

## **Kagnew Station – The Earliest Days**

After reading *A History of Kagnew Station and American Forces in Eritrea* when Rick first posted it on kagnewstation.com around 2007, I was skeptical that U.S. military operations in Eritrea didn't really get started until April 30, 1943, when Second Lt Clay Littleton arrived with six enlisted men. After all, when he arrived, the British had been in Asmara for more than two years since their capture of the city on April 1, 1941. Indeed, military operations in East Africa had effectively ended not long after that with the surrender of the Duke of Aosta at Amba Alagi on May 14, 1941.

The Kagnew History does say that "the first American military advisors and contract civilians probably arrived in Asmara late in 1941." Still, I was curious about exactly what was taking place in Eritrea in those earliest days and have been reading about U.S. operations there on and off ever since.

In fact, the first American civilians arrived before late 1941. And, as we shall see, the U.S. had a very important permanent military presence in Eritrea earlier than April 1943.

The first part of this paper gives some facts about the earliest U.S. military activities in Eritrea, largely relating to Lend-Lease; the second part describes our earliest permanent military operations in Eritrea. Those who want to bypass Lend-Lease can jump down to "The First Permanent U.S. Military," below.

### **Lend-Lease**

#### **Background**

As the Kagnew History points out, the earliest military advisors and contract civilians were part of the Lend-Lease program, which had been authorized in March 1941, and under which war all kinds of war materials were provided to the British and other allies. While much of the work was performed by civilians, Lend-Lease was substantially planned and administered by the military.

That same month, Erwin Rommel began his offensive against the British Eighth Army in Libya, highlighting the strategic importance of the Middle East: its loss would not only further isolate China, the Soviet Union, and Turkey, but the oil of Iran and Iraq, the lifeblood of modern warfare, would be available for Axis tanks, planes, and ships, rather than those of the Allies.

To manage Lend Lease in North Africa, the U.S. military established a North African Mission in Cairo on September 13, 1941, three months before the U.S. declared war against Germany and Italy on December 11.<sup>[2]</sup> In his Cairo headquarters, Brigadier General Russell H. Maxwell, the head of the mission, planned facilities for aircraft repair and assembly at Gura, reconditioning and repair shops for tanks and motor vehicles at Asmara and port and naval repair facilities at Massawa.<sup>[2]</sup>

While much is made of the secrecy shrouding early U.S. involvement in Eritrea, especially Project 19, U.S. plans were well out in the open. The day after official U.S. entry into the war, a number of U.S. newspapers carried, under varying headlines, the following (almost breathless and, in places quite erroneous) AP story. Notice that the dateline is actually the day *before* the U.S. declared war on Germany and Italy.<sup>[3]</sup>

### **United States To Take Over Eritrea As Arsenal**

Cairo, Dec. 10 (Delayed) (AP) –

The United States will virtually take over Eritrea for the duration of the war and convert it into an arsenal of the democracies in the Middle East under an arrangement with Great Britain which was made known here today.

Title to this strip of land along the Red Sea which was wrested from Italy by British forces will remain with Britain, and its administration will continue to be British. But the United States will pour thousands of technicians into it to erect factories, assembly plants, and innumerable other establishments.

It will be the powerhouse behind combat troops in this part of the world.

Well out of enemy bombing range, airplanes, tanks and other equipment will be assembled there and minor manufacturing will be carried on. American materials will pour into Eritrea and come out as the implements of war, ready for the battlefield.

Other more extensive measures which can not be disclosed now are also on the program.

Cities situated in salubrious climatic conditions will spring up, linked to the coast by new railroads. The task of converting this land into an enormous supply base, although staggering, will be carried out with lightning speed. It is an undertaking unparalleled in world history.

### **Project 19**

The aircraft repair operation at Gura - known as Project 19 - is probably the most well documented of the early operations.

Many of the stories about Project 19, most of which were told only years later, lead one to believe that the Douglas Aircraft civilians didn't arrive in meaningful numbers until mid-year 1942, such as when the steamer *Rajula* arrived at Massawa, as described by Dick Turpin.

The Kagnew History, however, does mention 120 Douglas engineers and other staff who assembled in New York in December 1941, but it doesn't provide a date of arrival in Eritrea. That date, however, was likely "early in March" 1942, for it was then when men of the Hamilton Standard Propeller Corporation of East Hartford, Connecticut, (once the world's largest manufacturer of aircraft propellers) arrived by ship in Eritrea. According to a newspaper account after the men arrived home, "The propeller servicemen were part of an all-American industry repair team sent to the Douglas-built and operated Base 19, deep in Eritrea, 7,200 feet above sea level."

