

The Beginnings of Radio Intercept in World War I

A brief history by a German intelligence officer

The endeavor to learn what is in the opponent's mind and to draw advantage from it has always been very important in the history of mankind in peacetime and particularly in wartime. During thousands of years only the methods have changed. In the days when there was no technical medium for conveying thought over great distances, the only existing possibility was either to overhear the spoken word or to intercept—or at least have a look at—messages transmitted in writing. To guard against this latter possibility, secret writing was invented. The history of the last three thousand years is full of examples of great successes in statesmanship or in military enterprises which were due solely to the fact that the statesman or general concerned was able to organize cleverly and to maintain for a considerable period of time a method of spying on the transmitted thoughts of his opponents. Cleopatra, Alexander of Macedonia, Caesar, Napoleon, Metternich, and many others owed their successes to the extensive use of this type of spying.

However, the practical possibilities were narrowly limited, and great individual cleverness was necessary in this work in order to arrive at the goal.

In the middle of the nineteenth century, when the Morse telegraph came into use, soon followed by the telephone, new technical possibilities of attack resulted by switching-in and listening; this quickly produced a new situation. The invention and use of radiotelegraphy, with the possibility of picking up anywhere at any time the radiations of a transmitter working at any point whatsoever, increased the possibility of interception in a way hitherto undreamed of. The hour when radiotelegraphy was born was also the hour of birth of illegal listening-in, i.e., of the so-called intercept service.

There were two countries in Europe in which the espionage service had been especially cultivated for centuries: France and Austria-Hungary. Consequently, these were the two countries which first recognized the importance of technical means of intercepting communications and took corresponding action.

Prior to World War I Austria had several occasions to test out this new means of gaining information.

During the crises which arose in 1908 between Austria and Italy in connection with the annexation by Austria of Bosnia and Herzegovina, all Italian radio traffic on the continent and at sea was intercepted by the Austrians. At that time Austria began regular cryptanalytic work, and in this way was able to get valuable insight into Italy's attitude; this proved of great value for Austrian foreign policy.

In 1911, when war broke out between Italy and Turkey over Tripolitania and Cyrenaica, the Austrian intercept service had an opportunity for the first time to prove its worth in the military as well as in the political field. Since the Italians had set up several relay stations for traffic between Rome and Tripoli, where the first Italian landings were made, the Austrians had a fine opportunity to intercept all transmissions more than once—and therefore very completely. The radiograms with military dispositions from the homeland, and the reports from the theater of war were all intercepted and deciphered so that the course of the operations in Libya could be followed day by day by the Austrian intercept service. This was the first time in history that the course of military operations between two opponents could be followed move by move by a neutral third party using technical means at a distance of hundreds of kilometers.

When the war in Tripoli took an unfavorable turn and Turkey lost its last possession in Africa and therewith its dominant position in the Mediterranean, an opportunity was offered the nations in the Balkans to shake off Turkish rule. This resulted in breaking up Turkey in Europe. The Balkan League, consisting of Serbia, Bulgaria, Greece, and Montenegro, which had been formed meanwhile, declared war on Turkey in October 1912. The Bulgarians were victorious at Kirk-Kilis and Lule Burgas; the Serbians at Kumanovo; the Greeks occupied Salonika. On 3 December a truce was made.

For the Danube Monarchy the course and outcome of the military actions and of the entire development in the Balkans were of interest. Therefore, Austria followed the radio traffic with close attention and again had opportunity to make successful use of this new means of gaining information, this time, to be sure, working to some extent with Italy. Austria and Italy put through the formation of an independent Albania. In the preliminary Peace of London, 30 May 1913, Turkey ceded to the allies all territory west of the Enos-Media Line.

But a quarrel arose among the allies respecting the conquered territories. The Balkan League broke up. In bloody battles the Bulgarians were driven out of Macedonia by the Greeks and Serbs. Rumania and even Turkey, which won back Adrianople under Enver Pascha, took the field against Bulgaria. A redistribution of territory took place in the Balkans. And once more Austria had the keenest interest in following the course of diplomatic and military events in this area. For the fourth time within five years Austria had a chance to get practice in interception and in cryptanalysis. At the peace conferences of Bucharest and Constantinople the new map of the Balkans was drawn.

