940), and one called BORESIGHT, were highly instrumental in achieving victory in two of the most decisive world conflicts of this century: the Battle of Britain, and the Cuban Missile (submarine) Crisis, respectively. And one should never forget the tenacity and the courage of the British Bulldog and the Irish Wolfhound behind them.

Following the Cuban Missile Crisis, BORESIGHT quickly became the hottest program at the National Security Agency. We had the full backing of SECDEF McNamara. He insisted upon a crash program. We were to install BORESIGHT in every corner of the Globe! He pressed our allies for the use of choice locations in which to install the large antenna fields required, and in which also a secure environment obtained. Security was paramount.

The remainder of 1962 and all of 1963 was a period of system refinement and expansion. Major installations included: Adak, Alaska; Kamiseya, Japan; Guam; Pearl Harbor; Port Lyautey, North Africa; Edzell, Scotland; Cheltenham, England; Recife, Brazil; Winter Harbor, Maine. These were backed up by a number of secondaries, constantly expanding.

By 1964, BORESIGHT had been designated the number two U.S. military priority, second only to the development of U.S. Polaris ballistic-missile nuclear submarines. It remained so closely guarded a secret for the next twenty years or so, that nobody ever questioned publicly what effect this program might have had in the crucial final-day talks between President Kennedy and Soviet Premier Khrushchev. How could they have? If there had been so much as a rumor of BORESIGHT, the NSA, the CIA, and even the President of the United States would have sworn under oath that no such program had ever existed. And nobody ever asked questions about the Cuban Submarine Crisis either, since that also never existed. Right?

But there are still a few of us around who know better, including the former Secretary of Defense, Robert McNamara. He knows the story about BORESIGHT and the Cuban Submarine Crisis as well as I do. Ask him.

A more comprehensive account of the part that BORESIGHT played in the Cuban Missile Crisis is offered in the new book by W. Craig Reed and William Reed, titled: Crazy Ivan, and now available from

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