“Not only were working conditions primitive, but living on the Eritrean base was no bed of roses. Leopards, hyenas and wild camels were daily in evidence. There were stories of workers being torn apart by angry baboons.”<sup>[4]</sup>

While the Kagne History says it was decided in November 1941 that the U.S. would establish an air base at Gura, in fact “Douglas Aircraft Company had been selected in *October* 1941, to operate a British-aid air depot as contractor for the Air Corps within the framework of the North African Mission.”<sup>[5]</sup>

Indeed, it is quite likely Project 19 was envisioned even earlier than October, because “Gura, designed to overhaul all types of American engines and planes currently in use in the Middle East, grew out of a British request in the summer of 1941.”<sup>[6]</sup>

### **Asmara Arsenal**

The tank and vehicle repair shops slated for Asmara were new to me, but as noted above the plans were being reported as soon as the U.S. entered the war. A UP story of December 13, 1941 reported that while an American diplomat who had recently arrived in Cairo characterized as “ridiculous” reports that the U.S. would take over British-occupied Eritrea, he nonetheless “pointed out that Americans would be stationed in Asmara and Massawa, Eritrea, in airplane and tank maintenance centers. Plans for maintenance centers were made and carried out even before the United States formally entered the war.”<sup>[7]</sup>

In fact, by late 1941, the chief U.S. ordnance officer in Cairo had planned seven very elaborate installations, which he called, in typical mil-speak, “OMET's,” short for Ordnance Middle East Tasks, in Africa and the Middle East, including OMET 3 – “an intermediate depot at Asmara to overhaul tanks and aircraft armament.”<sup>[8]</sup>

Shortly after the U.S. entry into the war, however, the “fluidity of the warfare” in the North African desert caused the Army to rethink and change its plans, and Asmara Arsenal “was scaled down from a large, specially built intermediate depot to a small arsenal housed in Italian shops and used for the repair of small arms, trucks, motorcycles, and tires and the manufacture of tools, parts, buckets, and other small items.”<sup>[9]</sup>

I have not been able to determine exactly when Asmara Arsenal got up and running, but it was likely in the early months of 1942. A March 25 news account reported that “Hundreds of United States engineers and craftsmen and thousands of Italians and native laborers are busily at work in making this conquered Italian colony into an arsenal to turn out the tools of war in this part of the world.”<sup>[10]</sup> The story went on to say, “The project still is in a preliminary stage. No production has been started, but the program is of such an extent that the appearance and tempo of this barren land already have changed.”

When Cairo was threatened by Rommel in late June, many units were evacuated to the relative safety of Eritrea. Among them was the first U.S. Ordnance unit sent to the Middle East, the 525th Heavy Maintenance Company (Tank). "On 2 July the company was sent by ship to Asmara Arsenal in Eritrea and remained there about two months. Then it was flown back to Cairo . . . "<sup>[11]</sup>

Evidently Asmara Arsenal employed civilians, many of whom had performed ambulance service with the American Field Service, as this early 1943 letter of appreciation attests:  
[12] [13]

HEADQUARTERS  
Service of Supply  
United States Army Forces in the Middle East  
Office of the Ordnance Officer

Commanding Officer,  
American Field Service,  
G.H.Q.M.E.F

Cairo, Egypt  
January 4, 1943

Dear Sir,

1. Realizing your continued interest in former members of your Command, this Headquarters would like at this time to inform you of the excellent service being performed by approximately thirty former members of the of the American Field Service who were employed by the United States Army for duty in Asmara Arsenal, Asmara Eritrea. High Ranking Officers of this Arsenal have been enthusiastic in their praise of the effort being put forth by these men and have expressed a desire for as many more as we are able to employ. The work these men are doing is varied in nature and although a long way from the front line, it is a very important part of our War effort in this theatre.

2. This Headquarters will continue to interview with a view of placing in Asmara Arsenal any or all members of the American Field Service who are released by you and elect to follow their former comrades to Eritrea.

Sincerely,

(signed)  
S.W. Connelly,  
Lt.Col. Ord.Dept.  
Ordnance officer

**Massawa Naval Operations**

As for the port and navy repair facilities at Massawa, Commander Edward Ellsberg arrived in Massawa on March 31, 1942, and he had at least a couple of Americans

working in his Eritrean, Italian and American crew by April 19. This operation, too, is well documented, in the Kagnev History, and nicely by Ellsberg himself. <sup>[14]</sup>

Again, however, the operation was not particularly secret. Three weeks *before* Ellsberg's arrival, newspapers were running a UP story with a London dateline and the headline "America Sets Up Navy Base On Red Sea."<sup>[15]</sup> The article quoted a high ranking British official who said that "the new American naval base in Eritrea (Italian colony on the Red Sea) is not very big at the moment but it is going to be a wacker.'" Under the subtitle "Roosevelt Ired," the story continued, "President Roosevelt today criticized the disclosure by British Supervisory Production Minister Oliver Lyttleton that an American naval base has been established in Eritrea on the Red Sea." When Roosevelt was asked about the disclosure at his press conference, he said that "to discuss this base would be an invitation to bomb it."

### **Eritrea Service Command**

Not only was there a lot going on in Eritrea, but Asmara was for a while headquarters of a large command.

In August 1942, the supply function of the United States Army Forces in the Middle East (USAFIME), which had replaced the North African Mission in June, was subdivided into geographic commands, one of which was the Eritrea Service Command, with headquarters at Asmara, and which reported directly to theatre headquarters.<sup>[16]</sup>

The Eritrea Service Command covered Anglo-Egyptian Sudan, Eritrea, French Somaliland, Aden, and all of Arabia south of the Persian Gulf.<sup>[17]</sup> Not only was the Command geographically extensive, but the U.S presence in Eritrea alone was surprisingly large – according to one post-war account: "Approximately 10,000 U.S. civilian and military personnel were stationed in Eritrea,"<sup>[18]</sup> although I must say I find that statistic suspect.

With most construction completed by year-end 1942 and most if not all North African supply operations wound down by late 1943, the Eritrea Service Command was merged into the newly formed Middle East Service Command, and Eritrea became a base command subordinate to the new headquarters in February 1944.<sup>[19]</sup>

There is a photo of Eritrea Service Command headquarters on kagnevstation.com.<sup>[20]</sup> It is identified as "circa 1950", but I suspect it is much earlier than that, likely pre-1945.