Prior to World War I France had less occasion to engage in radio interception, but it watched all wire lines leading into foreign countries and particularly the exchange of foreign diplomatic telegrams passing over these lines. In the French Foreign Ministry there was a cryptanalytic section which worked with good success on the solution of the secret writings used by foreign governments and their representatives. For instance, even before the outbreak of World War I the French had solved the cryptographic system in which messages were exchanged between the Foreign Office in Berlin and the German Ambassador in Paris. When the long telegram containing the declaration of war on France was transmitted to the German Ambassador by the Foreign Office in Berlin, the French first deciphered the dispatch and, after they had taken cognizance of the content, so garbled important passages in the original that the German Ambassador could at first make nothing out of the telegram he received. Only after divers inquiries was he able to get matters straight. In this way the French gained valuable time.

In the Deuxieme Bureau of the French General Staff there was, even before World War I, a desk charged with following all foreign radio traffic (especially German and Italian), in order to have an idea of the normal radio situation and of the changes occurring in case of military complications. The use of radiotelegraphy in the armies of Europe had even then assumed considerable proportions and would probably increase considerably in any coming war. But this raised the question of the extent to which it

would be possible to gain insight into the situation on the enemy side by observing his radio traffic. A prerequisite was to watch this traffic in peacetime, to recognize the types of traffic, the use of ciphers, and any methods of camouflage, and by so doing to maintain contact, so to speak.

These chances and possibilities had been recognized both in France and in Austria before the beginning of World War I. And both countries had made preparations in time. As in the French Deuxieme Bureau, there was in Vienna in the Evidenzbuero a desk for watching foreign army radio traffic, while in the Foreign Ministry in Vienna and in Paris, bureaus had already been set up which were engaged in the decipherment of the cryptograms which were customary in the diplomatic correspondence of other states.

In Germany to be sure, the General Staff thought of such possibilities, but down to the outbreak of World War I had undertaken practically nothing. Even in the Foreign Office nothing had been done in this direction which was worthy of mention. In England at the Foreign Office the decipherment of cryptograms had been attempted some years before the beginning of World War I, and good results had been achieved. In Russia, on the other hand, no attention had been paid to this matter.

This then was the situation respecting the intercept service and cryptanalysis at the beginning of World War I. At that time people did not suspect the proportions which interception would assume during the course of this struggle.

Tannenberg

The Battle of Tannenberg was the first in the history of man in which the interception of enemy radio traffic played a decisive role. This is all the more remarkable since the intercept service of the Germans at that time was not yet systematically organized, and the intercepted radiograms often represented the results of chance occurrences.

After World War I a series of books was published which, among other subjects, dealt also with the Battle of Tannenberg. The chief ones were: Hindenburg's "Aus meinem Leben," Ludendorff's "Erinnerungen," General Danilov's "Russland im Weltkrieg," and the German Archives publication "Der Weltkrieg 1914-18". In the three last-named publications the interception of radiograms of the Russian Army before and during the battle is discussed; but nowhere is it discussed fully. In the German Archives publication the intercepted Russian radiograms are touched upon briefly; but there are many sentences attempting to prove that all the Russian radiograms intercepted at that time had no influence whatsoever on the outcome of the battle.

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What are the facts?

At 1400 hours on 23 August 1914 the new head of the German Eighth Army, General von Hindenburg, and his Chief of Staff, Major General Ludendorff, arrived in Marienburg and assumed command. The Eighth Army, which was to defend East Prussia, was composed on that day of an Eastern Group (I Reserve Corps, XVII Army Corps, and First Cavalry Division) on the Nordenburg-Insterburg line, and a Western Group (mostly the XX Army Corps) in the region of Tannenberg. The I Army Corps was being transported by railroad from the Eastern Group via Marienburg to the Western Group.

The Eastern Group was facing the Russian First Army (General Rennenkampf) consisting of the XX, III, IV, and II Army Corps plus five and one-fourth cavalry divisions; the Western Group was facing the Russian Second Army (General Samsonov), consisting of VI, XII, XV, XXIII, and I Army Corps, plus three cavalry divisions. The two Russian Armies formed an Army Group under General Shilinskij.

The Germans had the following radio communications: Two heavy radio stations at the Army Headquarters, one heavy and two light stations in the First Cavalry Division, making a total of five mobile radio stations for the entire Army. In addition there was one radio station each in the garrisons of Königsberg, Graudenz, and Thorn.

