German U-Boats in the Indian Ocean

Kapitaen sur See Kurt Freiwald, ex-German Navy, is the author of the essay from which the following excerpts are taken. Freiwald was aide (adjutant) to Grossadmiral Raeder until the latter was relieved of his post as supreme commander about 1 February 1943, after which he remained with Grossadmiral Doenitz's staff (as aide) for about 6 months and then was assigned command of a U-boat operating in the Far East, in which theater he remained until the war's end. He made an attempt to return to Germany with his boat along toward the end of the war, but ran into difficulty and was forced to return to Japan. During his service on both Raeder's and Doenitz's staff (as aide), he doubtless had a fairly good insight into German-Japanese relations, and after, when commanding a U-boat in the Far East, no doubt acquired a great deal of information firsthand form the Japanese naval side. However, in order that "expert" evaluation of his treatise be available from the German ex-naval side, Freiwald's these has been referred to competent former ranking German naval flag officers of O.K.M. whose comments on particular parts thereof are supplied in footnotes.

The Germans sent 45 U-boats at various times to operate in the Indian Ocean. Of these, 34 boats were lost; 4 were interned by the Japanese; 3 surrendered and only 4 returned to their home ports.

On the other side of the ledger the boats claimed to have sunk 170 ships totaling about 1,000,000 G.R. T. Ex-Capt. Freiwald concludes: "It may therefore be said that if one considers the difficulties and enforced improvisations at the bases, the entirely new milieu in which the boats had to operate and dock, the continuous lack of qualified personnel and the mistakes which occurred despite the best intentions, the overall achievements of the U-boats were no less than could have been expected."

1.

GERMAN U-boat operations were at first confined to the area off Capetown and to the area south and east of Madagascar.¹
Here, in late autumn 1942 and during the summer months of 1943, 14 German U-boats appeared in two major operations. Although three boats were lost, their surprise tactics brought good results. It was demonstrated that, by replenishing once at sea, a large U-boat could be employed for more than 200 days, although fuel consumption was relatively high as the boats operated almost entirely on the surface.

In the spring of 1943, after lengthy negotiations, the Japanese permitted the establishment of German bases in Singapore and Batavia for the use of blockade running vessels and one in Penang for the U-boats.\(^2\)

So at the beginning of July 1943 a new group of 11 boats, mostly Type IX C, was named the "1st Monsoon Group," and dispatched from ports in western France and Norway to the Indian Ocean. The plan was to have the boats operate everywhere in the Arabian Sea and adjacent waters,

\[--362--\]

including the Gulf of Suez, the Gulf of Oman and the Persian Gulf. They would be replenished and overhauled in Penang, then set forth on a second patrol from which they would return to European bases for thorough repairs.

Only five of these boats ever arrived in the Indian Ocean.

After completing operations, four boats put in to Penang in late October or early November 1943. They were fitted-out and overhauled as scheduled and, after docking in Singapore they left the area singly during January 1944 for further operations in the same area.

After these operations, one boat was supplied at sea and commenced return passage. She arrived at Bordeaux at the beginning of July 1944. The other three boats had to turn back because their supply ships were destroyed. They made for ports in east Asia for thorough repairs and two of them proceeded to Japan to get new batteries. They were overhauled there and then were lost as they proceeded to the operational area. The third boat commenced return passage to home waters in the spring of 1945 and arrived in Great Britain at the time of the German capitulation.

During operations of the 1st Monsoon Group, it became obvious that Penang alone could not meet the task of replenishing and repairing the U-boats. However, increasing air patrol in the Central and North Atlantic put an end to blockade running in the winter of 1943-44, and this left the German offices in Singapore and Batavia free for other tasks. Their conversion into U-boat supply bases was urgently necessary as a large number of U-boats was expected to arrive in the spring of 1944. For this reason still another German supply station was established in Soerabaya.