### **Ferrying and Transport**

A key part of Lend-Lease that has not been particularly well documented as it relates to Eritrea was the aircraft themselves and just how they made their way to the Allies in North Africa and elsewhere.

The responsibility for delivering aircraft overseas was given to a new agency, the Air Corps Ferrying Command, created specifically for that purpose in May 1941. Among the Command's four major overseas air routes was the South Atlantic route which, via Brazil, would at first link the U.S. with West Africa and later other parts of Africa, the Middle East, India and China. Military pilots, however, would not deliver all of those aircraft – instead, the U.S. would employ private companies and civilian pilots.<sup>[21]</sup>

The first such operations over the South Atlantic began in June 1941, carried out by a subsidiary of Pan American Airways which had been organized especially for the job, and which undertook to deliver twenty transport-type aircraft to the British in West Africa.<sup>[22]</sup>

That same month, Juan Trippe, the founder of Pan Am, had met with Winston Churchill, who asked for Pan Am's help in moving aircraft from West Africa to British forces in North Africa.<sup>[23]</sup> Trippe agreed, and within a week after meeting Churchill, even before contract negotiations began, he sent a Pan Am survey team led by Pan Am–Africa's newly appointed System Manager, Frank Gledville, across the continent to Cairo, and on to Asmara, likely by early July 1941.<sup>[24]</sup> This is the earliest American war-related visit to Eritrea that I have found.

Although aircraft destined for the British in North Africa traveled from West Africa by way of Khartoum in the Sudan, Asmara became a waypoint for deliveries to the Middle East, to the USSR, and to the Allies in the CBI (the China-Burma-India Theater). By June 30, 1942, Asmara was on a map of the Army Air Forces' principal foreign transport and ferrying routes, linked to Khartoum and to Aden.<sup>[25]</sup>

A video that tells the fascinating story of Pan Am's role in the war effort - *FDR's Secret Air Force* – is available online at: <http://vimeo.com/30142501>

According to John Schwally, Pan Am–Africa operated flights to December 1942 and had a station at Asmara.<sup>[26]</sup> Indeed, “until late 1942, when all ferrying operations over the southeastern route were militarized, the great majority of lend-lease aircraft that were delivered overseas by air were flown to their destinations by civilian crews of Pan American Air Ferries.”<sup>[27]</sup>

### **Asmara Field**

After the War Department's directive of February 1942, that all Lend-Lease projects sponsored by the U.S. Military North African Mission be militarized, “By special arrangement, some 2,500 civilian employees of the Douglas Aircraft Corporation were to continue operating the Gura depot for another six months, and about 2,000 employees of engineer contractors were to remain on civilian status, but all projects were brought under military control.”<sup>[28]</sup>

I was puzzling over the presence of so many contractors, until I saw a question posed by Arthur Ayotte, an officer on the USS *Chateau Thierry*, a Navy ship which transported a large number of U.S. civilians from Charleston to Massawa for Project 19. As Ayotte put it in *The Summer of '42*,<sup>[29]</sup> his humorous description of the voyage,

“Before Pearl Harbor the idea of the Asmara field was part of Pan American Airways' inchoate string of round-the-world flight stops. It had been constructed by Morrison and Knudsen, under contract to Pan Am.

“A question that I have never heard answered is this: How long had that field been under construction? The British had not captured Eritrea until May of 1941. Large airfields are not built overnight.”

Indeed, Pan Am was “the chosen instrument for building a series of airfields in Africa capable of receiving the planes ferried across the ocean from Recife, Brazil.”<sup>[30]</sup> As *Time* magazine reported in early September 1941, “Across Africa, Pan Am planned direction finders, hangars, fields, communications and weather stations, resthouses. Priorities for the necessary materials are expected to be granted shortly. The company intends to have the service functioning before snow flies in the U.S.”<sup>[31]</sup>

### **American Volunteer Guard**

I have been unable to determine who exactly constituted the “American Volunteer Guard,” but it was likely a collective term that included at least the U.S. civilian employees of Project 19 and probably all U.S. civilians employed by the U.S. military in Eritrea.

In any case, service in the American Volunteer Guard in Eritrea was later designated as eligible time toward VA benefits, similar to the American Volunteer Guard in China, better known as the Flying Tigers, and a number of other civilian groups, including overseas airline employees involved in ferrying and transport for the military. According to the VA, “Honorably discharged members of the American Volunteer Guard, Eritrea Service Command, between June 21, 1942, and March 31, 1943, have been certified as active military service for benefits purposes.”<sup>[32]</sup>

### **U.S. Consulate**

In preparation for the extensive activities that would soon begin, diplomacy was under way by late December 1941 to establish a U.S. consulate in Asmara to deal with all those civilians:<sup>[33]</sup>

125.146P/1a: Telegram

The Secretary of State to the Ambassador in the United Kingdom (Winant) WASHINGTON, December 26, 1941 - 7 p.m. 6031.

