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JAPANESE SIGNAL INTELLIGENCE SERVICE

THIRD EDITION

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Washington, D. C.

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Prepared under the Direction of the CHIEF SIGNAL OFFICER 1 November 1944 SPSIS->

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JAPANESE SIGNAL INTELLIGENCE SERVICE

Third Edition "1 November 1944

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CHAPTER I INTRODUCTION

It is safe to say that every Japanese is a spy to some extent. Throughout the world in peace times, diplomats, consular officials, business men, students, travellers, and army and navy officers in disguise were constantly at work gathering information. Of course, all nations' diplomats, consular officials, and military attaches are spies in essence, but confine themselves, more or less, to the unwritten rules of the game, analogous to the rules of civilized warfare, and are guided by what we may term good taste.

Information thus gathered comes from two sources: overt and undercover. Overt sources include military maneuvers and exercises to which foreign officials are invited, official interviews, nonsecret government publications, newspapers, magazines, and books. An astounding amount of reliable information can be obtained in this manner, especially from non-secret government publications. If any foreigner had a complete file of U. S. Army Regulations and Training Regulations (obtainable from the Government Printing Office at from 5¢ to 50¢ per individual regulation), he would have much more knowledge of our Army than the average officer in it. About the only things he would not know would be war plans, secret weapons, and secret sources of intelligence. Of these latter, war plans are not important--it merely means outguessing the other fellow; the trend of secret weapons

could be pretty well sized up from known information; and, as for his knowledge of one of our sources of secret intelligence, Yardley's book gave him an overdose of the trend in that direction.

The Japanese then may be considered as having had a head start over other nations in their attention to the gathering of intelligence. Probably their greatest bottlenecks were translators and interpreters of the occidental mind.

Closer to home, in their own backyard as it were, in China, Burma, Indo-China, and India, the Japanese not only used the sources previously mentioned, but organized intelligence gathering groups or spy rings. These were known as TOKUMU KIKAN or Special Service Agencies. These, of course, increased after the acquisition of Manchuria in 1951 and after the China Incident of 1957, and spread with the ever-increasing territory which came under military domination.

Before Pearl Harbor, most of the intelligence was forwarded on to Tokyo where tremendous files must have been maintained. After this, some decentralization was made, but these lower level groups apparently just "grew" of necessity with not too much help from Tokyo. This was especially true within the purely military intelligence gathering organizations. The subordinate units were expected to be independent, but were to furnish any results to collateral units and to Tokyo.

Experts in cryptanalysis were rare. They were so scarce that Tokyo could not afford to spare any for the field forces. Hence, the latter were forced to develop their own as best they could. As a result, the field forces became expert in the next best thing--radio

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traffic analysis. Hand in glove with this, of course, went the study of intelligence resulting from reading plain language messages, radio procedure and operators! "chat", simple codes, and decoding messages with the aid of captured code books.

No great distinction can be drawn between the purely military and non-military intelligence agencies in Asia and the Pacific. Both comprised military and civilian personnel, and their fields of operation and facilities were dictated by necessity. Some remained independent, others merged, while still other non-military units kept their identities, but operated under military authority.

The military attaches abroad were extremely conscious of the gathering of all kinds of intelligence, and they fed this material into General Staff Headquarters in Tokyo as well as to interested attaches in other centers. No little part of this information was obtained from the cryptanalytic effort of Axis and satellite nations where the attaches act as media of exchange.

A measure of the Japanese mind is revealed in their definition of intelligence: "Intelligence means an organization or system for collecting information for some definite purpose without actually revealing that source." This explains why they consider the gathering of even overt intelligence as a very secret business. Thus to let anyone know that you notice something that may be of use to one's government and that you are transmitting it to them is highly secret, although the information may only be a newspaper account.

The Japanese divide the kinds of intelligence into two classes: general intelligence and scientific intelligence.

General intelligence includes reports gained from spying, careless talk, theft, tracing and copying, and information culled from documents.

Scientific intelligence includes interception of enemy telephone and radio communications, secret inks, unsealing envelopes, and electrical eavesdropping equipment. They consider the first item the most important and can learn the disposition of enemy forces and their intended use from a study of the set-up of enemy radio nets and from the type and volume of radio communications the enemy sends out. They include in this category direction finding, interception, and cryptanalysis.

The term "Special Intelligence" is also used and in many ways this seems to be synonymous with "Scientific Intelligence", but there are exceptions. Most of the evidence at hand indicates that the word "Special" is usually concerned with radio signal intelligence and cryptanalysis. CHAPTER II

ORGANIZATION

1. TOKYO, ARMY .- - In Tokyo the activities of the Japanese Army Signal Intelligence Service are located in the Central Special Intelligence Eureau. Prior to 1943, this activity was known as the 13th Section of the General Staff. Cryptographic functions were entirely separate and were performed by the 11th Section. These are shown in the attached chart (Tab A) which is a reproduction of one prepared to accompany a study entitled "A Short Survey of the Japanese Intelligence Service with Particular Reference to the Military Intelligence Service", dated March 1944. This chart is purely tentative and is subject to revision. There was a reorganization of the Imperial General Staff in late 1943, which apparently moved the signal intelligence unit over into the Army Department of Eureau No. 3 which is shown as the Central Intelligence Organization of the Imperial General Staff. It is possible that this was done to afford closer integration with similar activities in the Navy and Foreign Office. At the same time, the cryptographic unit may also have been moved away from the probable communications functions of this section. At any rate, more and more collaboration in intercept, cryptanalytic and cryptographic operations between Army and Navy has been apparent since that time. The Japanese term for the Central Special Intelligence Eureau is CHUO TCKUSHU JOHO BU. Other terms that have arisen in connection therewith are as follows:

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CHUO TOKUSHU JOHO BO FUKKAN------Central Special Intelligence Eureau Adjutant. CHUO TOKUSHU JOHO BO KENKYU EU----Central Special Intelligence Eureau Research Department. CHUO TOKUSHU JOHO BO TSHUSHIN SHO--Central Special Intelligence Bureau Signal Office. CHUO TOKUSHU JOHO BO TSHUSHIN TAI--Central Special Intelligence Eureau Signal Unit. CHUO TSUSHIN CHOSABU-----Central Signal Examining (or Monitoring, or Analysis, or Investigation) Department.

Until 1944 Tokyo was not too much concerned with the success of special intelligence units in the field--probably because they were short of expert personnel themselves. All information, however, was funneled in and the results obtained were periodically sent to the field units. Elaborate methods were employed by the field units to acquaint collateral centers with the same information they were passing to Tokyo. It cannot be said that the Japanese failed to let the right hand know what the left was doing.

2. TOKYO, NAVY AND FOREIGN OFFICE. -- There is also a Special Section Naval Intelligence in Imperial Headquarters, but it is not known whether the Foreign Office has such a unit. The latter has shown evidences, though rarely, that it performs cryptanalysis.

3. FIELD UNITS. -- The following Japanese field units are directly concerned with our present study:

-6-;

TOKUSHU J<u>OHO</u>BU------Special Intelligence Bureau. TOKUSHU J<u>OHO</u>BU SHIBU-----Special Intelligence Bureau, Branch of. TOKUSHU J<u>OHO</u> HAN------Special Intelligence Section. T<u>OKUSHU JOHO</u> KIKAN------Special Intelligence Agency. K<u>OKU</u> TOKUSHU TSHUSHINTAI--Air Special Communications Unit. K<u>OKU</u> TOKUSHU MUSENTAI----Air Special Radio Unit. TOKUSHU MUSEN TAI or)--Special Radio Unit. TOKUSHU MUSEN J<u>OHO</u> TAI)--Special Radio Unit. TOKUSHU MUSEN J<u>OHO</u> TAI)--Special Radio Intelligence Unit. TOKUSHU MUSEN H<u>Y</u><u>O</u>TEI TAI--Special Radio Location Unit.

a. Nothing is known of the internal organizations of the SPECIAL INTELLIGENCE BUREAUS, BRANCHES, and AGENCIES. They seem to be closely associated with the intercept units and also with the purely spy rings where necessary. They are concerned with the evaluation of the intercept product or traffic analysis, and with cryptanalysis on low-grade material as far as possible, although there is a great shortage of cryptanalysts in these field units. The Bureaus are generally associated with Area Army and Air Army Headquarters; the Eranches, Sections, and Agencies with Army and Division Headquarters. although the term KIKAN (Agency) is often associated with spy-ring activities. We find evidence of Special Intelligence Units at the following named places. (Unstarred items from ULTRA material; starred items from Japanese Army Transfer Lists, captured documents, P/N Statements, etc. which gives officer assignments -- those with Special Intelligence assignments were noted as to organization assigned.)

PLACE

Obihira Toyohara ?

Harbin ?

Nanking

*Nanking

Canton Hankow

Hsinking

*Hsinking

*Peking

Hanoi

Saigon ?

