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EXAMPLES OF INTELLIGENCE OBTAINED FROM CRYPTANALYSIS

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## INTRODUCTION

The following examples are selected from the files of the Army Security Agency to illustrate the different kinds of information obtained from cryptanalysis of enemy messages and, where possible, the action taken and results achieved. Two of the examples also indicate the importance of protecting this source of information.

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## I. Japanese Army Systems

### A. The Hi-81 and Mi-27 Convoys, November 1944

1. On 14 November 1944 the First Transport Staff in Moji sent a cryptograph<sup>d</sup> radio message to the airforce units concerned requesting air escort for two convoys, the Hi-81 and Mi-27, carrying troops to reinforce the Philippines. According to the message, which was read by the Army Security Agency, one of the convoys consisted of ten ships, tankers and escort vessels; it was to leave Mitsure on the 15th; the route, including noon positions from the 15th through the 22nd, was given.

(J11925) The convoys immediately encountered difficulties. According to a series of Japanese Navy messages which were read by the United States Navy, the Akitsu Maru was sunk by a submarine on 15 November.

On 17 November the Hi-81 reported being sighted by a B-29, with strong indications that the Mi-27 had also been sighted.

Four hours later the Mayasan Maru was torpedoed.

The final score for both convoys according to messages read by the Army Security Agency, was six ships definitely sunk, one ship disabled and one ship on fire. (J3273, J3259, J44932, J16120, J16852) The diaries of two of the survivors, which were later picked up in the Philippines, confirmed the information obtained from the messages on the serious damage inflicted on the convoy and added that one aircraft carrier was also sunk.

2. This episode may be used to illustrate another important aspect of the work of obtaining intelligence from enemy traffic. The careful study of the external aspects of messages by the sections dealing with traffic analysis made it possible to recognize a convoy message in raw traffic, and to concentrate all efforts on translating it in time to be of use.

3. Another point illustrated by the history of the Hi-81 and Mi-27 convoys is the method adopted to protect the source of information. The sighting of the convoys by B-29's explained to the enemy the submarine attack.

### B. The Japanese Attack on Aitape, 10 July 1944

1. A summary of the Aitape-Wewak operations in the summer of 1944 illustrates how useful this type of information may be in making estimates for the planning of operations. Messages read early in the year at Central Bureau, Australia showed the status of Japanese forces in the area between Madang and Hollandia; the existence of acute supply problems was revealed and the number of front line troops together with the state of arms and equipment was given. The subsequent withdrawal of these units into the Wewak area was not unexpected to the

American command. By the end of May the Japanese found their position untenable and decided to attack. A 28 May message, which was translated by the Army Security Agency on 1 June, mentioned supplies needed by the 18th Army, controlling operations in eastern New Guinea, which must arrive at Wewak by the end of June in order to be of use in "the attack on Aitape." (F13408) A 20 June message from the 18th Army translated 25 June, supplied the information that an all-out attack against the US Aitape perimeter was to begin about 10 July. The message gave the detailed disposition of each division under the command of the Army with the planned operations of each division in the attack; total strength of the forces involved was stated to be about 20,000. (F19959)

2. The information was forwarded to the Commander in Chief, Southwest Pacific Area. The Japanese attack was made on schedule, and the results were reported in a message of 13 August: According to the report of the Japanese Commander, most of the enemy artillery had been destroyed, the units decimated. The seriousness of the supply situation was shown by the description of how they had made their ten days supply of rice last twentyfive days: "By resorting to chewing it raw instead of cooking it, the period of consumption had been prolonged somewhat." The Commander concluded that, "Unless we can impress upon the enemy the greatness of the defensive strength of the Japanese Army, thereby striking terror into his heart, it will be impossible to defeat the enemy." (F25591)