Please inform Foreign Office that we consider it desirable to establish American Consulate at Asmara, Eritrea in connection with American maintenance and supply project in East Africa. Request Foreign Office to inform appropriate British authorities of proposed establishment of this office in order that usual facilities may be extended to Consul. Explain that it will of course be understood that the request for these facilities has no bearing on question of territorial sovereignty. Neither provisional recognition nor exequatur being requested. E. Talbot Smith, now in United States on leave, being assigned as Consul at Asmara.  
HULL

British approval of a consulate was received in January 1942 when the British Foreign Office advised the U.S. that “British military authorities . . . will be happy to afford E. Talbot Smith all appropriate facilities in the accomplishment of his duties in the militarily administered enemy territory of Eritrea.”<sup>[34]</sup> Despite the apparent welcome of a U.S. diplomatic presence, the subtle reminder that Eritrea was militarily administered by Britain perhaps lends some credence to John Spencer’s assertion in *Ethiopia at Bay* that, “after Pearl Harbor, Washington had sought and received Britain’s reluctant permission to install an intercept station at Asmara.”<sup>[35]</sup>

Annotated to the text of the answering telegram was the following footnote: “The Consulate opened July 1, 1942. After American military activities and interest in this area subsided, the Consulate was closed on June 1, 1943.” That, of course, was less than a year later and not long after the arrival of 2d Lt Littleton.

### **The First U.S. Military Visitors**

The earliest U.S. military personnel in Eritrea that I have been able to document was Major Crawford Sams, the mission surgeon of the United States Military North African Mission. Within a few weeks after his arrival in Cairo on November 22, 1941, “Major Sams had completed sanitary surveys of Egypt, Eritrea, Anglo-Egyptian Sudan, and Palestine, using local civilian, British, and captured Italian records as well as personal reconnaissance.”<sup>[36]</sup>

Nonetheless, I would not be surprised to learn that U.S. military had visited even earlier, perhaps as early as April or May 1941, when British troops took control of Eritrea.

### **The First Permanent U.S. Military**

Although Don Davis, Major, Infantry, Commanding, USARS, stated in the *Handbook of Eritrea* (Asmara, 1951) that, “The Americans moved into Radio Marina in January 1942 and have been in continuous operation ever since,” I haven’t been able to corroborate that, as reasonable as it seems.

### **The Medical Department**

U.S. medical service in Eritrea began very shortly thereafter, in early February 1942, with the arrival of Capt. Thomas C. Brandon. "With a male nurse, an X-ray technician, and six hospital attendants--all civilians--Captain Brandon established dispensaries at Asmara and Gura in February and, the following month, at Massaua and at Ghinda, where a large housing project for Massaua personnel was under development."<sup>[37]</sup> This is the earliest permanent U.S. military presence in Eritrea that I have been able to document.

At first, "American personnel were hospitalized in British hospitals, while Italian hospitals cared for Italian and native workers under insurance carried by the contractors." The first U.S. hospital in Eritrea was a 250 bed unit at Gura, established by Douglas Aircraft. Although the hospital employees were civilians, the equipment and supplies were furnished by the U.S. military, and it operated under the control of the area surgeon. The hospital was available to all Americans in Eritrea.

Later that year, the 21st Station Hospital (500 beds) was the first complete Army unit to arrive; it debarked at Massawa on November 13, 1942. It relocated the next day to Mai Habar, between Asmara and Gura, where it took over hospital buildings formerly used by the medical services of the Italian and British Armies. A second U.S. Army hospital, the 104th Station Hospital, arrived in late January 1943 and set up a 100-bed unit in Massawa. A medical supply subdepot in Decamere was operational for several months, but the military situation in the theater had so changed by February 1943 that it was closed.

In fact, by the spring of 1943, U.S. Army activities in Eritrea had diminished to the point where there was little need for a 500-bed hospital. Consequently, the 21st Station Hospital moved on to the Persian Gulf area in May. In April, the 104th had turned over to the British Navy the hospital it had been operating at Massawa and moved its personnel to Gura to share in the operation of the Douglas Aircraft hospital there. The closure of the Gura depot in November ended the Douglas hospital and the 104th was transferred to Asmara (the location of the headquarters of Eritrea Service Command), where it established a 25-bed hospital. This small installation remained in operation for some time as the only U.S. Army hospital in Eritrea.

With the decrease in activity in 1943, "personnel in Eritrea were cut back to the minimum necessary for servicing bases and fuel dumps of the Air Transport Command, and for operating extensive radio installations."

### **The Signal Corps and Team Seven**

So while the Army Medical Department likely had the longest continuous presence in Eritrea, what about communications? How did all those units communicate, not only within theatre, but especially trans-continent and trans-ocean? Given that virtually everything that moved any meaningful distance in Africa moved by air, it is not

surprising that the Army Air Forces played a major role. Indeed, throughout 1942 the AACS (Army Airways Communications System) had set up airway stations across Africa, including Gura. “Nearly all of the equipment installed was commercial (much of it had been taken over from previous Pan American Airways stations in Africa).”<sup>[38]</sup>

It was in the gloomy atmosphere of February 1942<sup>[39]</sup> that Colonel Calvert H. Arnold, the U.S. theater signal officer in Australia, sent off to Java, he thought, some of his best signal specialists from the 52d Signal Battalion, together with other Signal Corps men of the newly constituted 835th Signal Company who had arrived in Australia earlier that month.<sup>[40]</sup>

Those officers and men never reached Java. Instead, they sailed to Fremantle, in Western Australia. From there they joined a convoy and sailed westward into the Indian Ocean. On March 12, 1942, the ships docked at Karachi, “a dusty port in the northwestern desert lands of India.” When the men went ashore, they learned they were the first Signal Corps men to reach India. On the day of landing, seven of them set up a message center while other teams went to work erecting a radio station.