*Nanking

Kamisikuka

Horomoshiro North Hiroshima

Sapporo

PROBABLE HEADQUARTERS

(Northern Area Army (Fifth Area Army

Kwantung Army 2nd Air Army

North China Area Army China Expeditionary Army (or Force) 5th Air Army 3rd Air Division

21st Division Indo-China Garrison Army

1

A STATISTICS

Burma Area Army Southern Army (to June 1944) (4th Special Intelligence Eureau ?) Southern Army (from June 1944) 2nd Area Army (to June 1944) 2nd Area Army (from June 1944) 7th Air Division 8th Area Army Bougainville 17th Army

Supervision over special intelligence activities in the field normally followed command channels. That is, each unit was more or less independent, and information was exchanged vertically through the regular channels, each higher headquarters consolidating the information received. Not until July 1944 was technical supervision to be exercised by the high field commands. The message giving this information is so important that it is quoted in full :

18th Army

20th Division

11

"Urgent Manila 27 July 1944

(

Rangoon

Maymyo Mangshih ?

Singapore

Manila Davao Menado Wai

Medan ?

Malang

Wewak

Hansa

Rabaul

To 2nd Area Army, Menado and Imperial General Headquarters for the information of the Chief of the Central Special Intelligence Bureau

Southern Area Army Staff "B" Message #595. Summary of operations order "B" 21.

1. The Commander of the Southern Area Army Special Intelligence Bureau will, in matters pertaining to the technical aspects of cryptanalysis and signal intelligence, assume supervision over the 2nd Area Army Special Intelligence Bureau (Menado), the 14th Army Special Intelligence Section (Manila) and the 4th Air Special Communications Unit. He will cooperate closely with the Central Special Intelligence Bureau and the Navy Special Intelligence Agency in this area and will immediately speed up the gathering

together of information derived from cryptanalytic and signal intelligence sources in the Pacific Theater. We are having the Army Chief of Staff instruct him on the details.

2. The 2nd Area Army Commander (as well as the 14th Army Commander and the 4th Air Army Commander) will have their various subordinate Special Intelligence Eureaus (Special Intelligence Sections, or Air Special Communications Unit as the case may be) cooperate with the above-mentioned Southern Army Special Intelligence Bureau Chief in his work with signal intelligence and cryptanalysis and will have them be supervised by him in technical matters concerning these.

Instructions from the Army Chief of Staff pursuant to "I" Operations Order "B" #21, paragraph 1:

1. In connection with the compilation of information on the Pacific Theater, place the emphasis on the United States Air Forces and Task Forces. By current study of United States military communications, determine the movements they are planning. At the same time, with respect to cryptanalysis, the Southern Army will devote its energies entirely to the United States Air Force and will strive to give the information acquired thereby as wide an application as possible."

Note that the specific mission assigned was the concentration on Army Air Force codes, leaving the Navy to work on Allied Navy task forces. This dividing of the work and coordination between Army and Navy is typical of recent Japanese practice. Where radio direction finding missions are essential, especially on Allied Navy craft, we find the Japanese Navy assigned these missions practically 100%, while the Army would concentrate on radar location of Allied planes and movements. Of course, both services performed straight radio intercept and cryptanalytic missions in their respective fields. This message also bears out the fact that prior to this time there were indications of more or less "hit and miss" methods of cryptanalytic coverage in the field, although traffic analysis techniques vere rather highly developed.



b. The <u>Air Special Communications Units</u> are apparently used for purely intercept functions but may have something to do with cryptanalysis also. It is believed that these units were formerly integrated with the Air Intelligence Regiments and Units which probably are now confined to the operation of radar and sound detector equipment, including communications facilities for rapidly transmitting the information received. The Order of Eattle Section records four of these units:

| 3rd 4th | Singapore Formosa | Code | name: | TSUKASA | |
|------------|----------------------|--------------------|--------------------|--------------------|--------------------|
| 5th | | | | | |
| 7th | | Code | name: | SHIN | |
| | 4th 5th | 4th Formosa 5th | 4th Formosa 5th | 4th Formosa 5th | 4th Formosa 5th |

c. The Special Radio Units were made up as follows:

Command Section Direction Finder Unit 4 Direction finders 4 Radio sets Intercept Unit 6 Radio sets

Strength--290 men commanded by a Major; completely motorized with a total of 37 vehicles and equipped with direction finders and radio sets for location of enemy radio stations and interception of enemy radio traffic. It is a field unit-functioning independently under the command of an Army or Area Army. Order of Eattle Section lists these units as follows:

> 6th) 7th)--Somewhere in Japan 8th) 12th---Unknown One unnumbered--Hsinking

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4. SPECIFIC DATA. -- The following data in relation to the various units previously mentioned follows:

a. TOKYO.--The 18th Section of the Japanese General Staff was given as the address in several messages pertaining to cryptanalysis from European capitals

but by September 1943 this internal address changed to the Central Special Intelligence Eureau . Generally internal addresses are omitted in these military attache messages. The 11th Section was addressed jointly with the 18th Section in one message to Tokyo from Berlin, with reference to the possible adoption of cipher machines in the Japanese Army The attached chart (Tab A) shows the 11th Section as the possible Communications Section. That the Cryptographic Section should be a part of this is entirely logical. The first evidence of messages originating in Tokyo, addressed to field units, and headed "Central Special Intelligence Bureau" is given in #63, dated 8 April 1944 (addressee missing), which relayed data obtained from the Japanese Navy regarding Allied Australian radio circuits There is some evidence that Tokyo operates some independent field units, as for example, on 18 April 1944, it sent a book message to various headquarters containing radio intelligence reports received from Obihiro in Northern Japan. A reference addressee on this message was the Northern District General Defense Command, the very area where Obihiro is located, hence it may be assumed that Obihiro communicated direct to Tokyo About this time a new term came into use:

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"CHUO TSUSHIN CHOSA BU" or Central Signal Examination (or Monitoring, or Analysis) Eureau, which was addressed direct from some of the field stations in North Hiroshima in the Northern Area and from Rabaul

· Not all

15

reports containing special intelligence from Tokyo are headed "Central Special Bureau" or "Central Special Intelligence Bureau". Others give "Staff Message (No.)", but these are generally concerned with the passing on of evaluated ultra information, in contrast to perhaps technical ultra information passed under the other heading

Tokyo showed several evidences of being short of cryptanalysts: Sapporo asked Tokyo for several cryptanalysts and ten days later had to repeat the request as Tokyo did not even deign to reply _______ Tokyo was extremely lax in providing funds for "scientific intelligence"--the military attaches in ______ Fand Budapest were exerting super-human efforts along this line especially in collaboration measures, and made repeated requests for funds without success

It is likely that with more and more pressure from the field and with the stepping up of Allied advances in the Pacific, Tokyo was forced to give more heed to the needs of the field forces. Evidence of this was given in the message quoted at length in paragraph 3, which shows great attention being paid to cryptanalysis on the part of the newly organized Southern Army

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b. NORTHERN JAPAN. --Signal Units at Horomushiro (Paramushiro) in the Northern Kuriles and at Kamisikuka in Karafuto have been very actively engaged in intercept, traffic analysis activities, and to a lesser extent in solution activities. About 1 April 1944, they started reporting the number of messages of each precedence received. There are hundreds of messages at hand which report this signal intelligence data. So many in fact that their standard pattern has been a great aid to our Sections B-II and B-IV

(

Internal addresses show a Special Intelligence Eureau at Kamisikuka with a branch at Paramushiro. Since 15 March 44, these two signal units have been placed under the command of the Special Intelligence Section of the 5th Area Army whose headquarters is at Sapporo (Hokkaido). (Magic Summary, Japanese Army Supplement, par. 1, 4 April 44). Prior to this time these units were under the jurisdiction of the Northern Army of Defence at Sapporo. There were at least two units at Kamisikuka-one engaged in intercepting Soviet Russia's communications, and one engaged in intercepting American communications. The latter moved to North Hiroshima near Sapporo in May 1944

Sappore informed Heromoshire 15 June 1944 that the Special Intelligence Bureau intended to greatly increase coverage on American stations by developing a plotting detail, and to increase intercept receivers and personnel ______ Cooperation with Japanese Haval Intercept Units on Heromuchire was evident in July _______ Bappere does some traffic analysis also and passes this information to its subordinates and to Tokyo for reference

-1.-

c. MANCHURIA. -- Harbin has been quoted as the source of special intelligence reports several times. Most of these are in regard to American Army and Fleet Operations, and seem to be taken from telegrams of the Soviet Ambassador to Australia.