Just what radio equipment the Russian Army Group had and how it was allocated cannot be accurately stated; it seems, however, that most of the staff headquarters down to the corps staffs were outfitted with radio stations. At the outbreak of the war there was one radio company each in I, II, IX, and XV Army Corps in European Russia, as well as in the Caucasus Corps. As can be seen from the above, I and XV Corps belonged to the Russian Second Army, and III Corps to the Russian First Army. Each of the companies which had been organized in the years immediately before the outbreak of the war had at its disposal at least six radio stations.

General Shilinski's objective was—according to directives of 13 August—to make a decisive attack in which the First Army was to surround the German left wing (the Eastern Group) and prevent its retreat to Königsberg, while the Second Army was to advance into East Prussia south of Königsberg in order to cut off the enemy's retreat to the Vistula and to attack him in the rear.

The German Army Staff Headquarters obtained information on this objective of the Russians through an order which was found on a Russian officer who had fallen in the battles around Gawaiten on 20 August. This

order contained an extract from the above-mentioned directive of General Shilinskij.

Almost simultaneously with the arrival of this order in the German Army Staff Headquarters, a Russian radiogram was intercepted which mentioned this attack and contained an attack order for the Russian IV Army Corps (which was attached to the First Army). This telegram was, therefore, a confirmation of the order found on the fallen Russian officer.

On the evening of 23 August General von Hindenburg's operational plan was essentially complete. The entire Eighth Army was to be concentrated for the attack on the Russian Second Army. The XX Army Corps was already organized, primarily only for defense purposes. The I Army Corps—being transported by railroad—was to be stationed to the right of the XX Corps, to attack first the left flank of the enemy, and then the rear. The principal part of the XVII Corps and the I Reserve Corps (until then in the Eastern Group) were to march in a southerly direction and attack the right flank of the Russian Second Army. The two last named corps were at that time still at a distance of about three day's march. Only the cavalry division and a small portion of the infantry of the XVII Corps were to remain behind to face the Russian Niemen Army.

How far this plan was capable of execution depended, on the one hand, on General Rennenkampf's tactics when he discovered the departure of the two German army corps and, on the other hand, on the ability of the XX Corps to maintain its position until the concentration of the Eighth Army.

On 23 August the battle began along the front of the German XX Army Corps, where the Russians started to attack. The Germans at first maintained their positions, but—to reserve their strength until an actual crisis—retreated somewhat on the 24th. On this day several radiograms were intercepted, which among other things, gave information on the line of march and the mission of the Russian XIII Army Corps. This Corps was to circle around the left flank of the German XX Corps and appear in the rear of the Corp's 37th Infantry Division.¹

¹The two radiograms which were intercepted on 24 August at 0500 and 0555 hours were as follows:

To the Commander of the XV Corps.

The Corps will deploy along the Komusin-Lykusen-Persing line till 0900, at which time attack is desired. I shall be in Jablonica. Kljujew (-XIII Corps).

To the Army Chief of Staff

The XIII Corps will go to the support of General Martos (XV Corps) and will deploy along the flank and rear of the enemy at 0900.

The Germans succeeded in avoiding this encirclement without too great losses on their side.

On 25 August they continued with the concentration of the Eighth Army troops. On this day General von Hindenburg intended to leave for the front early in the morning, meet the head of the I Army Corps, General von Francois, in Montawa,² and acquaint him with the existing situation.

Before his departure from Marienburg a radiogram was handed him which had been intercepted in the night of August 24-25. This radiogram, which was not enciphered, but had been sent in plain text, contained (a thing which until then had never happened) a complete operational order of General Rennenkampf to the IV Army Corps. From this intercepted radiogram General von Hindenburg obtained information on the future aims of the Russian First Army, which up till then had been completely unknown to him. Among other things, the radiogram stated that the First Army would not reach the Gerdauen-Allenburg-Wehlau line until 26 August with the southern flank (IV Corps) at Gerdauen. Also the marching goal for the 25th was given, which was to be several miles east of the above-mentioned line.³

Hindenburg now knew that for the present Rennenkampf was no menace. Therefore, in the course of the day he was able to decide to decrease still further the number of troops which were facing the Russian First Army and to withdraw the entire XVII Army Corps toward the south.