From Karachi, the mission of what would become the 835th Signal Battalion was to establish a string of fixed radio stations along the Burma Road, from Rangoon up into China and later throughout the CBI.

But some of those men of the 835th would play another very important role. From here on, I'll let the *History of the 835th Signal Battalion* tell the story of one particular Signal Corps team.

### Team Seven

The radio station at Karachi became increasingly important during the spring and summer months of 1942. Messages from all corners of the Theater were funneled into Karachi for relay to Washington: liaison messages from China, messages from Theater Headquarters, from Assam, from the debarkation ports of Bombay and Calcutta.

Karachi was unable to meet this growing radio traffic demand. Their radio beam to Washington passed directly over the North Pole. Electrical disturbances made contact with Washington impossible for more than a few hours a day. A relay station was indicated. The choice of sites was limited; oddly enough Field Marshal Erwin Rommel was the strongest influence in the final decision.

June was the month of Rommel's drive into Egypt. By the twenty-fifth he had reached El Gazala, fifty-five miles inside the Egyptian border. Over-extended supply lines stopped him there, but there seemed little reason to doubt that after a month of consolidation he would not be able to continue his drive on Alexandria, Cairo, and the Suez Canal. American forces at Cairo were evacuated to Asmara,

Eritrea. Asmara lay far to the south of Cairo on the shore of the Red Sea, a point from which further evacuation could be made across Arabia to India.

This movement was enough to require a radio station at Asmara. Moreover, Asmara was approximately two thousand miles west of Karachi, nearly half way to Accra in West Africa. Traffic from Karachi could be relayed to Accra, and a radio beam from there to Washington would miss the polar region far enough to allow around the clock transmission.

Team 7 drew the Asmara assignment. On the last day of June, 1942, they were given exactly twenty-four hours in which to gather and pack their equipment and load it on two planes. A third plane, with less essential equipment was to follow later. On July 1, 1942, Team 7 - 1 officer, 20 enlisted men - left Karachi for Africa.

The first stop was one of necessity. A motor fluked out over the Gulf of Oman and they were forced to land at Sharjah, Arabia. Repairs were made that night, and the following day they flew the length of the Persian Gulf to Basra, at the mouths of the Euphrates and Tigris rivers in Iran. The next leg carried them across Iraq, Arabia, Transjordan, Palestine, and the Dead Sea to the Lydda Air Port on the shore of the Mediterranean.

One plane remained at Lydda overnight. The men were billeted in the city of Tel-Aviv. "The town had everything," team members report. "Beer, women, scotch, women, good food, women . . ." The next stop was Cairo, a city besieged, but by the accounts of Team 7, a city still selling souvenirs, still guiding tourists to the Pyramids of Giza. Team 7 men were quartered for two days at the Heliopolis House Hotel. "The waiters were Sudanese and efficient, and everything desirable was available at the ring of a bell..."

Wadi Halfa, far down the Nile Valley in Anglo-Egyptian Sudan, saw them next. From there, they turned east, climbing toward a steep range of mountains. They landed at Asmara late in the afternoon [probably on July 5, 1942]. The altitude was 800 [sic] feet, the weather was quite cool. In spite of a long day in the air, they were told they had to go on to Gura, 17 miles distant and a thousand feet lower. Gura was found with some difficulty, but when they finally landed the enlisted men reported it was a soldier's paradise.

A working definition of paradise would seem to be: "... a very few GIs, a climate superior to that of any rest camp, and a per diem of four dollars a day." The women at Gura proved something of a problem. They were numerous and lovely and Italian. Being Italian, they were technically prisoners of war and not to be touched.

Work was begun on the station the day after arrival. The antenna towers left by the Italians at the time of their defeat in Ethiopia were used for the antenna of the

new station. The towers were high. "...they reached somewhere near the sun in the daytime, and the moon at night." Numerous changes in the wiring made it necessary for almost every man of the Team to climb them at one time or another. Additional towers were erected for a receiving rhombic, and the station began operation. Karachi was called, then Accra. The signals from both came in strong and clear.

The radio room, message center and code room were in a small clubhouse beside a tennis court. The walls were little more than Venetian blinds. During the monsoon season, the wind drove the rain through the walls and two inches of water on the floor was not uncommon.

A few weeks after contact had been established, the station was moved from Gura to Asmara. There installation was made on a hill overlooking the city, on the site of an Italian station called Radio Marino. Here it was to remain, an important link in the world-wide communication net.

Late summer and fall found General Montgomery and the British Eighth Army strengthened to the point where Cairo was again deemed safe. The men of Team 7 were called to Cairo. They left the Asmara station in the hands of replacements and were flown to Cairo and the Middle-East Headquarters of General Maxwell's command.

It was perhaps fitting that after they left Asmara, "Team Seven was . . . to receive at once an exotic assignment to Cairo where then men lived luxuriously in the patio palace of an oriental prince while they installed an ACAN station in the Egyptian capital."

### **Army Command and Administrative Network (ACAN)**

Although the men of Team Seven may have been surprised by their assignment to Eritrea, the groundwork had been underway for some time.