They seem to be mostly spy reports and Tokyo considers them valuable enough to pass on to all main army centers -

The 23th Division is

located here, but nothing further is known about Harbin itself. Hsinking, in Manchuria, is the headquarters of the Kwantung Army. Some

a contraction of

organization there has made studies of Russian radio communications

According to a Prisoner of War Report the Manchuria 1249 Wireless Intelligence Unit was stationed, at least during the period March 1940 to December 1942, in the following places: Mutankiang and Nanrin. Sections of the unit rotated to stations with Border Garrison Units from three to six months at a time for practical intercept work on Russian stations.

d. NANKING.--Here is the Headquarters of the 5th Air Army, and the Special Intelligence Bureaus at Canton and Hankow are under its direct control . The results of activities at Nanking, however, seem to be largely confined to spy reports and as a collection center for captured documents.

It usually contacts centers in Rangoon, Singapore, and Tokyo, but once it addressed a book message regarding the nature of an AAF code, obtained from a B-24 shot down, to many other centers as well. These included the Eorneo Garrison Army at Api, 21st Division at Hanoi, Indo China Garrison Army at Saigon, Taiwan, 2nd Shipping Transport Command, and the 1st Air Army, Tokyo

e. CANTON.--There is a branch of a Special Intelligence Eureau in Canton which sends out a series of Kwantung Special Intelligence messages and which indicates familiarity with solution of 3-figure Chinese or American codes. It reports to the Special Intelligence Bureau at Hanoi. Note that Canton is in Kwantung province, which is not the location of the Kwantung Army whose headquarters is in Hsinking, Manchuria

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; It inquired of Rangoon the progress made in ciphers used for aircraft movement, and the kind of ciphers used by new aircraft units reported in China

g. HANOI.--There is some indication that Hanoi has a special intelligence unit which has branches in Hankow, Canton, and Mangshih. It also does some traffic analysis . The 21st Division and the 8th Air Division are tentatively located here, and the former relays messages from this unit

The 21st Division gives Centon a spy report on American air fields in China _______ and it also gives Hankow a "K 1 spy report" on allied air attacks in French Indo-China ______. The 21st Division relays a message from Hanoi Agency Head to Special Intelligence Bureau Branch Chiefs at Hankow, Canton, and Mangshih, asking for copies of enemy code books on hand or obtained in the future ______,

h. SAIGON.--This is the Headquarters of the Indo-China Garrison Army. Most reports out of Saigon are from spies or unknown telegraph sources

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The second second

i. BURMA.--

(1) <u>Rangoon</u>.--Headquarters of the Burma Area Army is located at Rangoon as is also the 5th Air Division. The latter reported British code capture to Tokyo

The organization at Rangoon seems to be under Air Force jurisdiction and is primarily interested in Allied Air Force codes and plane movements. There is much interchange of this kind of information with other air centers in Hankow, Canton, Nanking, Manila, and Tokyo

There is

20

also located at Rangoon the Hikari Agency which seems to have something to do with codes, although its primary function appears to be spy activities in the India theater

(2) <u>Maymyo</u>.--Formerly the headquarters of the 15th Army and later of the 33rd Army. A "Hayashi group" located here was informed of captured British codes). The "Branch Chief" sent a very complete message of apparently recovered conversion squares to the Special Intelligence Bureau Branch Chief at Nanking

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j. SINGAPORE. -- Headquarters of the Southern Army has aked Hanoi (21st Division) for information on enemy call signs and frequencies

. The special intelligence organization here seems primarily interested in intercept and traffic analysis matters

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k. MEDAN. -- One item indicates that the 4th Special Intelligence Bureau may be located here '

1. SURABAYA.--Davao addressed a message to Surabaya to the Special Intelligence Bureau in regard to interception of enemy communications At the same time that the Special Intelligence Bureau was established at Davao, there was one established at Malang and was to be known as the Malang Agency. It may be a branch of the other (See par. k. above). It transmits information via Surabaya to Singapore, Davao, and Menado

Messages originating from this agency are usually headed SU REN. This is an abbreviation for SURABAYA RENRAKUSHO which means Surabaya Liaison office.

m. MANILA.--Evidently there was no special intelligence unit located here until Manila became the headquarters of the Southern Army in May 1944. In July, they were intercepting Allied communications, and determined that NTF was the central Naval communication base and conveyed this information to all its subordinate commands as an urgent measage 0 on 1 August 1944, it reported rather complete details of the M-209 to Tokyo. It is probable that MINAMI is the code name for this special intelligence organization, which apparently followed the move of the Southern Army Headquarters from Singapore. In July, Manila was to become the center of greatly expanded cryptanalytic activities. (see par)).

n. DAVAO and MEMADO.--In Davao was located the Headquarters of the 2nd Area Army until the spring of 1944 when it moved to Menado, at which time the special intelligence organization moved with it. There is much evidence to show that Davao was the center of solution activities. It is possible that the Special Intelligence Eureau established here in December 1945 was to serve not only the 2nd Area Army Headquarters but the Sth Area Army Headquarters at Rabaul and that of the Southern Army at Singapore

1.....

Rabaul and Surabaya have repeatedly sent intercept and traffic analysis data to Davao and Menado

o. WAI.--The 7th Air Division makes traffic analysis studies and forwards same to the 14th Division at Manokwari, 3rd Air Army at Singapore, 4th Air Army at Hollandia, 9th Air Division at Palembang, and 19th Army at Ambon

p. RABAUL. -- Rabaul has sent traffic analysis data to the 17th Army at Bougainville, the 4th Air Army at Hollandia, and the 18th Army at Nevak via Tokyo

In May 1944, the Special Intelligence Bureau sent partial results of solution of apparently one-part Allied Air-Ground Code to Menado

In July 1944, a reorganization was evident in the 8th Area
Army special intelligence activities. A new series of messages containing traffic analysis was started from the 8th Area Army Signal
Examination Department and routed to the Central Signal Examination
Department in Tokyo (CHOCA EU)

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q. BOUGAINVILLE. -- The 17th Army at Bougainville forwarded to Tokyo a copy of one part of a captured Air-Ground Liaison Codebook

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r. WEWAK .-- A detachment of the 18th Army was engaged in intercept operations at Wewak

s. HANSA.--A detachment of the 20th Division was stationed at Hansa and was engaged in intercept duties

1. (1) CHAPTER III PERSONALITIES 1. MILITARY ATTACHE SYSTEM .-- Of the Military Attaches mentioned, the most prominent are Colonel Tahei HAYASHI, ; and Major HORTUCHI. HAYASHI was evidently stationed in Berlin until transferred to Budapest about 1 January 1943. He seems to be the most authoritative in matters pertaining to solution. There was one proposal that he head up the Japanese group in joint solution endeavors with the Germans. Cont. Re in Briller Major SAKURAI was designated as liaison officer with the Germans in June 1944. Other mentioned include Lt. Colonel TSUNEYOSHI, Agent SAKURAI, Interpreters-HAKATA and HORIUCHI (not the major).

2. FOREIGN OFFICE and DIPLOMATIC PERSONNEL. -- No names have arisen within this category in connection with solution or signal intelligence activities. There are numerous mentions of code clerks, telegraph officials (many of whom are code clerks also), and cipher machine repairmen, but these are not included in this study.

3. JAPANESE ARMY FIELD FORCES.

a. Very few names have appeared in Japanese Army messages which can be connected up with the Japanese SIS. Major AOYAMA was definitely the officer in charge of the Special Intelligence Bureau at Davao, and a Captain SATO was in charge of the Malang Agency

Captain MIYASHIRO was apparently in charge of intercept activities at Horomushiro (Paramushiro). Lt. Colonel TSUNEYOSHI's name was connected

with a "directional detector" and was known to be in the Special Intelligence Section of the Kwantung Army (See subparagraph b below, Engineer IMANAKA was head of the Cryptanalytic Bureau at Rangoon according to a footnote of a British Bulletin

Lt. Colonel SOTOI was mentioned as the Head of the Special Intelligence Bureau in Rabaul ______, . 2nd Lt. IWADA made a study of the M-209 cipher machine in Manila . _______Names of strictly cryptographic personnel (i. e. code clerks) are not included in the present study.

b. A study of the intelligence organizations in Order of Battle files has revealed names of many officers who have been assigned to Special Intelligence duties. There follows a list of these officers which was compiled from the Japanese Army List of 1942, the periodic Transfer Lists issued by the Japanese Army, and other captured documents. They are grouped according to organization, but since in most cases dates are not given, no inference can be drawn as to the relative sizes of each organization:

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A STATISTICS TANK AND A

CENTRAL SPECIAL INTELLIGENCE EUREAU (TOKYO)

HARA, Hisashi ICHIE, Takeo IMAMURA, Masahiro INOUE, Masaki INOUE, Makaji KAWAHARAI, Kiyoshi KAWAHARAI, Kiyoshi KAWANO, Koichi KITAMURA, Yoshio KUBOTA, Hideo MACHII, Hikoshiro MACHII, Hikoshiro MATSUNAGA, Kengo MATSUNAGA, Takashi YAMADA, Tadashi YAMAMURA, Takeshi

HIRAGA, Satoshi

IMAMURA, Masahiro

Assigned Research Dept. Attached, Signal Station Assigned Research Dept. Assigned Assigned Research Dept. Assigned Research Dept. Attached Assigned Assigned Assigned Research Dept. Attached Chief, Signal Station Assigned Research Dept. Chief -Assigned Research Dpet. Attached Adjutant Assigned Assigned Research Dept. Assigned Research Dept. Assigned Assigned Assigned

NORTHERN AREA ARMY

Attached Attached

Assigned

Assigned Assigned

Assigned

Assigned

Assigned

Assigned

Assigned

FIFTH AREA ARMY

IZUTA, Atsuji KATO, Shigeki KODANI, Takamichi MINAMI, Torajiro SHIMADA, Yoshi SUZUKI, Hisaichi TSUKAMOTO, Nakaba YAMAGUCHI, Usaburo lst Lt. lst Lt. Captain lst Lt., Infantry 2nd Lt. lst Lt. 2nd Lt.