At the end of 1943, four more boats, forming the 2d Monsoon Group, were dispatched from ports in western France and Norway. Only one boat arrived in her operational area in the Gulf of Suez. After completing her patrol she put in to Penang and then she too proceeded to Japan to get a new battery. In mid-January 1945 the boat commenced return passage to Norway via Batavia, and at the time of the German capitulation she was in St. Nazaire where she had been fitted with a snorkel.
Beginning spring 1944, 16 more boats, mostly Type IX D, proceeded singly to east Asia. Those which arrived in the areas allotted to them operated at all the focal points in the Indian Ocean and the six boats which survived then put in to Penang and Batavia.

Meanwhile the situation regarding raw materials in Germany had become so strained because of no more blockade running that some of these operational boats had to attempt the return passage as cargo carriers. However, two boats of this group and one boat of the 1st Monsoon Group were fitted out for an operation in the Australian area which began in October 1944. One boat returned in February 1945 and proceeded to Singapore for repairs and loading.

The remaining boats were dispatched to Norway in the autumn and winter of 1944-45. One boat had to fall out because of serious engine trouble and damage to the diving equipment, two were lost, and only one boat reached port of destination.

The bases in east Asia required supplies of weapons, ammunition, and other war material which could not be provided by the Japanese. Some of these supplies were brought out by operational boats, but from spring 1944 they were mostly brought by U-boats of Types IX D, X, XIV, and VII F and one former Italian submarine with a mixed crew. On the return voyages, these boats were also to make their entire loading space available for raw materials. Out of eight boats sent out on this mission only three arrived in Southeast Asia; of these, in turn, only one commenced return passage and she, too, was lost.

At the time of Germany's capitulation two combat boats were lying in Singapore and two transport boats in Batavia.

**Basis of German-Japanese Cooperation**

Once coordination of German and Japanese warfare in the Indian Ocean had been decided upon, both sides approached the task with a will. The system of cooperation with an Asiatic state ought not to be based on European or American standards. In view of the difference in race, the different mentality, standards of efficiency, physical and ideological approach of the two partners who really had no great sympathy for each other, a maximum of mutual support and cooperation could not be achieved. Although later in this study certain difficulties will be mentioned from time to time, these were only the result of Japanese inability or lack of trust and never the outcome of malicious intentions.

It should be borne in mind that in Japan there were three political factions whose opinions on political and/or military aims always differed--the Army, the Navy, and the economic circles. These differences of opinion were obvious even in the lowest offices and were so divergent as to border on mutual sabotage.

It might be added that the German officers who were employed in establishing the German bases had no particular knowledge of the country and the Japanese occupation forces, and were very prone to apply German standards.
Organization of German Bases

Bases were established in Batavia and Singapore in mid-May 1943, and another in Penang at the beginning of June 1943. From late autumn 1944 Soerabaya was at German disposal as an independent station. Until the end of 1944 all these bases were subordinated for organizational matters to the German admiral in Tokyo, Admiral Wenneker.

Singapore and Batavia were first fitted out for preparing and loading the blockade runners. As most of the German personnel, including the officers, had belonged to auxiliary cruisers, they lacked the necessary knowledge and experience to take care of U-boats. On the other hand, the bases at Penang (which gradually came up to requirements because the few U-boat experts were detailed there from the beginning) had no dock.

Initially, the only docking facilities were in Singapore, but later boats could also dock in Soerabaya. The hulls of the boats were overgrown with weeds; unloading and loading of the keel had to be done, and their main ballast tanks and fittings had to be overhauled, so docking was vital. The boats were thus compelled to undergo repairs in at least two bases. The conversion of the other bases for U-boat repairs was at first regarded as a subsidiary task, but later, when the blockade runners stopped, it was necessary in order that the bases could be kept in operation.