Hindenburg now went over to the I Army Corps. On his way down there, when he was passing Lobau, another intercepted radiogram of no less importance was handed to him. This time the organization and destination of the Russian Second Army were completely revealed. This radiogram, also in plain text, was dated 0600 hours 25 August and contained an order of General Samsonov to the Russian XIII Army Corps. To be sure, this radiogram

²Montawa not found, there is or was a Montowo in Western Poland.

³The radiogram contained the following:

To General Aljev, IV Corps.

The army will continue the attack. On 25 August it will reach the line of Wirbeln-Saalau-Norkitten-Potauren-Nordenburg; on 26 August the line of Damerau-Petersdorf-Wehlau-Allenburg-Gerdauen. The river divides the XX and III Corps; the Schwirbeln-K1. Potauren-Allenburg road belongs to the III Corps. Chan Hussein Nachitschewanski (2 Cav. Div.) is to proceed in direction of Allenburg before the army front and in the sector between Pregel and the Parkehmen-Gerdauen-Bartenstein line; north of it Rauch (2 Cav. Div. Guards). Crossing of Pregel is mission of XX Corps.

was somewhat garbled. The intercepted contents were as follows:

"After battling along the front of the XV Army Corps the enemy corps retreated on 24 August in the direction of Osterode. According to information. . . .the land defense brigade by Gilgenburg. . . .The First Army pursues the enemy further, who retreats to Konigsberg-Rastenburg. On 25 August the Second Army proceeds to the Allenstein-Osterode Line; the main strength of the Army Corps occupies: XIII Corps the Gimmen-dorf-Kurken Line; XV Corps Nadrau-Paulsgut; XXIII Corps Michalken-Gr. Gardiene, Boundaries between the Army Corps on advance: between XIII and XV the Maschaken-Schwedrich Line; between XV and XXIII, the Neidenburg-Wittigwalde Line. The I Corps to remain in District 5, to protect army's left flankThe VI Army Corps advances to the region Bischofsburg-Rothfliess, to protect the right flank. To protect station Rastenburg the 4th Cav. Div., subordinate to VI Army Corps, will remain in Sensburg to observe region between the Rastenburg-Bartenstein Line and Seeburg-Heilsberg Line. The 6th and 15th Cav. Div. . . .staff quarters 2 Army in Ostrolenka."

Thus when General von Hindenburg arrived at 1300 hours on 25 August at the General Command Staff of the I Army Corps, he was completely informed respecting the mission of the Russian Second Army for that day. It was decided to begin the German attack on the following day. On the same day at 2030 hours the orders for the army to attack on 26 August were released in Riesenburg.

One must admit that it was a piece of unusually good fortune for the Germans that both these radiograms were intercepted on the morning of 25 August, that is, at a time when critical decisions had to be made. It seems the more remarkable that these two radiograms were the only ones of any considerable length and with contents of decisive importance to be sent in plain text by the Russians, and intercepted by the German radio stations, during the entire period from the beginning of the war to the middle of September 1914.

On 26 and 27 August the I and XX Army Corps prepared to attack the left flank of the Russian Second Army. The German divisions which had advanced the farthest toward the right (the 5th Landwehr Brigade and the 2nd Infantry Division) met with stiff opposition, and for a while the situation was critical. On the forenoon of the 27th, Russian radiograms were intercepted which disclosed that the Russians were expecting reinforcements or perhaps had already received them, among others, the Third Guard Division from Warsaw (which was attached to the XXIII Army Corps). This information contributed to the fact that General von Francois (I Army Corps) no longer deemed it possible to proceed eastward to Neidenburg in order to sever the

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enemy's connections in the rear, but decided to turn the attack in a southerly and southeasterly direction.

The left wing of the XX Army Corps, which on 26 August had not been drawn into the battle to any great extent, was attacked by the Russians early in the morning of the 27th. The attack gradually spread out more and more toward the north and finally reached the German Third Reserve Division, which was on the left of the XX Army Corps. A Russian radiogram which was intercepted by the Germans now gave information on the attack mission of the opposing Russian XV Army Corps and revealed its intention to encircle the German left wing. Other radiograms disclosed that the Russian XIII Army Corps intended to support this attack toward the right of the XV Army Corps, and to proceed toward the rear of the German Third Reserve Division.