Capt., Mech (Cav).

Major, Infantry Major, Infantry Capt., Mech (Cav)

Major, Engineers Major, Infantry 2nd Lt.

Major, Engineers 1st Lt., Infantry 1st Lt., Inténd. Major, Elec (Engr)

Major General, Hy Arty

Lt. Colonel, Infantry

Lt. Colonel, Infantry

1st Lt., Mech (Cav)

lst Lt., Infantry Major, Tpt. Major, Mech (Cav)

Colonel, Hy Arty

lst Lt., Inf.

Captain

Lt. Colonel

Colonel

Major

lst Lt.

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BAGINO, Takeo BAN, Yutaka ENDO, Saburo

FUJIKI, Jiro FUKUDA, Minoru HANAZAWA, Tetsuo

HASHIDA, Suguru HIDAKA, Takashi

HIRATA, Hidetoshi HOSHINA, Jinichi HYODO, Hajime INUZUKA, Risaburo KAGAWA, Masatomi KAMIYAMA

KIKUCHI, Toshio KIMURA, Yasuji KIRA, Kingi

KOBANAWA, Shigezo *MATSUOKA, Takashi MIZUNO, Katsumi MORIAI, Kojo NAGASAKA, Saburo OCHI, Tokio OKAMOTO, Masaru OKAMA, Shigemi OKUZAMA, Goichiro *ONODERA, Koichi TAKORI, Sunao TSUCHIYA, Kiichi TSUCHIYA, Kiichi TSUCHIYA, Muneharu YAMAKITA, Shiro YAMAMOTO, Akira YAMATO, Hiroshi YONETANI, Ryokuro YOSHIMAI, Mitsuo *TSUNEYOSHI, Shigeji

KWANTUNG ARMY Attached, 8/38 3/40 Chief, Branch Intelli-gence Dept., 8/42 Attached 3/41 Attached C.O. of 1 Coy, R.I. Unit, 12/42 Assigned, Special Intelligence Dept. Attached, Special Intelligence Dept. Attached, 11/41 Attached, 10/41 Attached, 12/40 Attached, 8/43 Attached, 5/42 Adjutant, MANSHU 1249 W/T, 12/42 Attached, 7/41 Attached C.O. of 2 Coy, MANSHU 1249 N/T Intel Unit, 12/42 Attached 9/30/42 4/42 Attached 7/41 Attached, 12/40 Attached, 3/41 Assigned Attached, 4/42 Attached, 8/42 Attached, 2/40 Attached, 6/42 12/40 Attached, 5/42 Assigned Attached

Assigned

Assigned

Attached, 5/42

Attached, 3/41 Attached, 3/41 Major, Mech (Cav) Lt. Colonel, Infantry

Captain, Infantry Captain, Infantry

Captain

Lt. Colonel, Infantry

Captain, Med. Arty. 1st Lt., Infantry 1st Lt., Tech. 1st Lt., Mech (Cav) Major, Infantry 1st Lt., Fd. Mtn

2nd Lt. Major, Infantry Captain, Elec. (Engr) 1st Lt.

Major Major, Elec (Engr) Major, Engineers Major, Elec (Engr) 1st Lt., Infantry Major, A/A (Arty) Captain, Infantry Major, Tech. Major, Tech. Major, Infantry 1st Lt., Engr Lt. Col., Med Arty 1st Lt., Inf. Captain, Infantry Major, Infantry Najor, Infantry 1st Lt., Tnfantry lst Lt., Fd Mtn Arty 1st Lt., Fd Mtn Arty 1st Lt. Lt. Colonel, Mech (Cav)

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*Officers entered more than once, under different armies.



FUJII, Mesayuki IIYAMA, Miyuke KONDO, Masashi

TANAKA, Sotaro TSUKII, Shukichi

DEGUCHI, Motomi FUJII, Shigejiro

IKKO, Yukio

JIKEN, Koji

*KITAMURA, Yoshio

MIZUTANI, Isao

NAKAGAWA, Mampei

OZALA, Yoshihira

*TSUNEYOSHI, Shigeji

YAMADA, Tadashi

SECOND ATR ARMY

Attached, 6/42 (Sub Apptmt) Assigned Assigned Special Intelligence Department Assigned Assigned

NORTH CHINA AREA ARMY

Attached, 5/40 Comdr, Special Intelligence Section, 3/40 Attached, Special Intelligence Section, 8/42 Attached, Special HQ Intelligence Section, 5/42 Attached, Special Intelligence Section, 3/41 Attached, Special Intelligence Section, 4/40 Attached, Special Intelligence Section, 5/40 Attached, Special Intelligence Section HQ, 9/7/42 C.O. Special Intelligence Section, 11 March 43 Attached, Special Intelligence Dept. HQ, 9/40

Captain, Infantry Major, Air 1st Lt.

Captein, Fd Mtn Arty

| | lst Lt., Captain, | Infantry Infantry |
|----|----------------------|----------------------|
| | lst Lt., | Elec. |
| .2 | Captain, | Infantry |
| .2 | lst Lt., | Infantry |
| | Captain, | Infantry |
| | lst Lt., | Infantry |
| | Captain | |
| | Lt. Col., | , Mech (Cav |
| | Major. Tu | ot. |

CHINA EXPEDITIONARY ARMY (or FORCE)

| ARAKAWA, Toichi | Attached, Special Intelli- gence Section, GHQ | lst Lt., Infantry |
|--|---|---|
| FUKUNAGA, Hiraku HISANAGA, Nobuyoshi IKEHARA, Yoshio | | lst Lt., Infantry lst Lt. Çaptain, Tpt. |
| ISHIMARU, Hisao *KAGAMI, Tooru KATADA, Sunao KATO, Sakuji *KUSE, Hideo | Attached, GHQ Attached, GHQ Attached, 5/39 Attached, GHQ, 8/42 | St Lt., Infantry Captain, Infantry Major, Rly Engr 1st Lt., Elec (Engr) 1st Lt., Infantry |
| MISUMI, Toshio MIYAGAMA, Katsuyoshi NAKAMURA, Toshiro | Assigned Attached, GHQ, 5/40 Attached, GHQ, 3/41 | Major, Infantry lt Lt., Infantry Major, Tpt. |

OTOMO, Takehisa *SAKAGE, Kenzo SATO, Takaichi SUETOMI, Takeshi SUEYOSHI, Keiji TANIYAMA, Ikuo TANIYAMA, Tsugio TSURUTA, Narumi WAKAMATSU, Shigeru YAMADA, Saneatsu YOSHII, Rikizo

ASHIDA, Toshio ENDO, Masami KIKUI, Yoshio

*KAGAMI, Tooru *KOBAYASHI, Yuzo

*KUEOTA, Hideo *KUSE, Hideo *NARIMATSU, Nagamasa

*SAKAGE, Kenzo

Attached, GHQ, 3/42 Attached, Special Intelligence Section, GHQ Attached, Special Intelligence Section, GHQ Assigned, Special Intelligence Dept. Assigned, Special Intelligence Dept. Attached, Special Intel-ligence Section, GHQ, 3/41 Attached, Special Intelligence Section, GHQ, 5/40 Chief, Special Intelligence Colonel, Infantry Section, GHQ, 15 July 43. Attached, Special Intelligence Section, GHQ, 5/40 Attached, Special Intelligence Section, GHQ, 3/41 Attached, Special Intelligence Section, GHQ, 5/40

FIFTH AIR ARMY

Assigned Assigned Assigned

1st Lt., Infantry 1st Lt., Infantry 1st Lt., Infantry Major, Infantry Major, Infantry 1st Lt., Med Arty 1st Lt., Infantry 1st Lt., Infantry

1st Lt., Infantry 1st Lt., Infantry

lst Lt., Air (Inf) Captain, Infantry Captain, Fd Mtn Arty

THIRD AIR DIVISION

Assigned Captain, Infantry Chief, Special Intelli-Major, Mech (Cav) gence Dept. Comdr, 4/42 Major, Eng. Assigned lst Lt., Inf. Attached, Special Intel-Captain, Infantry ligence Dept. Assigned 1st Lt., Infantry