C. The Tachibana Maru, summer of 1945

1. Early in 1945 it became apparent from reading Japanese traffic, that the enemy was attempting to redeploy their forces in the Netherlands East Indies. One of their objects was to withdraw units from the Banda Sea area to the comparative safety of Java and Sumatra. By June however lack of available water transport led them to try to make use of a hospital ship, the Tachibana Maru, for purposes other than those prescribed by the Geneva Convention. (J74568) The ship was renamed the Hirose Maru (J71916) and assigned to transport 1500 troops of the 11th Infantry Regiment with 150 tons of ordnance and munitions from Tual in the Kri Islands to Surabaya. (J77567) Precautions taken to provide against the possibility of search by an enemy vessel included supplying hospital clothing for the troops, having available daily sick reports and lists of medical supplies (J77567) and sending the regimental colors by air. (J89766) The ship left Tual 1 August, scheduled to reach Surabaya on the 5th. (J91835)

2. According to the New York Times' account however, the Tachibana, although marked by floodlighted red crosses twenty

feet high, was halted north of Timor by two destroyers. The discovery by a search party that cases marked medical supplies contained munitions, while the only wound among the hospital patients was the result of a packing case being dropped on a thumb, led to the capture of the ship. (New York Times, 5 Aug 45; 8 Aug 45)

3. Fully one month before this attempted deception, information about the Japanese plans for the unorthodox use of the hospital ship had been received from messages. Other messages translated in July made it possible to give the Navy exact information on ports of arrival and departure and loading and sailing times. Again the source was concealed by attributing the sighting of the ship to air reconnaissance. (New York Times, 8 Aug 45)

## II. Japanese Military Attaché Systems

### A. Japanese Description of the West Wall, November 1943

1. The value of intercepted diplomatic and military attaché traffic for military intelligence purposes is illustrated by quotations from the report of Colonel Ito, attached to the German Western Area Headquarters, who made the report after inspecting the Atlantic coast defenses in the autumn of 1943.

In the construction and location of fortifications, emphasis is mainly on the defense against landings at and the protection of the naval bases, especially the five submarine bases of Brest, L'Orient, St. Nazaire, La Rochelle and Bordeaux...The harbors, large and small, have been fortified with emphasis on the proper weapons and defenses for each particular location. We have confirmed the fact that defenses of places other than those with cliffs and precipices have all been fortified for more than 1,000 meters from the shore line. In the places where there are cliffs and precipices, a sharp lookout is kept. They have arranged things so that troops are held in reserve in the rear and can be immediately sent in as reinforcements...In order to protect her submarine bases and harbors, Germany has not only constructed defenses against sea attack, but has made powerful land front defenses...consists in constructing for several kilometers from the harbors defensive positions which connect nests of resistance and strong points. This defense varies in depth for the various cities as follows

La Rochelle...10 to 15 kilometers

Le Havre...6 to 8 kilometers

Cherbourg...7 kilometers

Boulogne 4 to 5 kilometers

Dieppe 2 to 3 kilometers

Examples of the types of army and navy coastal type guns used on the sea front in the defense of harbors:

200  
La Rochelle district - four 60 caliber mm./naval  
guns; four 35 caliber  
---m--- ---m--- ---m--- mm.  
army guns.

Royan district - four 280 mm. naval guns

Le Havre district - four 300 mm. guns

SHIEABURAWA (kana version of place name. May  
be Cherbourg) district - four  
380 mm. heavy field pieces...

In order to eliminate dead space in the neighborhood of the strong points, they have two or three grenade throwers firing from within the armored turret (?range?) 20 to 600 meters; speed of fire - 120 per minute; caliber, 50 mm. ---g--- ---g---. These are high-angle fire weapons. For defense against tanks, tank ditches (built in triangular cross-section with a span across the top of 5 meters and a depth of 3.5 meters) are constructed along the periphery of the strong points. In addition to having flanking fire provided by 2 or 3 casemates with 40 mm. Skoda anti-tank guns (?similar to?) machine guns and 2 or 3 casemates with 60 caliber 50 mm. anti-tank guns, they have 2 or 3 gun shelters (Protected against bullets) with 60 caliber 50mm. anti-tank guns which they can drag out into the open to fight when the opportune moment comes. They also have mine fields in front of and behind the tank ditches (anti-tank mines, anti-personnel and horse mines, etc., are used together; they are laid in three rows of 2 mines each for each 3 square meters). As far as infantry obstacles are concerned, in addition to the mine fields, they have wire entanglements both in back of the tank ditches and within the strong points. For the direct protection of the casemates, fixed-type flame throwers are buried in the ground nearby and set up so that they can be electrically ignited from the ringstelle.  
(D3348)