Local dockyards which had been taken over by the Japanese were available for certain repairs but they were not very efficient as most of them had previously been used for the repair of merchant ships. The large naval dockyard at Seletar was not open to German U-boats; the boats were occasionally given a hand with difficult repairs of engine parts or parts of their guns, but when only after adequate [high-level, Ed.] requests had been submitted. The facilities of Soerabaya, which without doubt met all demands, could not be exploited because increasing minelaying from the air made it difficult for the boats to put in there. In any case, the high losses of German U-boats reduced the number of boats to be attended to, and the other three bases eventually proved adequate.

Local specialists generally failed to come up to German requirements. In their key positions, the dockyards had previously employed white personnel who had been internees; these were replaced by Japanese who were not satisfactory. However, under the leadership of some experienced German civil engineers who had settled in east Asia years ago, German workshops were established which proved their worth.

Technical firms which had supplied the dockyards in Singapore and Batavia were either taken over because their proprietors were enemy aliens or their stocks were used up in a short time. Transfer of supplies between the bases was difficult because of the great distances involved and the increasing lack of transport vessels.

The interbase communications system was good. Each base had an efficient radio station. Most of their equipment was made in Japan. If the radio stations were in constant communication with the station of the German admiral in Tokyo, which also dealt with traffic to the German Naval Staff. Even direct communication with radio stations in Germany was possible but, according to the season and time of day, it was sometimes difficult to make the connections. Telephone communications were also in existence between Penang and Singapore but the chances of putting through intelligible calls were limited and, moreover, the line was overburdened by Japanese use. Mail was carried between Singapore and Penang by railroad, to the Dutch East Indies by air mail, and between Soerabaya and Batavia by railroad and trucks.
Compared with the number of personnel at home bases, these bases were inadequately staffed. There were some 50 German soldiers at each base, employed almost entirely in administrative duties and communications. In addition, there were a few civilian employees. Natives were employed only as personal servants.

**The Amenities; Recreation, Etc.**

Within the limits of the material available, the Japanese authorities granted all possible support to the German officers to equip their bases according to European standards and military requirements. Every German base had a sufficient number of bungalows for use as offices and quarters for permanent staff. In addition, spacious accommodation was prepared for any U-boat crews which might call. Despite increasing food shortages in the country, adequate rations were always supplied. The men could engage in many kinds of sport such as golf, tennis, football, swimming, and hunting. Health resorts in the mountains such as Penang Hill, Fraser Hill, Cameron Highlands in Malaya, or Selapentana and Chikopo on the island of Java, were opened to German authorities for recreation of the crews or the personnel of the offices. In some cases, the entire management of such places was in German hands.

**The U-Boat Repair Groups**

However, an organization similar to that in home bases, where a boat putting in from a war cruise was almost completely abandoned to the technical care of the flotilla and the base dockyard, could not be established in east Asia. Even in Germany the boats needed specially trained men for maintenance and repairs. At first there were no U-boat experts in east Asia. Only when a Type IX C boat had been transferred to the Japanese Navy in the spring of 1943 as a model for future building, and when crew members had been rescued from the German U-boats lost in the offshore waters of Malaya and Java, could the first limited U-boat repair groups be established. These were then reinforced by 25 former sailors from Italian submarines. These groups certainly helped the situation but they could not relieve the crews in port who were in need of rest.

A period not to exceed 2 months was allotted for repairs, loading, and recreation of the crew, but this schedule could never be kept. The serious wear and tear of operations in the tropics necessitated extensive repairs to preserve these boats which were not built for a long life. The whole crew had to share in the work and at times this proved to be a greater physical strain than the exertions of a patrol.

**Health and Morale**

During this time the general state of health was not satisfactory. There was a high percentage of malaria cases (up to 25 percent of a crew). Skin troubles, ulcers, boils, etc., required wearisome treatment and this meant that the 3 to 4 weeks of leave which all crews needed could be granted only to those actually ill. These factors, together with the effects of alcohol and women, produced a situation where the average state of health of the crews when the boats left the bases in Southeast Asia, was worse than when they put in!
However, the opportunity to engage in sport, to use good libraries, and see German films (sometimes brought by the boats, at other times provided from Tokyo as part of the entertainment service), the official dance halls, and most of all the attractions of a new gaily colored world, occupied the "submariners" so fully that they were not aware of the strain and no essential change in their morale was recognizable.