A COLORADO

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ANDO, Kinichi AOYAMA, Waichi *FUJIE, Tetsunen FUJIMOTO, Shigeharu FUJISHIGE (FUJISAKA), Tetsunen IMANAKA, Taichi *KOEAYASHI, Yuzo MIYAZAKI, Kenzo NAKAGAWA, Taichi NONAKA, Toshio *ONODERA, Koichi SATO, Ryoichi *SOTOI, Takeo TACHIBANA, Kishichi

YAMAMOTO, Iwao

TAKAYAMA, Tatsuo

YOSHINO, Hiroshi

SOUTHERN AREA ARMY Assigned, Special Intelli- Major, Air

gence Dept (Sub Apmt) Attached, Special Intelli- Major, Mech (Cav) gence Section, GHQ lst Lt. Attached, Special Intelligence Dept. 1st Lt., Infantry Attached, Special Intelligence Dept. 1st Lt., Infantry Attached Special Intelligence Dept. Major, Infantry Attached Special Intelligence Section, GHQ, 5/42 Major, Mech (Cav) Attached, Special Intelligence Dept. 1st Lt., Fd Mtn Arty Attached, Special Intelligence Dept. 5/42 Attached, Special Intelli-Interpreter gence Dept., Assigned Special Intelli- Lt. Colonel, Air gence Dept (Sub Post) (Relieved of Sub post) Assigned, Special Intelli- 1st Lt., Eng. gence Dept. 1st Lt., Infantry Attached, Special Intelligence Dept Chief, Special Intelligence Lt. Colonel, Tpt. Section, 11/41 Attached Special Intelli-1st Lt., Infantry gence Dept. Attached Special Intelli-1st Lt., Infantry gence Dept. 1st Lt., Infantry Attached Special Intelligence Dept. Captain, Infantry Attached Special Intelligence Dept.

SECOND AREA ARMY

| ENDO, Atira | Assigned Special gence Dept. | Intelli- | Captain, Tpt. |
|------------------|--|----------|---------------|
| NARUMOTO, Jiro | Assigned Special | Intelli- | lst Lt. |
| NUKAGA, Daisuke | gence Dept. Assigned Special gence Dept. | Intelli- | Captain |
| SHIROTA, Kenichi | Assigned Special gence Dept. | Intelli- | Captain |
| | 0 1 | | |

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EIGHTH AREA ARMY

6 6-11

| | Assigned Special Intelli- | lst Lt. |
|---|--|-------------------|
| | gence Dept. Assigned Special Intelli- | 2nd Lt. |
| | gence Dept., 12/42 | |
| | Assigned Special Intelli- | 2nd Lt. |
| | gence Dept., 12/42 | |
| | Assigned Special Intelli- gence Dept. | lst Lt. |
| | Assigned Special Intelli- | Captain, Infantry |
| | gence Dept. | |
| | Assigned Special Intelli- | Captain, Infantry |
| | gence Dept. Assigned Special Intelli- | Captain, Infantry |
| č | gence Dept. | |
| • | Chief, Special Intelligence | Lt. Colonel, Tpt. |
| | Dept. | |
| | | |

*FUJIE, Tetsunen HARADA, Kazuhiko IITSUKA, Kazuji *KONDO, Masashi MISHIMA, Hitomi NADA, Shinichi *NARIMATSU, Nagamasa

*SOTOI, Takeo



CHAPTER IV

COLLABORATION WITH ALLIES AND NEUTRALS

1. General Information. -- The Japanese Military Attaches were doing an excellent job of liaison with the solution organizations in certain European capitals. Direct evidence is available as regards

Budapest, and Berlin. It is possible that the attaches at different capitals had particular specialties. Budapest messages reported most of the solution material. Bucharest messages contained most of the information on intercept activities. All of the other capitals' messages were most prevalent in reporting special types of intelligence, FU, M, etc., and seem to be either of the informant type from espionage, or reports released from the General Staffs. These specialties may have developed from the personal talents of the attaches concerned.

NOT RELEASABLE

b. Hungary.--The picture of the Japanese relations with Hungary is obscure. One reference made by the attache in Budapest in a dispatch to Tokyo stated that he had been told by the Hungarian code expert that the Hungarians were reading the American strip system

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. The only other direct reference came from a <u>Helsinki</u> to Tokyo message of 27 October 1943 _____, which stated that Hungary was concentrating on cracking low-class codes of the Balkan countries; that they were not very tenacious on Russian, British, nor U. S. codes; and that their workers were generally old people and hence less efficient. All other reference about solution activities emanating from Budapest spoke of material obtained from the Germans and, Roumanians

Two other messages reveal a sort of back-handed collaboration in that the Hungarian Military Attache in Sweden was passing some information to the Japanese Military Attache in Sweden

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the information to Tokyo that the Germans desired to undertake joint operations in the breaking of foreign codes! However, Tokyo was slow to act. A message of 12 Feb 43. , Budapest to Tokyo stated, "We have repeatedly asked for instructions concerning our collaboration with the Germans but have received none. Shall we stop this collaboration or not." On 12 March 43, Colonel Hayashi in Budapest reported to Tokyo that the head of the German code section had told him that the Germans were reading the American strip system. Also on 20 March 1943 Hayashi knew that the Germans had deciphered the conversion table of the American MI-12 code Later, in August 1943, they learned from the Germans that the latter were breaking the Strip and Brown American ciphers and were studying the use of machines for removing additives . This is another Budapest message and it is possible that the Germans had a solution group in Budapest. In October 1943, the situation changed when Colonel Hayashi left and had not improved up to 6 January 1944. Apparently his successor did not have the confidence of the Germans, and in addition both Japanese and German communications offices had been destroyed, and negotiations were about to begin on the reexchange of materials for reading codes . These arrangements took considerable time for it was not until June that their completion was evident. At that time the German War Ministry, with the explicit approval of Hitler, offered to exchange cryptanalytic information with Japan on American codes and wanted to know what Japan wanted and what

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they had to offer in exchange. The offer was bonafide as the same message contained material the Germans had and what they wanted from Japan ` The Japanese replied eagerly and wanted American strip alphabets and conversion tables for which they offered some information on the M-209 (The Japanese had little to offer in exchange at this time, and to cover up they stated that what they were now getting from the Germans was in exchange for cryptographic material they furnished the Germans three years before. This would date collaboration back to the middle of 1941, before the Japanese entered the war. Also in June 1944, the Japanese attache in Budapest complained that he did not have direct contact with the German cryptanalytic organization at all times, and urged that Tokyo make more information available to the Germans so that he could better this situation Tokyo agreed to cooperate and "to match the enthusiasm the Germans are (presently) showing in the cooperative work". Major Sakurai was given the specific All these mission of liaison with the Germans. June through October messages were in and out of Budapest which further confirms the possible location of a German cryptanalytic organization

there. There was also a reference in a diplomatic message, dated 10 August 1944, to intelligence emanating from the "German agency at Budapest".

d. Roumania.--There is nothing to show any collaboration with the Roumanians except by inference. Many messages have originated from Bucharest giving traffic analysis on British and U.S. communications

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data on Russian radio stations and techniques '

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own intercept station here since their general practice was to obtain information from liaison methods

e. Italy.--The Italians were quite willing to keep the Japanese informed of their own intercept and solution activities and to cooperate in making the resulting intelligence available to the Japanese, but the Germans opposed any Italian large scale operations along this line. This was after the collapse of Italy and applied of course only to the Fascist government ______. No evidence is at hand regarding relations prior to this time.

f. Sweden.--No cooperation with Sweden in "this type of espionage" was evident up to May 1944. The Military Attache at Helsinki advised against it since Sweden leaned toward the Allied side, and reported that nothing was known of Swedish progress in "scientific espionage"

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CHAPTER V TYPES OF INTELLIGENCE

1. General--The Japanese have an elaborate and confusing system for designating the sources of intelligence. The letters of the English alphabet are used as well as Kana designations. Each special spy informant or spy group thus has a code abbreviation. Printed publications have still another designation. Different geographic areas have their own abbreviations which have no relation to others. Thus "A" Intelligence has a source in Europe that has no relation to the "A" Intelligence in the Japanese Army Field Forces. Our primary interest in these sources is to isolate and prove the source so that we may discard those which are not concerned with cryptanalysis and traffic analysis. As in other fields the Japanese are not consistent in confining sources in a strictly abbreviated manner. They often give the exact source, but it is possible that these are the more infrequent type.

a. Diplomatic Field.--In the diplomatic field practically all sources are from informants, spies, handouts, and printed material. Among these are "A", "D", "FU", "GH", "HA", "I", "K" (Berlin), "K" (Stockholm), "KI", "M", "MA", "MO", "P", "PA", "RA", "S". Possible exceptions in this field are the "NE" and "NC" reports. "NE" Intelligence emanated from the military attache in Bucharest and was concerned with traffic analysis data on British, American, and Russian radio communications (See Section IV, paragraph 4). The "NC" reports are sent from Nanking to Tokyo and are purported to contain information derived from Chinese

wires concerning Chinese diplomatic problems and military intelligence. Much speculation over these reports has given various sources, but nothing definite has been learned. It is now thought that they have been planted by the Chinese.