Indeed, by the spring of 1942 "plans for large ACAN (Army Command and Administrative Network) stations in Asmara, Eritrea, and in Basra, Iraq, were being realized."<sup>[41]</sup> "Before mid year 1942, Signal Corps planners had decided upon the equipment, the frequencies, and call signs for an administrative net along the African ferry route to relieve the heavily loaded Pan American and AACS [Army Airways Communications System] stations. Outstanding among the new ACAN stations would be the ones at Accra and Asmara, on the west and east coasts of Africa, respectively."

In fact, "by the last week of May 1942 Press Wireless filled a Signal Corps order in the record time of three and a half months, for a 40-kilowatt multichannel SSB transmitter for shipment to Asmara to become the main station serving the U. S. Military North African Mission."<sup>[42]</sup> That 40-kilowatt transmitter, however, would never reach its destination, for the ship carrying it was lost at sea to a torpedo off Madagascar.



ANTENNA TOWERS OF RADIO MARINA

According to another source, “Lacking the planned 40-kilowatt transmitter, the men of Team Seven put to temporary use a 300-watt set.” Apparently attesting to the “anomalous propagation characteristics” of the Eritrean highlands, “within a few weeks, as ACAN station WVNT, they began working Karachi, some 2,000 miles to the east, and then Accra, also about 2,000 miles away, but to the west, across the breadth of Africa.”

“More men were needed and in September 1942 Company C of the 850th Signal Service Battalion sailed from New York bound for Asmara by way of Suez. Already two smaller groups of the 850th had arrived in Asmara, a section of 1 officer and 13 men on August 5, followed by a second section of 1 officer and 7 men on September 14.”

Meanwhile, to replace the 40-kilowatt transmitter that had been lost at sea, “a second transmitter, embodying a multichannel single side-band system, arrived in October 1942.

Here is some more insight into the early operations of station WVNT and what it took to get it up and running:

By the end of November men of the 209th Signal Depot Company had tallied in all the items for the station only to find that they had not enough to get it in operation without the aid of British and local purchases.

The emergency power setup at Asmara required supercharged diesel motors and these were so scarce in the United States that only a part of the units required had been sent. Here, too, poles were a problem. The desired heights of 75 to 90 feet were not to be had locally. A dozen steel poles were ordered but they could not be expected in time for the initial installation. Steel towers were fine once erected but they had to be put up in sections, which necessitated expert cutting and welding. The 75-foot poles for the Asmara station, therefore, had been shipped from the United States. Then it was feared that the road to Asmara from the port of Massawa on the Red Sea was too narrow and the turns too many and too sharp to permit transporting the poles overland. Moreover, they arrived unmarked and no one at Massawa was sure of the use for which they were intended. Nevertheless, they eventually reached Asmara by rail, anchored to a flat car with the ends projecting over a car to the front and one to the rear, with only a few poles damaged in transit as they brushed against the sides of tunnels on the sharp curves.

Despite all obstacles, the 40-kilowatt Asmara station, like its counterpart at Algiers, went on the air in December 1942. When General Dawson Olmstead, Chief Signal Officer, visited the station in the spring of 1943, he considered it to be one of ACAN's best overseas installations. By then radio intercept equipment had been added at Asmara and in June 1943 men from the 2d Signal Service Battalion left the United States to establish that specialized service.

The unit charged with the Asmara station was the 850th Signal Service Company (later, a battalion), whose men arrived in dribbles all through the last months of 1942. Further increments arrived in January. The less experienced of them were assigned to Cairo to work the local circuits which stretched out from there. Most were in the 15- to 18-words-per-minute class, but long periods of inaction en route had tended to make them lose the speed they had acquired. Under the supervision of more experienced operators they worked eight hours a day, seven days a week, 1st Lt. T. J. Larabee working the more heavily loaded circuits because of his ability to operate at higher manual speed. The ten operators at Cairo handled about 400,000 groups manually in the month of April 1943, but the ten at Asmara did better. Their score was 620,000 groups in February and 840,000 in April. Until second-priority troops arrived in April, thirty-two operators kept the five stations at Asmara, Cairo, Tel Litvinsky, Bengasi, and Tripoli in operation.

With their ranks increased, the signalmen of the 850th helped the Office of Strategic Services to install a station in Africa. Others scattered to assignments in the Suez Canal Port Command, the Delta Service Command, the Anglo-Egyptian Sudan, and as far away as Ankara, Turkey. Some went to Addis Ababa to set up communications for the newly authorized United States Legation in Ethiopia, despite the reluctance of the Army Service Forces to accept what it considered to be a nonmilitary project. Until the Signal Corps men installed this radio station, the only telegraphic communication with the Ethiopian capital had been provided

by the British, who maintained an Army station there and a station in the legation compound. The Addis Ababa-Asmara circuit, its equipment ferried in by air, was to open October 1, 1943 with alternate routing by way of Cairo.

Throughout Africa and the Middle East new stations were opening, others closing, as situations changed. The United States Military North African Mission, which had planned the initial installations, had necessarily taken into account only the immediate requirements in men, material, and service. But after the arrival of United States troops in November 1942, the fixed administrative network stations faced almost as fluid a situation as did the tactical networks.

Men and materials were moved from area to area to provide service under the changing conditions. Communications in the Libyan area were made possible only by the transfer of signal men from the Levant Service Command and by the use of British equipment or American equipment borrowed back from the British. The first radio installation in the Delta Service Command, which embraced Egypt and such adjacent territory in the western desert as might be occupied by the Allied forces, consisted of a 1,200-watt Pan American Airways transmitter borrowed from the signal officer of the Air Transport Command at Accra and operated by the 40-kilowatt team of Company C, 850th Signal Service Battalion, on detached service from the Eritrea Command.