Native Work Crews

Japanese authorities provided all necessary harbor accommodations, workshops, and labor, including native workers, for dockyard repairs. No Japanese labor could be employed because obviously the Japanese were unwilling to work for the "white man" under the eyes of the natives. Although the dockyard people could be entrusted with simple constructional and engineering work, such as painting and maintenance, renewal of calking and packing, repairs and production of simple parts, all the more difficult work on the hull, diving fittings and Diesel engines and all repairs of electric installations, periscopes, radio sets, and weapons had to be done by crews and repair groups.

---365---

Timetable for Overhaul

As far as possible (to avoid overexertion during the hottest hours of the day) working hours were confined to morning and late afternoon. The timetable for a boat in port was approximately the following:

After putting in to Penang or Batavia:

Some 3 days for cleaning out the boat, to withdraw and check the torpedoes.

Some 20 days for urgent maintenance work and overhauling of the hull, diving fittings, engines, and weapons.

Some 3 days to stow away the supplies and transfer the boat to Singapore for docking.

Some 14 days in dock for cleaning and maintenance of the skin plating and repair of outer damage, for unloading and loading of the keel and fuel tanks, then transfer to the port of departure, Penang or Batavia.

Some 14 days for replenishing the boat with fuel oil, lubricating oil, provisions, and ammunition, for recreation of the crew, trial runs, and diving tests.

In practice, unexpected delays always occurred, which in most cases could be traced back to the vulnerability of the boats to the damp climate. The best time made for overhaul was 70 days.

Fitting out of the boats for further operations or return passage constituted no great difficulties, except in obtaining lubricating oil. Torpedoes had been brought up by cargo carrying U-boats. Moreover the boats which arrived from patrol had not fired all their torpedoes. Stocks of torpedoes were even increased as operational boats, when dispatched as cargo carriers, had to give up all their torpedoes except two.
Generally, the ammunition was not used up and spare barrels for 3.7-cm. and 2-cm. antiaircraft guns were constantly brought in by all the boats. The radio location sets, which were particularly necessary, were immediately copied from the latest construction so far as was possible and they were also constantly supplied from Germany. Other important spare parts for engines, auxiliary engines, and radio sets, which were not to be found among the well-organized supplies, were made in own workshops or by the dockyards. For example, an inflexible snorkel was made and installed.

General equipment was supplied by the dockyards. Stores found after the occupation were sufficient for that purpose. With the assistance of the Japanese Army, the boats were smoothly supplied with provisions. The preparation of bread, fats, vegetables, and fruits as K-rations was the main problem for the German offices. However, after initial difficulties, it was partially solved by enlisting local canning factories.

Fuel oil and lubricating oil were supplied by the Japanese Navy. Fuel supplies were always assured because of the rich stocks in Seletar and on the islands of Java and Sumatra, and the oil fields in the Dutch East Indies, particularly Palikpapan. However, beginning with the summer of 1944, it became almost impossible to get any lubricating oil of the quality that the German U-boats required. Inferior qualities of oil had to be used and this meant more wear and tear on the bearings.

The U-Boat Blockade Runners

Raw materials to be shipped to Germany were procured in Tokyo by Staatsrat Wohltat. He set up his own organization in conjunction with the German military offices. This organization had already arranged the loading of blockade runners and now, in somewhat reduced style, looked after the U-boat cargoes.