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b. Military Field.--In the Japanese military field we have only lately come across a definite reference to signal intelligence sources. These are given in 55rd Army (Maymyo) Staff message No. 225, sent 14 May 1944, to a subordinate unit . This apparently quotes a revision in the "Collection of Intelligence Regulations" from higher headquarters--perhaps Tokyo. The pertinent parts follow:

"A" intelligence will be items from decryptographed codes. "B" intelligence will be items from intercepted in plain text. "C" intelligence will be items of traffic analysis. "D" intelligence will be items detected by radar."

Additional messages are available which prove this classification and it appears to be general throughout the Japanese Army. One reference calls this "A" and "C" intelligence as verily infallible.

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CHAPTER VI SUCCESSES

1. Traffic Analysis.

a. BUCHAREST SOURCE.--The results obtained from the intercept operations emanating from Bucharest (see Chapter IV, par. 1d) were confined to the study of British, American, and Russian radio communications. The American and British messages seemed to be confined to the analysis of the APO numbers, EFM messages and their cable addresses, and apparently valuable Order of Battle information, convoy movements, etc., was obtained

in Bucharest were sent to Tokyo and labelled "NE intelligence".

b. FIELD FORCES. -- As previously stated in Chapter II, par. 4b, the most complete information along this line came from Kamisikuka in Karafuto and Horomushiro (Paramushiro) in the Northern Kuriles. Kamisikuka sends routine reports of its activities in intercepting Allied communications. One of these reports is devoted to the results of its interception of Soviet transmission; the other reports results of the interception of American signal activities. Most of these Japanese Signal Intelligence reports are in the nature of traffic analysis and traffic flow analysis summaries. They discuss the number of messages

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intercepted, classification of the messages (operational priority, priority, routine, etc.), the pattern of intercept as indicative of military activity, and other matters comparable to the work of Allied traffic analysts. These messages are sent from Kamisikuka to Horomushiro without exception. It is interesting to observe that they apparently are an exchange of information with Horomusiro which sends a highly routinized message to Kamisikuka reporting its results of the interception of American radio traffic. Evaluation of intercept data seems always to be made at the same centers where the actual interception takes place. An extract from the report of the Japanese results of traffic analysis compiled in May 1944 by our Traffic Analysis (B-IV) Section follows:

"4. Study of Radio Contacts and Traffic Patterns

Frequent reports are filed setting forth radio contacts and detections derived from this and from patterns of messages. From messages passing between Nanning and other points, it was deduced that "the 20 P-40's judged to be in Nanning may be in the same company" (Nanking to Hanoi, 13 Mar 44); from the appearance of a great number of routine messages after 1700 over naval air and base circuits, it was inferred that the pattern was the same as that which preceded a previous air attack (Horomusiro to Kamisikuka, 5 Feb 44); from the fact that "messages originated from recornaissance east of the Green Islands, etc" it was deduced that there is activity connected with the Solomon Islands (Rabaul to Tokyo, 4 March 44). The Japanese looked to the mere existence of an American radio transmission to act as the signal for their attack: "If we observe enemy shipping groups sending messages in the Buna or Finschhafen area, we shall begin attacking these at once" (Davao to Rabaul, 8 Feb 44). Estimate of the number of planes which travelled from Hawaii to Canton Island to Espiritu Santo was derived from intercept analysis.

The following contacts between our radio stations have been mentioned: "JOV" and "loJ"; submarine contacts with Honolulu (said to be rare); between "official who sent urgent special messages near Madang and other officer surveying the eastern tip of New Guinea"; between 2 ships with Torokina and between ships and Munda; between all companies in the Central Pacific and the Solomon Islands and Honolulu (said to receive long broadcasts daily.)

b. Study of Volumes and Traffic Types

The most frequent reference in Japanese SIS reports is the volume and type of U.S. traffic.

It was pointed out that since 5 February, radio traffic between all bases in the Aleutians was heavy (from Sapporo, 14 February 44); and 20 messages were sent and received (Manila). In fact, both Horomusiro and Kamisikuka each employ a stereotyped message form to convey the results of this intercept, as to type and volume of American traffic:

1. Horomushiro sends a daily message in the Northern 7777, stating the number of OP, P Weather and Other traffic passing over "naval base circuits", "naval air circuits", "Army air circuits". At the conclusion of each such report a paragraph is devoted to items of special interest, as the change in Army call signs, the strengthening of our communication security, unusual ebbs and flows of our traffic, unusual relays of our traffic (1 OP message was addressed to Midway from 7V6, relayed from D to B), etc.

2. Kamisikuka sends a daily message in the Northern 7777 regarding ships it has detected from intercepted communications, listing "ships detected"; "senders"--(including type and number of messages transmitted); "receivers"--(including the number and type of messages received.)

c. Call Sign Study.

Frequent reference is made to our use of call signs. Some of the methods of designating call signs are not clear, as the OOV (Number) series, which may refer to naval planes. The various call signs mentioned are listed:

00 V 10--with respect to 00 V 10, it was asked if it is a "naval table" (18 April), and on another occasion it was stated with respect to it that "there is still electric wave control."*

*These are actual calls used by the U. S. Navy: 00 = Officer in Charge, V = Flight; thus, 00 V 10 = Officer in Charge of Flight # 10.



00 V \exists l--this "call" was said to "control the wave lengths" and also reported that "after 00 V \exists l was detected, it was put under wave control."

00 V 32--this "call" was said to be a "base circuit."

00 V 33--

00 V 34--

- - . . .

2 V 3---said to be a naval plane (22 Feb 44).

SU V 3---said to be an army air field (22 Feb 44)

NUD 4---at 2550 Kcs on "S" circuit, said to have exchanged communications with "A". (23 Feb 44)

| NQW 6 | (53A) | | | | | | |
|-------|-----------------------------------|------|-----------|----|-----|-----|--|
| XYK | (71A) | (all | mentioned | 24 | Jan | 44) | |
| UIWF | (53A) (71A) (52A) (11CA) | | | | | | |
| QFTY | (11CA) | . – | | | | | |

| 31 | V | 3naval | plane | |
|----|---|--------|-------|---------------------------|
| 34 | V | 3naval | plane | (all mentioned 19 Mar 44) |
| 25 | V | 3naval | plane | (Horomusiro to Sapporo) |
| 29 | V | 3naval | plane | |

49 V 3--naval plane mentioned 19 Mar 44

D 2 V--mentioned 3 Mar 44

7 V 6--(message to Midway from 7V6--mentioned 12 Mar 44)

00 V 2--naval base to naval air mentioned 5 Feb 44

00 V 3--naval base to naval air mentioned 5 Feb 44

d. Direction Finding

In messages from Sapporo to Horomusiro, and from Kamisikuka to Horomusiro, direction finding and D/F equipment were mentioned.

e. Identification of Units and Location from Traffic Analysis.

In a message from Bougainville to Tokyo (4 Mar 44) it was stated that from signals a fleet of 6 vessels of flagship type and . 8 ordinary vessels were deemed to be near Guadalcanal. In a



message from Ambon KEN to Motozan (17 March) it was deduced that 2 companies of B-24's based on Brook's Creek may have moved, this was inferred from radio intercept. Other instances have been cited above.

f. Charting of Circuits

A number of references are made to circuits, and their establishment. A message from Horomusiro to Sapporo is reminiscent of local t/a. This message reports that a frequency heretofore reported, is now established as an army air circuit.

g. Intercept Difficulties

Frequent complaints are registered about the difficulties the Japanese experience, from time to time, with our transmissions. On 5 February 1944, reduction of sensitivity between 0800 and 1200 was said to have made reception difficult; on 22 February 1944, it was said that the sensitivity of all communications nets dropped at 0700, making reception difficult; on 14 March 1944, the lowering of sensitivity between 0800 and 1330 made reception impossible. These complaints originated with Horomusiro or-Kamisikuka.

h. Nomenclature

An elaborate system of nomenclature is believed to be used in the designation of circuits, frequencies, etc. It was stated (18 March 44, Horomusiro to Sapporo and Kamisikuka) that ORANGE was intercepted, and assumed to be a signals circuit between an attack plane and its base. Although colors may designate circuits, it is likely that letters and numbers designate specific frequencies; it was said that "frequency L7 was used jointly" (2 March 44, from Horomusiro); and that "P" would designate the "Pearl Harbor Circuit", and "Broadcast", the 'Puget Sound Broadcast-ing Circuit". (22 February 44, Kamisikuka to Horomusiro.)