While these encounters were progressing, the German XVII Army Corps and the German First Reserve Corps made forced marches toward the battlefield. On 26 August at Gross-Bóssau they fought with the Russian VI Army Corps which then retreated southward. Simultaneously, a Russian radiogram was intercepted from which the German Eighth Army Staff Headquarters assumed that the Russian II Army Corps, which was at Rennenkampf's left wing, had been proceeding northward from Mauer Lake and was now supposed to march in a southerly direction, in order to help Samsonov.

That the Russian II Army Corps was proceeding northward from Mauer Lake was already known from reports of the Lötzen garrison, but that it was supposed to advance in order to support the Second Army was news. The German First Cavalry Division, which was stationed in the region of Schippenbeil, now received orders to halt the advance of the enemy corps along the Rastenburg-Korschen Line.

The German Army order for 28 August was signed by Hindenburg on the evening of 27 August. Later in the evening information was received that Russian troops from the south had arrived in Allenstein. There was thus the possibility that the Russian XIII Corps was striving to reach the north in order to join the approaching II Corps. The Army order which had just been signed was now immediately replaced by a new one which, among other things, ordered the XVII Corps and the I Reserve Corps to Allenstein.

On 28 August at 0700 hours Hindenburg and his staff arrived in Frógenau to direct the battle from there. Great tension prevailed at Army Headquarters. They were entirely in the dark as to the enemy's purpose at Allenstein. This group still had complete freedom of action.

At 0800 hours radiograms of the Russian XIII Corps disclosed that it was marching from Allenstein southward to Hohenstein, and that its vanguard would arrive at 1200 hours in Grieslienen, five kilometers north of Hohenstein. Its purpose was to aid the XV Army Corps.

On the basis of this knowledge, an order was immediately sent by airplane to the German I Reserve Corps to proceed at all speed, regardless of everything, by the shortest possible route, to the Stabigotten-Grieslienen Line (northeast of Hohenstein).

Even while the battle against the Russian Second Army was still at its height, the attention of the Germans was called to the pending operations against the Niemen Army. On the 28th a Russian radiogram announced that the II Corps (left flank Corps of the First Army) was to begin the retreat toward the frontier and to be transported by railroad. This move, however, did not take place.

Early in the morning of 29 August, an incomplete radiogram was intercepted, which stated as follows:

"Because of heavy battles of Second Army the Army Command orders supporting reinforcements. . . and advance of cavalry. . . ."

(General Rennenkampf had received orders on the morning of 28 August to proceed with his left flank to the support of the Second Army. This radiogram was apparently an order of Rennenkampf to one of his Army Corps. A later radiogram, however, interrupted the advance again).

The above-cited radiogram confirmed what they had been expecting in the German Eighth Army Headquarters. During the night of the 29th a number of radiograms were intercepted which mentioned the encirclement of Königsberg from the south. On the morning of the 30th one such radiogram gave information that the head of the Russian II Army Corps on his countermarch (which thus had been ordered for a second time) was to demolish completely the railroads and telegraph wires west of the Königsberg-Rastenburg line, including Korschen and Rastenburg. This last-mentioned radiogram made it possible for the German Eighth Army Staff to devote further attention to the remnants of Samsonov's Army.

All these Russian radiograms were intercepted by the German garrison radio stations Thorn and Königsberg, but also in part by the two heavy stations of the Eighth Army Staff, and were immediately translated and transmitted to the German Army Command. The German Command therefore knew not only the strength and organization of the enemy, but also his objectives.

It is very interesting to note how differently the importance of these intercepted Russian radiograms was estimated in the postwar period. Ludendorff mentioned this fact very casually in a subordinate sentence: ". . . we

had received an intercepted enemy telegram which gave us a clear picture of the enemy's moves for the following days." Ludendorff forgot that there was not only "one" radiogram but that several dozen were intercepted during the course of operations which revealed the situation of the enemy.

Hindenburg himself, in his book, "Aus meinem Leben," which appeared in September 1919, did not devote even one word to the radiograms; on the contrary, he described the course of the Battle of Tannenberg in such fashion as to give the definite impression that he was in the dark as to the enemy's objectives and organization.

The Russian General Danilov spoke of an "unpardonable negligence" in the Russian radio service, and declared that the imperfect communication service had been the chief reason for the catastrophic outcome of the battle.