The total cargo for a Type IX D2 boat comprised the following: 130 tons tin, 12 tons molybdenum, 12 tons tungsten, 110 tons rubber, and 1 ton quinine (265 tons total). This amount of cargo could only be taken on board at the expense of fewer torpedoes and fuel supplies; only slight fuel reserves for the most economical speed were carried. The cargo of a Type IX C boat was as follows: 115 tons tin, 12 tons molybdenum, 9 tons tungsten, 10 tons rubber, 1/2 ton of quinine, and 1/5 ton of opium, (about 147 tons total). The transport boats could carry a greater load, but their capacity was never really tested.

Supply Ships

When war broke out, the German tankers Brake (11,000 G.R.T.) and Charlotte Schliemann (7,000 G.R.T.) were diverted to Japan from ports in foreign waters and were there fitted out for the task of replenishing the submarines. Their former civilian crews remained on board. In summer 1943, for the first time, these ships successfully supplied a group of six IX D boats with fuel, lubricating oil, and provisions in the area southeast of Madagascar. In September 1943, the tanker Brake supplied the 1st Monsoon Group. Another attempt was made in February 1944 but Brake was sunk by an enemy task force with aircraft carriers. The tanker Charlotte Schliemann was then brought in, but met the same fate in March 1944. From this time onward only two small German tankers, the Quito and Bogota, were available for
the task. The _Bogota_ refueled the boats at sea on one occasion; otherwise these vessels were chiefly employed in good traffic and fuel transportation between the bases and Balikpapan.

The German authorities also had three former Italian submarines at their disposal. After the conquest of Eritrea, these submarines made for Singapore and were later requisitioned and manned by German crews when the Italians capitulated. As they were no longer of any combat value, they were used solely for transportation mostly in traffic to Japan. Of these auxiliary vessels, the following were lost to enemy submarines: One Italian submarine in the Strait of Malacca in February 1944, and the tanker _Quito_ when she was proceeding from Balikpapan to Batavia in April 1945.

The employment of these vessels was also a considerable help to the Japanese Navy. The requests of the Japanese armed forces for certain raw materials which they lacked (particularly mercury) and designs for new weapons, planes, and ships, were met as far as possible. All the combat boats dispatched to east Asia carried good will gifts of this kind.

However, it is doubtful whether the Japanese recognized the real value of these gifts which, without doubt, exceeded their reciprocation.

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**Cooperation of German Japanese Commands**

Commander Southern Area had the following tasks: to accept Japanese requests for operations by German boats and to inform the German Naval Staff accordingly; to inform the Japanese Commander of Submarines of the operations and intentions of German Naval Staff; to make preparations for the reception of boats putting in by fixing their ports of destination, approach routes, and providing German escorts or requesting Japanese escort forces. He also had to issue orders to the German U-boats after they entered offshore waters, arrange rendezvous and escort into port, fix the program for repairs and supplies, protect the boats on passage between the bases, and take all necessary measures for the boats' departure. His powers, therefore, did not exceed the offshore waters and the connecting routes between the bases.

For his tactical tasks of protecting the boats on inward and outward passage and between the bases, he had two Arado planes available which had been left by an auxiliary cruiser. They were equipped with 50-kg. bombs only. Otherwise he was dependent on the assistance of the Japanese Navy. As the war neared its end this help became more urgent, but less adequate.

It was amazing [at this time] to see how few resources the Japanese had at their disposal to execute the most elementary assignments of war. Japan had spent so much energy on her one enormous effort to conquer the Southern Area that she was incapable of carrying out further large-scale offensive operations. Warfare in China sapped the strength of the Japanese armed forces so rapidly that no other focal points or concentrations of reserve troops could be formed. The lack of war industries in the conquered countries meant that all supplies had to come from Japan. The Japanese reserves of raw materials, particularly of iron and steel, were soon exhausted. Merchant shipping, on which the fighting troops or occupation forces relied for supplies, was reduced by the attacks of American submarines. From spring

--367--
1945, the Southern Area was practically cut off from Japan and had to be self-sufficient.