Quite consonant with the local policy of assigning ' "validity indicator (v.i.) to its conclusions, the Japanese state that information is of "Reliability 'A'" (25 February) or the "5rd Degree of Accuracy". (17 March.)

6. Use of Circuit and Code to Convey Signal Intelligence.

The above messages were intercepted on the usual Japanese army, air and water radio channels and in the usual variety of discriminants, nether special circuit nor code were used to transmit these intelligence messages.







10. Inadequacy of Traffic Analysis Personnel.

An interesting sidelight is the complaint of Sapporo that "competent" traffic analysis personnel are needed to differentiate naval circuits:

'HOKUGUN JO MESSAGE #30 Part 2

We don't have enough equipment at the KASHIWABAHA SHIBU to understand various kinds of ship circuits; so please arrange to give us competent personnel for handling the detection of the activity (in these circuits). (Sapporo to Horomusiro, 25 Jan 44)!"

2. DIRECTION FINDING. -- Special Branch has made an evaluation study of Japanese success in the use of D/F for aircraft warning. Their report follows):

"<u>Use_of D/F by the Japanese</u> <u>for Aircraft Warning</u>

a. A Japanese message dated 7 July 44 gave a specific location for a "warning device (device B-1)" on Chichijima, Bonin Is, which was "to be coordinated with the radar devices" at two other specific locations on Chichijima. The two radar installations and the "warning device" have been pin-pointed on photographs, and the "warning device" has been clearly identified by aerial photographs as a high frequency D/F (direction finding) station.

b. Photo recce coverage of the N Kuriles has revealed the location of five radar installations and two high-frequency D/F stations on Paramushiro (Horomushiro) and Shimushu Is. The two types of Japanese early warning radar known to be on Paramushiro and Shimushu have a maximum range for detecting approaching planes of 60 and 90 m. respectively. Japanese messages giving alerts against U. S. air attacks show that this radar range is not sufficient to account for many of the alerts, indicating that D/F fixes were plotted on air-to-air and air-to-ground communications from attacking U. S. planes. Although picket boats have been used for warning in this area, their known locations do not account for the available messages, and the method of reporting, using

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vectors from Kashiwabara (N Paramushiro), points to the use of D/F stations.*

c. Fifteen available Japanese messages locate the positions of U. S. planes approaching the N Kuriles. The following table, based on the messages, shows that in at least seven cases the warning was given while U. S.' planes were clearly outside the radar range:

| Date of Warning | Time of Warning | Stated distance of U.S. plane(s) from Kashiwabara D/F Station | Minimum warning in <u>Minutes**</u> |
|---|--|--|---|
| 6 Feb 21 Feb 18 Apr 29 Apr 13 May 26 June 10 July | 00091 00271 20051- 25301 21001 23471 19501 | <pre>122 m. at 50° 128 m. at 85° 144 m. at 90° 140 m. at 85° 125 m. at 75° 155 mi, bearing not given 151 m., bearing not given base point missed, prob- ably Kashiwabara</pre> | 81 48 95 90 60 38 40 |

"Note: The D/F station at Kashiwabara, N Paramushiro, is believed to be the master station, while the station at Kurabu Zaki, S tip of Paramushiro, is the secondary point in obtaining fixes on approaching planes. The base point, where known, has always been Kashiwabara. -

d. More than a hundred Japanese high-frequency D/F stations have been located, scattered throughout the Empire and Japaneseoccupied territory. At least some stations other than those in the Kuriles and the Bonins have been used for aircraft warning. Thus in one case Allied planes over Liuchow Peninsula (N of Hainan Is) were apparently followed from the Canton station more than 250 m. away.

e. The use by the Japanese of D/F stations for aircraft warning involves the plotting of intersecting bearings from two or more stations. Its success depends entirely on interception of Allied inter-plane and air-to-ground radio transmissions, and can be avoided by maintenance of radio silence by Allied planes."

- * There is a possibility that the vector system used is the same * as that used by our own forces obtained perhaps from materials recovered from planes shot down. (See Special Study entitled, "Japanese Traffic Intelligence of the Aleutians Area", SSA circa 15 July 44.)
- ** Computed from operational cables reporting the time the first attacking plane was over the target. 46



3. CRYPTANALYSIS.

a. RUSSIAN SYSTEMS. -- The Japanese have been working on the Russian systems at least since 1940. No evidence exists as to their work prior to this time, but they apparently had not had too much success

"The amount of material on the Russian Army codes which Japan has acquired since 1940 has, not been slight.

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In July 1942, reported that the Russian 2- and 5-digit codes used by the small units (regiments, brigades, etc.) were easy to break (higher

echelon) codes were becoming increasingly hard to break

By October 1942, Tokyo had begun the study of Russian diplomatic codes and gave a very complete analysis of digit code group structure as "subtracting the first group of the text from the third group, the

first and second digits give the additive page; the third digit is the same as the second; the fourth and fifth digits give the vertical and horizontal coordinates; the fifth digit is always even.---The additive table is 50 pages each of 50 groups." They seemed to be on familiar ground here in relation to their own systems

. A report from Berlin of 12 October 1942 shows little knowledge of the Russian system used between their high commands and the armies in the field. There was some doubt as to whether or not it was a machine code. A 10,000-group, 4-digit code printed in 1941 had been captured and comparison was being made with the current edition _____. This code was radioed to Tokyo from Hungary on the 18th of the following month ______. Another code was captured by the Germans and turned over to the Japanese Military Attache in Berlin ______. By January 1943, ______ had recovered 24 values of the 5-digit code and 1000 values of a 4-digit code .

A number of values were sent and received for comparison of results Tokyo reported they were the same and that 4000 values were being read. This same code apparently was the one that was captured early in January,



and arrangements were being made to send it to Tokyo from Budapest in February ______. After this, little progress was reported,

A report from in March 1944 stated that had not progressed greatly since "last fall" (of 1943) on Russian codes, which further explains the lack of available information in this regard In May 1944, Tokyo offered

) the results of present studies in Russian diplomatic codes

for

Tokyo's study consisted in stating the nature of the

principle diplomatic code as being of 10,000 4-digit groups, that the groups representing numbers were self checking, and that a 50page additive book was used in connection therewith. Tokyo also reported that it had a lot of 1941 Russian diplomatic traffic on hand on which some study had been made, but they apparently had not read it because "it is unknown whether it is a long period or not".

In June 1944, Budapest reported to Tokyo that the Russian 5-digit codes were considered unsolvable. It is not clear whether this is the attache's own opinion or the Germans' opinion. Probably the latter since closer collaboration was manifest at this time between the German and Japanese in cryptanalytic matters in <u>Budapest</u>

It will be noted that all the above information was obtained in military attache traffic between Tokyo and European capitals. Other than traffic analysis and general statements as to revelation of intelligence from Soviet messages (some of which were reported as "A" and others are "B" intelligence /see Chapter V;

nothing has been revealed in Japanese Army traffic of successes of a purely cryptanalytic nature on the Russian systems.

b. AMERICAN SYSTEMS.

(1) DIPLOMATIC STRIP SYSTEM. -- In January 1945 the Japanese Military Attache in reported that were reading the American strip cipher used for diplomatic traffic. A wedge was obtained by reading identical plain text in two different keys. He requested Tokyo to inform him of the status of solution of this system in Japan and to wire keys recovered to date

. Tokyo replied that they had been reading traffic in this system a year before emanating from Vichy, but had not "been able to get any new materials since the American Ambassadors had been evacuated from foreign lands", which indicated a physical compromise. They were, however, studying one of the general keys. They were anxious to get results (21 Jan 45). had been working on this traffic since 1940 or 1941, and in response to Japan's request, furnished complete sets of alphabets which the military attache in wired to Tokyo (

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These were all out-of-date keys, except one, and too was studying the same general key but had not yet solved it (3 Feb 43). When Tokyo acknowledged receipt of the strips they also requested information on the daily numerical strip assembly (4 Feb 43), and evidently wanted to apply it to their backlog of traffic. Some confusion results from the fact that ' numbered these sets of strips differently than was our own custom, although the same general manner was used: our 42-1, 44-1, 54-1 for instance were designated 4-1, 7-1, and 10-3 respectively by These alphabets were sent in various ways. Some were sent in reverse order, others in regular order, and all had different starting points than the originals. This might indicate that obtained solution by cryptanalysis. In February 1943, Tokyo notified that they were sending the alphabets apparently used between Vichy and Washington in July 1942, and also gave information that would indicate that Tokyo no doubt had obtained the key chart "which appears in the manual", at the same time that they got hold of the alphabets in Vichy. Also in May 1943, both the Japanese and were still working on the general strip key (0-2) which was under study in January, and were exchanging information steadily (9 May 43). This was evidently a job of pure cryptanalysis

but they evidently lacked enough traffic in any one day to complete the job. In May, also, reported tentative settings for several strips for a particular day's traffic.