## B. The OSS in Lisbon

1. General Marshall in his letter to Governor Dewey of 25 September 1944, gave as an example of "the delicacy of the situation" that "some of Donovan's people (OSS), without telling us, instituted a secret search of the Japanese Embassy offices in Portugal. As a result the entire military attaché Japanese code all over the world was changed, and though this occurred over a year ago, we have not yet been able to break the new code and have thus lost this invaluable source of information, particularly regarding the European situation." (New York Times, 8 December 1945)

2. A series of Japanese messages, read by the Army Security Agency, gives a behind the scenes picture of the repercussions of this episode. The OSS although misguided, apparently carried on their operations with some skill, since the first news that "American espionage agency in Lisbon knows minutest details of activities of Japanese ministry there and also has the Japanese codebook" came from the Italian General Staff in Rome (Rome/Tokyo, 6/29/43, ; Rome Circ. 6/29/43, D1318) and was a complete surprise to Morishima, the Japanese minister in Lisbon. He assured Tokyo that "code books ...could hardly have been stolen, because of careful precautions...Perhaps," he suggested, "You mean some of the messages were deciphered." He naturally wished to know the source of the Italian information. (Lisbon/Tokyo, 6/30/43, This point was never settled, according to the correspondence, but it was suggested that the report might have come from "...an Italian resident in Lisbon who has contacts with British and US Intelligence Agencies." The Japanese Legation continued to assert that it was impossible that "...their materials could have been seen by any unauthorized person." (Lisbon/Tokyo, 7/2/43, D-1316) An investigator, however, was sent to Lisbon where he was "resented and ill-treated." (Madrid/Tokyo, 7/12/43) Morishima then offered his resignation (Lisbon/Tokyo, 8/25/43, and his fellow-minister in Madrid thought it "only natural that he should be indignant and utterly discouraged" at this high-handed treatment. (Madrid/Tokyo, 8/26/43)

3. Although this ill-advised attempt to procure a copy of a codebook which was already being read apparently had results, they were not as disastrous as General Marshall's letter indicated. The code was not changed but on 18 September 1943, the Japanese introduced a new and more complicated system of enciphering the code. By the beginning of December of the same year, however, the new key had been solved and messages in the Japanese military attaché system were again being read by the Army Security Agency

## II. German Diplomatic System

### A. Oscar Hellmuth, Secret Agent, 1943

1. The Blue Book on Argentina, the United States Government official indictment of the fascist regime in that country, emphasizes strongly the importance to the cause of the Allies of the arrest of Oscar Hellmuth. In 1943 the Argentine Government was negotiating with the Nazis in order to obtain German arms which were to be used to strengthen Argentina in her position of refusing to break relations with the Axis. According to the Blue Book the negotiations "culminated in October 1943 in the ill-starred Hellmuth mission...The Argentine Government and Himmler's secret intelligence agents in Argentina selected Oscar Hellmuth, an Argentine national, as their common representative to enter into broad negotiations with the German Government in Berlin, not only for arms, but for many other types of mutual assistance. The mission failed but only because of Hellmuth's arrest en route by the Allies." He was removed from the ship on which he was travelling to Spain by British authorities in Trinidad in October 1943. (New York Times, 26 Jan 1944)

2. It is possible that the information which led to Hellmuth's arrest came from a message read by the Army Security Agency, which was sent by the German Chargé d'Affaires in Buenos Aires to Berlin, 30 September 1943, in which he reported the intention of the Argentine Government to send Hellmuth, described as a co-worker of the Germans in Buenos Aires, via Spain to Berlin where he was to be received by the Fuehrer. This message was translated 24 October, six days before the arrest of Hellmuth in Trinidad. Coast Guard messages supplied the name of the ship on which he sailed.