The Japanese Navy did appear in Southeast Asia with both fleets, but they had almost no sea or air patrols to defend the offshore waters. The Navy was powerless to stop the operations of numerous Allied submarines off the bases by employing suitable submarine chasers, let alone provide forces for any planned antisubmarine operations on the scale understood by the German U-boats commanders. Consequently the Allied submarines could safely appear in areas where, according to German rules of antisubmarine operations, they should have been immediately destroyed.

The Japanese were not even able to provide efficient escort forces for the inward-and outward-bound German boats. As a result of least five German boats were lost to enemy submarines in offshore waters. The greatest danger existed in the northern approach route to Penang and in the Strait of Malacca where, at times, fixed routes had to be followed. No enemy submarine activity was observed on the route between Singapore and Batavia, but, on the other hand, continuous operations were detected on the outward routes through Sunda Strait and Iombok Strait and on the route between Soerabaya and Batavia. As the Japanese Navy detailed only weak escort forces within the immediate vicinity of the ports, the boats passed through the endangered areas on zigzag courses, at times making wide detours. Since Japanese shipping which would have made these operations worth while had ceased in these areas, it was assumed that the concentrated enemy submarine operations were directed mainly against the German U-boats.

**Organization of German Command**

German Naval Staff was in operational command of the U-boats. During all operations the boats' radios were switched to home waves and they transferred to the U-boat command wave of Commander Southern Area only when they entered his area. For the conduct of these operations Naval Staff generally based their directives on reports of experiences by returning boats and occasionally on information from the Radio Intercept Service and the German Counterintelligence Service. At best, Commander Southern Area could advise only on the operations. Enemy merchant ships generally proceeded singly in the entire operational area of the Indian Ocean. Convoy traffic was observed only in areas of concentrated traffic, for example, in the Gulf of Suez. Therefore, most of the ships sunk had been proceeding alone. To find these ships in the wide ocean where traffic was sparse was a task requiring patience and instinct.

Up to the end of 1943, enemy defense were weak. They had only a few submarine chasers and destroyers off the main bases and aircraft close to the coast. It was not until 1944 that the enemy combated the U-bats by widely dispersing their traffic and considerably increasing the aircraft employed on antisubmarine operations. Regular air patrol with radar sets and systematic antisubmarine operations, mainly executed by planes, were observed in the area around Capetown, off Mauritius, in Mozambique Channel, in the Gulf of Suez, off the west coast of India and in the area around Ceylon. Sunderland flying boats were mostly employed at sea and twin-engined land planes over offshore waters. Occasional carrier planes were notice din areas where U-boats were supplied.

It was remarkable that neither the German U-boat command nor the Japanese offices concerned succeeded in supplying the German U-boats with thorough reports on the enemy, their strength, their air and submarine bases, convoy routes, routes for single ships, etc., from Radio Intelligence and Counterintelligence reports. Each U-boat had therefore to feel her way carefully into her operational area,
thereby losing much time. What made this more difficult was the fact that, partly owing to the weather and partly because of the few boats available, the operational focal points had to be continually changed. This meant that contract with the enemy was often lost in certain areas, so that the experiences of one group of boats were of no value for the next boats.

The Germans, on the other hand, had the impression that the enemy had a disturbingly good knowledge of the U-boats' location, supply points, dates of putting in and out, approach and outward routes, and movements between the bases, and a leakage of information was suspected. Although the enemy had a remarkably good Radio Intelligence service, as was often proved by the amazingly rapid reactions of enemy air reconnaissance, it was highly improbable, particularly as the German radio codes were regarded as secure [by the Germans, although Polish and British intelligence had broken the ENIGMA codes early in the war. --HyperWar], that this service could draw the right conclusions on the day-to-day procedure of the German U-boat Command.

It was difficult to know where to search for possible sources of leakage. Japanese offices were regarded as most unlikely and it is not impossible that the information stemmed from German home commands.  