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v and two days later Tokyo came back excitedly requesting all settings ,
available / In June the

Japanese Military Attache in reported to Tokyo that American and British diplomatic systems were becoming very hard to read and recommended the study of the codes of small nations in order to gather important information on these two countries

. Both nations were trying to keep abreast of current traffic insofar as cataloguing it according to keys, while still working on the backlog of traffic for which they had the alphabets and key set-At the end of June, Tokyo asked that tings + traffic in a certain strip system be sent on film reported further progress in 0-2 and 0-3, but In October. were awaiting Japanese results, and also reported that they had solved traffic in 4-1, 33-1, and 34-1 After and the Japanese underwent a coolingthis, relations between off process (see par. 6 a), and no further progress was reported. In December 1943, the attache in reported that the man in charge had told him that subsequent work on the American codes In March 1944, he reported was at a standstill had not progressed greatly with American codes since that the preceding fall and were ready to exchange material with the Japanese as they were anxious to solve them After . Tokyo finally sent numbers, dates repeated requests from and indicator groups of much 1942 and 1943 traffic available -- none





From June, when good relations were reestablished between Germany and Japan (par. 6 c), exchanges of alphabet strips and key tables were made. This was all material of 1945 and prior vintage, and Germany cleared up some questions as to general and special usages of the same sets of strips \

Tokyo apparently had never been able to read any of the strip traffic unless it had the alphabets and the key tables.

(2) AMERICAN ARMY STRIP SYSTEM. --All the foregoing concerned American diplomatic strip systems. There were two references to the American Army strip system. Tokyo reported a zero to five strip elimination from 30 strips set in a frame device as their understanding of its use, and the Japanese Attache in reported that the were working on this "new type U. S. Code".*

(3) U. S. MILITARY ATTACHE'S CODE.--The Japanese Military Attache in Budapest reported obtaining copies of MI-11 and MI-12 codes which were forwarded to Tokyo. He further reported that the Germans and also had solved the cipher table used in relation thereto. The latter were obtained from and sent to Tokyo.

The Military Attache in Madrid reported to Tokyo

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*Variable channel elimination was common U. S. Navy procedure at this time, but not Army or diplomatic.

that he had heard the code books had been stolen (in Madrid) from the American attache and the attaches of other countries

In June 1944, Tokyo still had not solved any of the conversion tables themselves, but reported that they had read some Manila wires (apparently of 1941) with tables previously furnished by the Germans

(4) AIR FORCE CODES. -- Davao reported a number of values assigned to 3-letter code groups, such as groups for "STOP"; number groups as airfield numbers; other 3-letter groups as DEP (FOR) or (FROM). Apparently this is a low-grade unenciphered code used for reporting plane arrivals and departures (16 Feb 44). A few days later Davao requested Surabaya to forward aircraft intercepts for study (21 Feb 44). The 21st Division at Hanoi reported to Canton that the only words used by U. S. attack planes that they understood were "Mike, Charlie, Love, and Peter" (phonetic alphabet)

. Various other references are made to 3-letter and 3-figure codes in regard to partial solutions, recoveries from planes shot down, etc. Menado considered the 3-figure code very complicated, but would send details regarding decipherment to Rabaul on request

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or in code or cipher

(5) M-209.--The Japanese were cognizant of the Hagelin cipher machine prior to February 1943, for at that time they decided They bought some of these in not to use it Sweden sometime in 1943, but it is not known whether they were '. In March 1944, shipped to Tokyo at this time the military attache in reported that he considered it a had told him they were weak anddangerous machine since able to read some traffic enciphered with it However, investigation continued and we find) in Stockholm in May. He reported that it was used by Sweden, Finland, England, United States, and Hungary, and that he considered it absolutely. secure if properly used. He recommended further study and that Tokyo forward to him the results of similar studies made there

Its period was long, but there were several weak points when keys were not used properly ______. In the meantime, Tokyo had been making some study on the "M-209 code" and reported to Singapore in December 1943 that "it seemed to be a strip, (and) it has an indicator group at beginning and end", and that its use dated from 12 December (1943) to replace the "CA Transposition" _____

By June 1944, Tokyo had confirmed that the M-209 was a

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machine like that which was purchased in Sweden the year before, in i other words, a Hagelin machine In June, in their exchange of cryptanalytic material with Germany, Tokyo reported what it had learned from its study of the indicator system of the M-209: merely its make-up and not its significance; they were still studying it and stated that it was used all over the Far East by U. S. air and ground bases - In July, Tokyo requested all subordinate Special Intelligence units in the field to send all past and future traffic enciphered with the M-209, "the one where the first two letters of the indicator sign are the same", . In August, Manila sent Tokyo rather complete details regarding the keying instructions of the M-209 as well as the physical construction of the machine It is known that some key lists giving the method of indicator construction were captured on Saipan and no doubt a machine was captured also. These were apparently forwarded to Manila where a 2nd Lt. Iwada was making a study of them.

(6) TELWA CODE. -- In June 1944, Tokyo reported that "the TELMA Code had not been decrypted" . . This is the War Department Telegraph code used for brevity purposes.

(7) DOUBLE TRANSPOSITION CIPHERS. -- The Japanese demonstrated some knowledge regarding the use of the Double Transposition Cipher by front-line troops, "sometimes they make the two keys identical as the first step and other times the two keys differ in both length and key sequences. The key length is usually 13 to 20".

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They also stated that they had solved a few score of these used by front line units, but no diplomatic systems of this type

It is possible that the double transposition messages reported as solved were the ones <u>meant</u> for them to solve (see under British Systems at the end of the next paragraph), because in reporting their knowledge of this system to the Germans, Tokyo stated that they had nothing to offer since the keys were changed daily.

c. BRITISH SYSTEMS. -- Very little evidence is available to show what success the Japanese had with British systems. Tokyo sent the following to Peking in November 1941: "Since there is a great deal of British code material coming in now which we cannot read, please investigate thoroughly, but be cautious."

About the same time Peking reported to Tsingteo in a somewhat garbled message that they had obtained some clues as to telegraphic codes used by the British Embassy between Shanghai, Chungking, Hongkong, and London, and that although they may already have been decoded by the North Army; they may be of some value. The list of codes following was missing in the message ______. The attache at ______ reported that _______ had little success with British systems and recommended the study of smaller nations easier codes in order to get information about the British .

They are classed with American and Russian codes as being of high grade



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Log- CLOUL

NOT RELEASABLE

h. CHINESE SYSTEMS. -- There has been remarkably little direct evidence of the Japanese cryptanalysis of Chinese codes. There are many quotations from Chinese wires, but the source is not given. One exception to this occurs in a Tokyo report to Saipan of 10 May 1944 which gives as the source "A" information sent out by the Chungking Military Attache in Washington. There is a possibility that this is the same as "A" intelligence previously referred to as emanating from decryptographing codes (see Section V), but again it may have one of the other various meanings assigned to the letter "A"

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CHAPTER VII

NOTE IN CONCLUSION

The Japanese are extremely security minded with regard to their own codes. Their interest here seems to be far in excess of comparable interest in cryptanalysis. This indicates rather wide separation of the two functions of cryptography and cryptanalysis in their organization set up. It is very probable that cryptography was always a part of the communications set up, and that traffic analysis and cryptanalysis were handled by the intelligence organizations springing out of and operated by them as the need arose. The effect of the publication of "The American Black Chamber" in Japan was much more apparent in their cryptographic organization than in their special intelligence organization. Their own codes became much more secure and more complicated, but their ability to solve medium and high-grade systems has not been apparent and what little progress they have made was mainly with the help they received from Germany

Tokyo's policy was always to bleed others of cryptanalytic information and code books. This bluff was called when agreed only to furnish information via an exchange basis. Tokyo did not have much to offer outside of general information and traffic analysis.

Recent evidence shows that the Japanese are becoming more and more interested in cryptanalysis, and their late start will probably bring no worthwhile results to be of use in the present war. We may

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look for higher development of the art in Japan in the more distant future with their characteristic tenacity. The Japanese, however, is tenacious as a cat is tenacious-

The history of Japanese methods for obtaining intelligence is not brilliant. According to a report from the CBI Theater made by Colonel Clarence W. Bennett, G.S.C., U. S. Liaison Officer with the 37rd Indian Corps, they will hire anyone as a spy and underpay them at that. As a result, they are continually acting on misinformation. Thus we may put gullibility down as another Japanese characteristic. This is again demonstrated in the traffic analysis field. In Northern Japan they have covered U. S. communications more thoroughly than elsewhere, concentrating on the Aleutians. Yet, in their estimates of U. S. air strength in that area, they were more completely wrong than anywhere else. Japanese estimate placed 945 Army planes there in August 1944 against an actual strength of 207.

The Japanese have stated that they regard cryptanalytic and traffic analysis information as virtually infallible, inferring that they realize the weaknesses of their spy operations. Hence, they can more easily be deceived in these fields than in others.





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