By the beginning of 1943, radio channels now reached from station WAR in Washington, D.C., directly to Algiers, to Cairo, to Casablanca, to Accra on the Gold Coast, and to Asmara, well down the east coast, opposite southern Arabia. In that regard, it is interesting to note the transmission and receipt times of a message from the Consul at Asmara to Washington, shown below.<sup>[43]</sup> Prior to January, consular messages had been taking as long as two to three weeks.

884.24/93: Telegram

The Consul at Asmara (Smith) to the Secretary of State  
ASMARA, January 2, 1943 - noon.

[Received 3: 55 p. m.]

1. Reference my telegram dated December 12, 11 a. m.  
Have just received the following telegram from Ethiopian  
Foreign Minister...

So, even though "the future Kagnev Station was formally conceived in a War Dept Disposition Form dated January 26, 1943, with the subject 'Establishment of a War Department Fixed Radio Station in Africa,' which detailed the operational objectives of what would become the 4th Detachment of the Second Signal Service Battalion, Asmara, Eritrea," U.S. Army communications at Asmara were already well established by that time.

As a final note, this exchange between a couple of senior Signal Corps officers in 1944 is interesting.<sup>[44]</sup>

Speaking of his message centers in India, "Compare the number of personnel doing it with what you have at big headquarters of other theaters and I think you will agree that the CBI is doing all right," [Brig. Gen. William O. Reeder] exulted in September. Reeder pointed to the big ACAN station at Asmara, operated by three hundred men, whose "sole purpose seems to be relaying us."

But [Brig. Gen. Frank C.] Meade corrected him. Asmara had other, highly classified, tasks to do, in particular the transmission of heavy loads of SIS traffic.

What eventually became Kagnew Operations was up and running.

Dave Engstrom, Co B '65-'68  
March 2012

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  - 2 Richard M. Leighton and Robert W. Coakley, *Global Logistics And Strategy 1940-1943 of United States Army In World War II* (Center of Military History, United States Army, Washington, D. C., 1995) 506  
<http://www.archive.org/details/globallogisticss00leig>
  - 3 AP, "United States To Take Over Eritrea As Arsenal," *Gettysburg Times*, December 12, 1941  
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[http://news.google.com/news/story?hl=en&sugexp=frgbld&gs\\_nf=1&ds=n&pq=asmara&cp=2&gs\\_id=8&xhr=t&q=eritrea&gl=us&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.,cf.osb&biw=1047&bih=416&wrapid=tljp133216814957302&um=1&ie=UTF-8&ncl=aE1u93eSck9PZ1M&ei=2kVnT7niLfSCsAKKiKC3Dw&sa=X&oi=news\\_result&ct=more-results&resnum=4&sqi=2&ved=0CE0QqglwAw](http://news.google.com/news/story?hl=en&sugexp=frgbld&gs_nf=1&ds=n&pq=asmara&cp=2&gs_id=8&xhr=t&q=eritrea&gl=us&bav=on.2,or.r_gc.r_pw.r_qf.,cf.osb&biw=1047&bih=416&wrapid=tljp133216814957302&um=1&ie=UTF-8&ncl=aE1u93eSck9PZ1M&ei=2kVnT7niLfSCsAKKiKC3Dw&sa=X&oi=news_result&ct=more-results&resnum=4&sqi=2&ved=0CE0QqglwAw)
  - 4 "Equipment Torpedoed, Service Men Carry On," *Pittsburgh Press*, September 1, 1943  
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or  
<http://news.google.com/newspapers?id=ijUbAAAABAJ&sjid=iUwEAAAABAJ&pg=3657,668942&dq=eritrea&hl=en>

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- 8 Lida Mayo, *The Ordnance Department: On Beach And Battlefield* (Center of Military History, United States Army, Washington, D. C., 1991) 18  
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- 9 Mayo, 19
- 10 "Eritrea To Be New Arsenal," *Windsor Daily Star*, [Windsor, Ontario], March 25, 1942  
<http://tinyurl.com/7tqwsvp>  
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- 11 Mayo, 21
- 12 <http://www.ourstory.info/library/4-ww2/AFSletters/VE.html>
- 13 The "Services of Supply," came into being on March 9, 1942, as one of the three major autonomous commands of the U.S. Army, along with the Army Ground Forces and the Army Air Forces. The SOS included the Corps of Engineers, Signal Corps, Ordnance Dept, Quartermaster Corps, Chemical Warfare Services, the Medical Department, and Transportation Corps, although the Transportation Corps was not established until July 1942. The SOS was renamed the Army Services Forces on March 12, 1943, as it was decided the term "supply" did not accurately describe its broad range of activities.

See [http://en.wikipedia.org/wiki/Services\\_of\\_Supply](http://en.wikipedia.org/wiki/Services_of_Supply)

and

John D. Millet, *The Organization and Role of the Army Service Forces* (Center of Military History, United States Army, Washington, D. C., 1998) 297-299

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15 UP, "America Sets Up Navy Base On Red Sea," *The Bend Bulletin*, [Bend, Oregon], March 6, 1942

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16 Leighton and Coakley, 509

17 Charles M. Wiltse, *The Medical Department: Medical Service in the Mediterranean and Minor Theaters* (Office of the Chief of Military History, Department of the Army, Washington D.C., 1965) 61

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19 Wiltse, 70

20 <http://www.kagnewstation.com/earlydays/chernethaile/index.html>

21 Craven & Cate, 280

22 Carter, 320

23 Thomas M. Culbert, "South Atlantic/Trans-Africa Air Route," in *Air Warfare: An International Encyclopedia: A-L*, Walter J. Boyne, ed., (Santa Barbara, ABC-CLIO, 2002) 576

Also see Carter, 320 and 322, which presents a slightly different version, or at least additional information.