Demarcation of German and Japanese U-boat operational areas never led to any difficulties. This demarcation was eliminated in autumn 1944 when the few Japanese boats employed in the Indian Ocean had either been lost or transferred to the Pacific Ocean to repulse the American offensive. It should be stressed that the Japanese commander of submarines cooperated well and intelligently in all fields of submarine warfare, but that operative assistance from the Japanese was unimportant due to the few Japanese submarines employed and lack of information from long-range air reconnaissance and radio intelligence.

In this connection, it is an open question whether, after the establishment of the bases, it would not have been more suitable to confer operative command of all U-boats and Japanese submarines in the Indian Ocean to a German Commander U-boats stationed in east Asia. The following factors support this contention:

1. The appointment of a Commander U-boats was justified in other theaters, such as northern waters, the Mediterranean, and the Black Sea, where tactical and operative cooperation was necessary with an allied power or another German naval command.

2. While carrying out their command tasks, the German Naval Staff generally relied on information transmitted to them and not on personal reports by commanders of returning U-boats. Only three U-boat commanders reported to Naval Staff on their experiences in east Asia, while in Penang the fresh impressions of 14 commanders were available and Japanese experiences could also have been gleaned during exchange of ideas.

3. Naval Staff was completely absorbed in the concentrated warfare around Great Britain, the defenses against the invasion, and the production of new types of boats.
4. A German Commander U-boats would have created a balance with the Japanese commands where admirals were appointed as commanders.

The following points support the command organization as it actually was:

1. Naval Staff would remain more independent in their decisions than a Commander U-boats could have been, as he would have to have taken into account Japanese desires and Japanese mentality in the interests of cooperation.

2. Orders issued to the boats in east Asia would have required more radio transmitters and the number of radio operators would have had to be increased.

Without doubt, capable officers could have been found for this task among the experienced senior officers of the Capetown Group. It would also have been possible to have sent one officer, preferably an admiral, with one of the boats from Germany. The necessary appointment of a young staff officer with restricted operational authority to the position of Commander Southern Area proved to be a mistake from the standpoint of the Japanese mentality.

The Japanese are very precise and sensitive on the subjects of etiquette, rank, and seniority. They do not understand that some men reach higher ranks without routine seniority. Thus, they were compelled to refuse full acknowledgment and support to an officer in this new and important position who hitherto was known as one of the most junior staff officers on the three stations. At times, feeling was so strong that when an officer was promoted out of turn, the Japanese counterparts of other German officers in charge, whom they believed to have been passed over, worked for their promotion, even sending inquiries to Berlin. Moreover, the Japanese could not understand the fact that U-boat commanders with more rank or seniority than the newly appointed Commander, Southern Area were subordinate to the latter. At any rate, the appointment of this officer aroused latent tension. It was also possible that these and similar differences were influenced by the development of the situation.

The final german surrender could no longer be denied, but at the same time it was obviouys that the Japanese armed forces would not be able to present effective opposition to a concentrated attack of the Americans and British in the southeast Asia area. They lacked modern material and it also seemed as if the fighting spirit of the Japanese forces had decreased under the influence of the tropics, the comfortable way of living, and the long duration of the war.

It was therefore strange that at the time of the German capitulation the Japanese fleet commander in Seletar politely invited some German officers to an interview before they were interned. In presence of high ranking Japanese officers he stated in all seriousness that the Japanese armed forces would reconquer Germany. This incident revealed to what extent, even in these circles, illusions, underestimation of the enemy, and complete misunderstanding of the ratio of forces could lead to a ridiculous midjudgment of the political and military situation.