### B. Cargo of Monte Albertia

1. According to the New York Times, the Minister of Economic Warfare announced in London in November 1943 that some weeks before "five ships plying between Buenos Aires and Spain were halted at British control points for search with the following melodramatic results: 40 drums stated on navicerts as containing paste were found full of liver extract, an important base in food compound for U-boat crews. Twelve drums had false bottoms and embedded in each was a disk of platinum three inches in diameter and weighing a pound, worth more than \$4,000 a piece but worth a king's ransom to Germany as a factor in the manufacturing of nitroglycerine for explosives. Also in the cargo were six tons certified as bacteriological peptone when in fact they were stuffed with small containers of gland extract powder for the treatment of shock. In making public this discovery the British showed what they and the Americans, with whom they are in close touch, are up against, as well as how the system is working. (New York Times, 10 Nov 1943)

2. A series of messages between Erich Otto Meynen, the German Charge d'Affaires in Buenos Aires, and Berlin, which were read by the Army Security Agency, revealed very clearly how the smuggling system worked. Ships officers or Argentine nationals were found who were willing to act as agents;

their chief function, apparently, was to deliver the consignments to the German consul in the first harbor which the ships touched. In a message of 16 August 1943, translated 30 August, the arrangements for the cargo sent on the Monte Albertia, a Spanish cargo ship, were described: 40 boxes which had been declared as containing bile paste really consisted of "extract"; twelve of them had false bottoms covering 56 kilograms of platinum. Six boxes which supposedly consisted of peptone in reality contained pituitary extract.

#### IV. German Low Echelon Army Systems

##### A. Signal Intelligence Operations in the Field

1. The Operational History of the 349th Signal Intelligence Service, Mediterranean Theater of Operations, describes the nature of the intelligence produced by radio intelligence organizations, which attacked enemy low and medium security traffic in the field. In comparatively static periods, attended by low volumes of radio traffic, information obtained from these types of enemy messages tended to deal with such topics as strength reports and ammunition returns, artillery and mortar fire orders, relief of personnel and changes of position, patrol activity and location of enemy units and positions. Intelligence of this kind made it possible to maintain a constant check on enemy activities, intentions and dispositions; to keep order of battle files up to date; and to know in advance of proposed Allied targets and possible enemy target points, on the basis of which the latter were often shelled or bombed successfully. During times of tactical activity, when radio activity also, of course, increased, enemy traffic supplied up-to-the-minute, play by play descriptions of engagements, often before the information was received from Allied troops, and betrayed enemy intentions and relocations before their actual execution.

2. Some illustrations of this type of intelligence and the use to which it was put are taken from the account of the operations of Detachment E, 849th SIS, in Italy: "As the Allied forces crossed the Volturno the mobile 3 Panzer Grenadier Division was identified on 12 October as coming into the line, suggesting that it was to cover further withdrawal and that the enemy did not intend to make a stand at the river line. Three days later the line was revealed to run generally from Ameglio to Ailan to S. Massima." (p. 42) "When the enemy inland

forces were withdrawing along the main route across the Mignano bridge; Allied bombers attacked the bridge the morning of 29 October, but could not determine the damage. By noon the Hermann Goering Engineers code was broken and revealed that the bridge had been destroyed beyond immediate repair and that traffic was to be re-routed through Conca. Early that afternoon the enemy alternate route of withdrawal was put under attack and bottled up." (p. 43) At Anzio: "Early realizing the important part artillery was to play in the enemy attempt to contain the beach-head, changes in the operating set-up were effected which brought the application of Signal Intelligence to a peak of effectiveness. Single isolated messages would not suffice. Detailed records were kept of each individual enemy group, of every location, mission and the number of rounds fired. Four of the Intelligence Staff men were assigned to keep a constant watch on voice frequencies. Although the enemy re-enciphered the code some five times, continuity in reading the code was maintained throughout the operation. So detailed was the tabulation kept of radio reports that at any given time it was known just how many rounds a given battery had expended or how much ammunition it had received, or what its alternate position was. So close was the liaison with Allied counterbattery that enemy reports of Allied fire were used as correction data for Allied firing guns." (p.44) "On 24 May with the main VI Corps attack northward toward Cori, messages on the 105 Flak Regiment net showed that some 4 or 5 of its Battalions were located between the 335-365 northings and 912-961 eastings. Since this unit had been operating in a ground anti-tank role, it clearly showed that the enemy expected an armored thrust to the Northwest, which indeed was the plan. At about this time the decision was made to move troops over the mountain, which soon hopelessly split the enemy forces." (p. 45)