- 24 John F. Schwally; Russell F. Marhull, Director of Photography, "FDR's Secret Air Force," <http://vimeo.com/30142501>
- 25 <http://www.ibiblio.org/hyperwar/AAF/l/maps/AAF-I-11.jpg>
- 26 Posting by John Schwally on now defunct Pan Am History board.
- 27 Craven & Cate, 338
- 28 Wiltse, 58  
In fact, full militarization of Lend-Lease was not accomplished until January 1, 1943, and even afterward former contractor employees continued to work directly for the Army. See Leighton and Coakley, 510. A notable example was Douglas Aircraft employees, some of whom remained in Eritrea until November 1943.
- 29 Arthur Ayotte, "The Summer of '42," [http://www.fugawee.com/summer\\_of.htm](http://www.fugawee.com/summer_of.htm) and Nancy Ayotte, the author's wife, personal conversation, March 1, 2012
- 30 The quotation concerning Pan Am building airfields in Africa originally appeared in the Wikipedia article cited below, but is no longer in that article. It is, however, on a Wiki-like site, enotes.  
[http://en.wikipedia.org/wiki/South\\_Atlantic\\_air\\_ferry\\_route\\_in\\_World\\_War\\_II](http://en.wikipedia.org/wiki/South_Atlantic_air_ferry_route_in_World_War_II)  
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Also  
William R. Stanley, "Trans-South Atlantic Air Link in World War II," *GeoJournal* 33.4 (August 1994): 459-463 (available through JSTOR, but not otherwise generally available online)  
<http://www.jstor.org/discover/10.2307/41146247?uid=3739600&uid=2129&uid=2&uid=70&uid=4&uid=3739256&sid=55943540043>
- 31 "Pan Am Stretches," *Time*, September 1, 1941  
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<http://www.time.com/time/magazine/article/0,9171,850661,00.html>  
In fact, Pan American had been engaged in the construction and improvement of airports on foreign soil as early as November 1940 for the U.S government as part of the so-called Airport Development Program (ADP) throughout the Caribbean area, Central America, and Brazil, as well as in Liberia. See Carter, 321.

- 32 [http://www1.va.gov/opa/publications/benefits\\_book/benefits\\_chap09.asp](http://www1.va.gov/opa/publications/benefits_book/benefits_chap09.asp)
- 33 United States Department of State, *Foreign Relations of the United States diplomatic papers, 1942. General; the British Commonwealth; the Far East Volume I (1942)* 561-562  
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- 34 FRUS, 562
- 35 John H. Spencer, *Ethiopia at Bay: A Personal Account of the Haile Selassie Years* (Algonac, Michigan: Reference Publications, 1984) 200
- 36 Wiltse, 56-57
- 37 Wiltse, 56-87, for the entire section
- 38 George Raynor Thompson, et al., *The Signal Corps: The Test (December 1941 to July 1943)* (Office of the Chief of Military History, Department of the Army, Washington, D.C., 1957) 310
- 39 The early months of 1942 were perhaps the darkest of the war of the war for the United States and its Allies. Axis forces controlled most of Europe and the Western Soviet Union. In North Africa, Rommel was threatening Cairo and the Suez Canal. In the Far East, Japan controlled Manchuria, a good part of coastal China, and inland as far as Beijing. In Southeast Asia and the Pacific, Japanese forces had taken all of Malaysia, had invaded Burma and the Dutch East Indies, and had captured Manila, forcing MacArthur's forces to withdraw to Bataan. Japanese troops had landed in New Britain, Borneo, New Ireland, and in the Solomons. By early February, they had taken the Borneo oil fields, had captured Singapore (with Britain losing 138,000 men), had taken Palembang on Sumatra near the Shell Oil refineries and were threatening the main island of Java in the Dutch East Indies.
- 40 This section relies on Thompson, et al., 113- 114  
and  
John Hawkins and Ward Hawkins, *History of the 835th Signal Service Battalion, 1942-1946* (World War II Operational Documents, 1946)  
<http://cgsc.cdmhost.com/cdm/singleitem/collection/p4013coll8/id/3518/rec/16>
- 41 This section relies on Thompson, et al., 108 and 310-311  
and

George Raynor Thompson and Dixie R. Harris, *The Signal Corps: The Outcome (Mid 1943 Through 1945)* (Center of Military History, Washington, D.C. 1991) 455-457 and 596

<http://www.history.army.mil/html/books/010/10-18/index.html>

- 42 A transmitter similar to the one destined for Asmara was installed at Algiers in December 1942. It provided six duplex teletype channels between WAR and Algiers, with automatic enciphering and deciphering. Regarding this first single side-band multichannel Army installation, General Stoner said: "It is going to revolutionize radio because you don't have to da-da-dit on the damn thing. It is just a radio printer, and there is no commercial circuit that I know of that the United States has under its control that has such type of transmission."  
Thompson, et al., 452
- 43 FRUS, 1943, 82
- 44 Thompson and Harris, 183