Conclusion
German U-boat warfare in east Asia came to an end with the requisitioning of the German boats and the internment of their crews by the Japanese ally. By and large, the boats' operations were satisfactory. According to the reports of the boats, some 1760 ships totaling about 1,000,000 G.R.T. were sunk, most of them during their early operations. Own losses were high. Of the 45 U-boats sent out from Europe at various times, 34 boats, i.e., 76b percent, were lost up to the day of the capitulation. Four boats were interned by the Japanese in their east Asia bases, four returned to their home bases, and three surrendered at sea or in a port in western France. Of the boats sunk, only parts of the crews of eight boats were rescued.

Decreasing successes and increasing losses revealed that in general the Allied antisubmarine operations in the North and Central Atlantic with aircraft carriers and auxiliary aircraft carriers, and the increased antisubmarine defenses in the focal points of the German U-boat operations in the Capetown area and the Indian Ocean were successful. This success was mostly due to the use of radar. Whereas U-boat operations in the Capetown area during winter 1942 and summer 1943 accounted for some 35,000 G.R.T. enemy vessels per boat, this figure decreased in the case of the 1st Monsoon Group to approximately 15,000 G.R.T., with the 2d Monsoon Group to 14,000 G.R.T., and in the single boat operations in the last year of the war, to some 11,000 G.R.T. U-boat losses, on the other hand, increased. While 100,000 G.R.T. were sunk for the loss of "half a boat" during the Capetown operations, the losses increased to five U-boats for the same amount with the 1st Monsoon Group, while with the 2d Monsoon Group and the last single boat operations the rate of exchange rose to seven U-boats lost for 100,000 tons of shipping sunk. This shows that the risk involved to achieve the same success had increased fourteenfold. These impressive figures should not be construed to mean that the quality of the commanders, their crews and boats was much lower in this area at the end of the war. On the contrary, it must be stressed that well-trained boats were invariably detailed for these operations in the Indian Ocean.

Footnotes

1. Former OKM flag officers write: "At no time did the Japanese object to the employment of German U-boats in the western part of the Indian Ocean. Determination of the 70th meridian as the operational boundary was the result of a direct Japanese proposal to this effect. This ruling was made on 19 January 1942 in the Three Powers' Military Agreement, i.e., in the second month after Japan entered the war, even before the Japanese occupied Singapore Japan always observed this agreement to the letter.

"One reason why German U-boat operations in the Indian Ocean were at first restricted to the area between Capetown and Madagascar was that the long-range Type IX D U-boats and the new U-boat tankers were not ready for operations at that time. The second and more important reason was that the German U-boats had no bases in the Indian Ocean area. Japan certainly took a long time to grant the Germans the bases which they requested, but this was not because the Japanese Navy did not welcome German U-boats in the Indian Ocean; in fact they had themselves suggested a strong representation of U-boats in building up her position, as a sea power in this area and, as the base facilities were limited, she needed them all for herself. The Japanese may also have been activated by a certain hesitation to allow German forces to gain insight into the internal procedure in the Japanese Navy. It is certainly possible that the resistance of local Japanese offices to German plans may have contributed to this attitude, but this could hardly be confirmed afterwards."
2. See footnote 1.

3. Comment by German flag officers: "'The disturbingly good knowledge' of the enemy concerning the positions and movements of the German U-boats can perhaps be traced back to the fact that the U.S. Navy possessed the Japanese codes. It can obviously be assumed that such information was also transmitted in Japanese radio traffic, for example, in the issuing of orders to escort forces and planes or the transmission of general information to the Japanese forces on the movements of their vessels. Moreover, in any occupied enemy area—as was proved in Norway and France—an efficient enemy intelligence service is quickly developed."

4. Comment by German flag officers: "This work is based on the author's personal submarine warfare experience acquired in the Indian Ocean and his knowledge of cooperation with Japanese Operational Command. On the other hand his information on politics and strategy is not firsthand—he has merely drawn conclusions from the effects observed at operational levels and is therefore not always quite correct in his deductions. Nevertheless, as a report on the entire problems of German submarine operations in the Indian Ocean. Freiwald's work is a very valuable contribution."