3. Similar examples may be found in the Third Army Radio Intelligence History in Campaign of Western Europe, prepared by Signal Intelligence Service of Headquarters Third U.S. Army. For instance, "As early as D-day itself, reconnaissance traffic of the 21 Panzer Division was intercepted on the English side of the Channel indicating the formation's commitment in the Caen sector." (p.31) "Headline news on 31 July came with the disclosure that 2 SS Panzer division headquarters was located at Montbray, and on the same day the need of ammunition by the Division's artillery regiment was expressed in traffic of that formation." (p. 32) "Reconnaissance patrols of 21 Panzer Division on the 16th of August provided the highlight of activity to that date giving extensive reports on the situation at the south end of the Falaise Gap. 2 Panzer Division was mentioned as 'the left flank neighbor'; and tanks of the 9 SS Panzer Division were reported in Lacourbe and Montgaroult. The reconnaissance missions of this group shifted the following day to an area east of Falaise and continued their conveniently detailed reports indicating that it was one of the principal units covering the withdrawal east from the gap to the Seine." (p. 34)

"The high point of the month's spot intelligence came on the evening of 28 September at 1815 hours when a reconnaissance patrol announced that Battalion 'Schneider' would attack on the following morning at 0600 in the vicinity of Foret de Gremmercy to establish contact with its left neighbor. As the reconnaissance traffic reported the next day, this attack was repulsed." (P. 40)

4. The mission assigned to Signal Security Detachment "D" was the procurement of signal intelligence from the solution of tactical codes and ciphers for the Acting Chief of Staff, G-2, 12th Army Group. (Summary of Operational Activity, Signal Security Detachment "D" for the Period 1 September 1944 to 1 April 1945.) "During the German Ardennes offensive, messages from thirteen divisional and similar formations in and near the 'Bulge' was read. Since the formations represented the bulk of the armored and mobile formations employed by the Germans during the Ardenne operations and constituted the major threat to Allied forces, the intelligence gained from their messages not only indicated accurately the trend of enemy operations carried out by all enemy units within the 'Bulge' but also provided G-2 with reliable information at a time when other intelligence sources were relatively unproductive or non-existent." (An Analysis of Ciro-Pearl Intelligence derived from German Army Signal Communications by Signal Security Detachment "D" during the Period 10 August 1944 - 12 May 1945. p.2) "In early September 1944, when the German Armies were rapidly retreating through eastern France and Belgium to the Siegfried Line, 2 SS PZ Div 'Das Reich' was retiring southeastward from the line: Dinant-Liege, Belgium. On 7 September 1944, the Div Ia (operations) of 2 SS PZ DIV announced to Div elements that: 'The Allies have presumably reached Liege from the West. 12 SS PZ Div "Hitler Jugend" now has its furthest forward Outguard Line of Resistance west of Hamoir.' The usefulness of this information at a time when Allied elements were feeling out an otherwise confused situation in the Liege area was immediate." (ibid, pp. 4-5) "During the rapid retreat of the German armies in France and Belgium in September 1944, 9 PZ Div...communications of 28 September announced the location of a large fuel and ammo dump...in the forest 3 km from Villers-Cotterets. (Note - the above mentioned dump was the largest supply dump captured intact in France. Two German general officers were surprised at breakfast when Allied armored forces took the area under command.)" (ibid, p. 7)