The German Archives publication declares: "...On the whole the German Army Command viewed the intercepted radiograms as an extremely welcome source of intelligence. The Army Staff because of them, was temporarily, and even immediately before the beginning of the Battle of Tannenberg, advised of the objectives of the enemy in a way rarely possible in wartime." And in connection therewith, the German Archives publication immediately strives to save the face of the German Command by continuing: "But the critical decisions and orders for the battle, *according to the unanimous statements of all participants*, were made independently of the information which became known on the morning of 25 August through the radiograms. One cannot assume that without these radiograms the course of the battle would have been different."

To this one can only reply: The general has not yet been born, who, after winning a battle, would admit that he had won it thanks to a well-functioning intelligence service. Since the victory at Tannenberg had become a symbol for Germany, the "unanimous statements of all participants" could not of course be any different. Undoubtedly the dispositions for the battle were made before the first radiograms were intercepted. But during the course of the battle the knowledge of the contents of the intercepted radiograms played a decisive role. The development of the battle without these radiograms would very definitely have been entirely different.

Now we shall try to find out why the Russians sent their communications in plain text. To use plain text for such important communications as the two radiograms of 28 August was a mistake of the gravest kind. However, an examination of the circumstances on the side of the Russians gives an explanation. The Russian communication system operated very imperfectly during

the battle. As a result, the army orders reached the staffs of corps at the front too late. Many times they did not receive their orders until about 1000 hours of the same day on which the orders were effective; under such circumstances the troops could not enter into action in the designated formation until almost noon. Very seldom were there telephone connections, which was partly due to the fact that there were insufficient cables. For this reason, where there were radio stations, these were preferred for the transmission of communications, as was the case between the army leaders and the army corps.

In itself this would not have been dangerous if the radio traffic had been handled so as to prevent enemy interception, but this was not done.

The radiogram of General Samsonov to the XIII Army Corps at 0600 hours, 25 August was of an urgent nature since it pertained to the operations of the same day. It was sent as a priority message. There were no wire connections. One can assume that time did not permit the encipherment of this message; in the last analysis, however, the reason seems to be that in the XIII Corps no radiograms could be deciphered; they had no cipher key! Hence an enciphered radiogram was simply out of the question in traffic with the XIII Corps.

This almost unbelievable state of affairs was the reason why, when the above-mentioned corps headquarters attempted to listen in on the traffic of a nearby corps with the Army Command in order to obtain desired orientation, this traffic could not be deciphered by them and as a result could not be read. For example, on 26 August the XIII Army Corps was ignorant of the position and mission of the VI Corps, although they had in their possession intercepted radiograms from the traffic of this particular corps!

Since various Russian corps headquarters did not possess facilities for deciphering radiograms, it is probable that this was also the case in the Russian IV Army Corps, to which General Rennenkampf sent the above quoted fateful radiogram in plain text.

General Danilov, Quartermaster General at the Russian Headquarters, in his book "Russia in the World War," gives a different explanation for the use of plain text in radiotelegraphy. He writes: "The use of radio was something entirely new and therefore unfamiliar to our staffs. Moreover, our enemy was guilty of the same errors, and now and then we were successful in intercepting their plain-text radio messages and orders. But this does not absolve us from the charge of unpardonable negligence."

Danilov considers the faulty functioning of the Russian communications to be one of the major causes for the catastrophic outcome of the battle. Although the Russians at times made active use of radio, this means of

communication was, nevertheless, not utilized as it should have been. On the Russian side there was not the experienced leadership which is required for the maintenance of a dependable radio network. When General Samsonov betook himself on the morning of the 28th to the XV Army Corps and sent the major portion of his staff with his radio station across the Polish border to Ostrolenka, all radio traffic on the part of his army ceased. All connections, both with the Chief of the Army Group and with the VI and I Army Corps were thus interrupted, wherewith the command of operations on the Russian side on this day practically ceased. On 31 August the Battle of Tannenberg came to an end.

In German military literature these circumstances have been carefully passed over or greatly reduced in importance. But anyone who has ever experienced how thirsty a command in a critical situation is for reports regarding the enemy, whoever knows how difficult and nervously exhausting it is to have to reach decisions without a knowledge of the enemy's situation, such a person will entertain no doubt that the knowledge of the content of the Russian radiograms decisively influenced the course of the actions in the Battle of Tannenberg.

The Germans had learned something from the happenings along the ether waves at the Battle of Tannenberg which was supposed to be put to practical use during the Battle of the Masurian Lakes. Before the German attack on the Russian First Army began, the Germans wanted to tie up the important enemy reserves stationed farthest to the north—(east of Königsberg)—so that these could not be moved to the south where the German attack was in progress. Since no troop contingents were available to hold this large enemy reserve, the German Eighth Army Staff resorted to strategy. In the forenoon of 7 September, the radio station at Königsberg sent a radiogram in plain text as follows:

"To the Corps Chief,
Guard Corps,
Priority telegram.
Tomorrow the Guard Corps will join the . . . immediately west of
Labiau, parts of V Army unloaded . . . (here follows a series of
garbles).
Army Staff Headquarters."

The radiogram was intercepted by the Russians and the strategy succeeded. This is the first known case of purposely misleading radio traffic during World War I. The contents and the precise wording of the radiogram had been well thought out. The Guard Reserve Corps, which had shortly before arrived in the theater had in reality a different mission, but still was the northernmost army corps within the German attack organization; hence the mission designated in the radiogram could be possible.

The V Army Corps, which was stationed in France, was garrisoned in Posen in peacetime, hence its presence in East Prussia appeared possible. The Russian Army Command had also believed for a long time that this V Army Corps belonged to the Eighth Army, although they did not know where it was located.

German and Austrian Intercept Service

When the war broke out in August 1914, there was no fixed organization on either the German or the Austrian side for intercepting the foreign army radio traffic which immediately developed. The field regulations for German telegraph troops did foresee the possibility of listening-in on foreign radio traffic during those periods when their own radio traffic was dormant, in order to get some insight into the situation on the other side. Actually this work had never been practiced at all in peacetime maneuvers, and when the war broke out, nobody thought of undertaking the task.

At that time there were two rather large fortress radio stations in eastern Germany which had relatively little traffic of their own and consequently were in a position to listen to the enemy in periods of light traffic. These were the fortress radio stations at Königsberg in East Prussia, and at Thorn. Moreover, there was in Breslau the radio station of the German Eastern Europe Institute, which was likewise employed for military traffic after the war began but was used only for transmission. Entirely on their own initiative a few operators attempted soon after the outbreak of the war to listen to Russian army traffic as a sporting proposition, so to speak; it was not long before the first messages were intercepted but no one knew quite what to do with them because there was no regulation stating what should be done with such radiograms. In those days radiotelegraphy was a novelty both in Germany and in Russia. People were astounded at the technical progress which made possible wireless transmission of information over rather great distances, but they did not yet understand how to make sensible use of this technical advance in order to gain information. In the Russian army the idea had not even become general that messages sent out by radio could be heard just as well by the enemy, and on the German side the idea was utterly foreign in lower and medium commands that one might be in a position to shape or alter one's own plans on the basis of intercepted traffic. Military thinking tended to consider one's own operation on the basis of the orders issued to be a fixed factor which could in no wise be influenced by any messages which might be intercepted.

The Russian operational orders intercepted in the last phase before the Battle of Tannenberg were forwarded to General von Hindenburg by motorcyclists solely on the

personal initiative of the chief of the German fortress radio station at Thorn. The impression which this produced on the German High Command was, so to speak, the birth hour of the German intercept service, since now for the first time were the value and the possibilities of this service recognized.

The Austrians had already advanced somewhat further in this field by the time the war began. Here again there was no special organization for intercepting foreign radio traffic; here, too, they employed existing fortress radio installations for intercepting foreign traffic as a side issue. In the main, the stations at Krakow and at Przemysl were the ones involved. However, there was already rather more system in the organization of the work and, above all, provision had already been made before the war for passing on and utilizing intercepted enemy messages.

In this way the Austrians in the very first days of the war had definitely geared this new branch of the service with their Secret Service.¹ Moreover, the cipher section had taken up its work as soon as the war began, so that within the first fortnight it was able to read enciphered Russian radiograms.

In Germany, on the other hand, the cryptanalytic service limped so badly that it was almost half a year before the first regular work in this field began to take shape. It hardly seems credible that, in spite of the example of the Austrian intercept organization and in spite of the stimulus which must have resulted from the intercepting of Russian radio traffic after the Battle of Tannenberg, a fixed German organization for the systematic monitoring of foreign radio traffic did not come into existence until nearly one year after the beginning of the war.

¹(Geheimdienst = Cryptographic Section of the Imperial Chancellery.)