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It started with Peter the Great

COMMUNICATIONS INTELLIGENCE AND TSARIST RUSSIA



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Western publications in recent years have been providing frequent revelations about the use of communications intelligence (COMINT) by major nations of the world. The one notable exception, at least in English-language publications, has been Russia. At the logical source, the natural secrecy attached to COMINT information in general, combined with the traditional Russian obsession with secrecy throughout its society, has held discussion of the subject to a minimum. Outside the USSR, such Imperial Russian failures in communications security as Tannenberg in World War I have contributed to the impresssion that the Russians must have known little about COMINT. Despite these constraints, however, since the early 1960s several rather specific articles concerning COMINT organizations and operations under the Tsars and even on the early development of a radio intelligence service in the Soviet Army have appeared in Soviet journals. When supplemented with information available from non-Soviet sources, a general picture emerges of an early Tsarist COMINT effort approaching, if not on a par with, similar efforts in the West. This article is an initial attempt to shed some historical light on this little-known area of Tsarist intelligence.

It should be noted that the absence of any discussion in this present article concerning Russian military COMINT activities before World War I or Ministry of Foreign Affairs and Ministry of Internal Affairs COMINT operations during WW I itself does not necessarily mean such activities did not exist, but merely that insufficient documentation was available from which to draw any conclusions. It should also be noted that the early Russian COMINT efforts apply to communications in their broadest sense, including secret or coded written messages.

Early Development of Russian COMINT

Ministry of Foreign Affairs (MID)

Traditionally, communications intelligence involving foreign governments and their representatives fell within the purview of the Ministry of Foreign Affairs (MID). This tradition has been traced back to at least the reign of Peter the Great. The methods used, of course, involved gaining access to the diplomatic correspondence, opening it (perlustration), and if found to be encrypted, either purchasing the necessary cryptographic materials from a willing employee or actually engaging in operational cryptanalysis to exploit the document. Even so wily a statesman as the "Iron Chancellor," Otto von Bismarck, while serving as Prussian Ambassador to St.

¹ David Kahn, The Codebreakers (Macmillan, New York, 1967); F. W. Winterbotham, The Ultra Secret (Harper & Row, New York, 1974); Patrick Beesly, Very Special Intelligence (Hamish Hamilton, London, 1977); and Ewen Montagu, Beyond Top Secret Ultra (Coward, McCann & Geoghegan, New York, 1978) to list just a few.

¹ "On the Origins of Radio Intelligence in the Russian Navy" by V. Yankovich, Voenno-Istoricheskij Zhurnal (Journal of Military History), February 1961; Marshal I. T. Peresypkin, Voennaya Radiosvyaz' (Military Radio Communications), Moscow, Voenizdat, 1962; "The Communications Service in the Russian Navy during World War I" by M. Zernov and N. Trukhnin, Voenno-Istoricheskij Zhurnal, March 1966.

³ "The Organization and Combat Use of Radio Intelligence during the Civil War" by Yu. Ural'skii, Voenno-Istoricheskij Zhurnal, November 1972.

For instance, see Kahn, op. cit., p. 614.

Petersburg (1859-63), fell victim to MID's COMINT operations in reading Prussian ciphers. MID was aided in its COMINT efforts by the so-called "Black Cabinets" of the Imperial Russian Postal Service.

Black Cabinets were set up at post offices in major cities of the Russian Empire. One of their important functions appears to have been opening suspect correspondence, photographing the contents, and disseminating the information to the appropriate ministry, i.e., information of "general State interest" (usually comments about the Imperial Family made by segments of the Tsarist nobility) to the Minister of Internal Affairs; "political" correspondence to the Department of Police; "diplomatic" correspondence to the Minister of Foreign Affairs; and "espionage" correspondence, presumably during wartime, to the Army and Navy General Staffs. According to one former Black Cabinet employee, there was never much of a problem gaining access to, or photographing the contents of, foreign diplomatic pouches. When the diplomatic correspondence was found to be encrypted, it was not worked on at the Black Cabinet itself but sent to a "... similar establishment attached to the Ministry of Foreign Affairs." Copies of all encrypted telegrams sent and received by embassies in St. Petersburg were delivered to this MID organization. In important cases, even copies of reports carried in locked leather briefcases by special diplomatic couriers were forwarded to this same unit.6 As most couriers and embassy employees were underpaid by their governments, they could be prevailed upon for a small bribe to allow the contents of their briefcases to be photographed by Black Cabinet specialists.

The fact that diplomatic documents were encrypted only served to intensify MID's efforts to discover their contents. One Black Cabinet official described the ease with which foreign cryptographic materials could be obtained, even on the open market, in the following manner:

Codebooks were acquired not only with the assistance of embassy employees but also in the cities of Brussels and Paris, where well-known persons engaged directly in open trade of foreign codebooks for a fixed price. The situation was completely identical in both cities. Codebooks which were of less interest to us, e.g., Greek, Bulgarian, and Spanish, and could be obtained rather easily cost 1,500 to 2,000 (rubles). Such codebooks as those of the Germans, Japanese, or U.S.A. cost several tens of thousands. The prices for the remaining countries fluctuated between 5,000 and 15,000. It was possible with this trading in codebooks to place an order for this or that new codebook, and these orders were filled within a short period of time.¹

The "similar establishment" of the Ministry of Foreign Affairs to which the encrypted diplomatic correspondence was sent by the Black Cabinets was, of course, the main COMINT organization within MID responsible for diplomatic cryptanalysis. Little information is available on the specific structure and operations of this organization. Purportedly it could read the encrypted correspondence of many countries, including France, England, Turkey, Austro-Hungary and Sweden. Shortly before World War I, according to one source, this cryptanalytic organization was reorganized by Aleksandr A. Savinskij, chief of the MID Cabinet (1901-10), and brought directly under control of the foreign affairs minister himself.

³ Cited in Richard W Rowan, Secret Service (Literary Guild, New York, 1937), p. 699.

^{* &}quot;Black Cabinet: Recollections of a Former Tsarist Censor" by S. Majskij, Byloe (The Past), July 1918, p. 191.

lbid., p. 192.

^{*}Swedish Cryptanalyst Yves Gylden, cited in Kahn, op. cit., p. 621.

Ministry of Internal Affairs (MVD)

Like the Ministry of Foreign Affairs, the Ministry of Internal Affairs (MVD), through the cryptanalytic organization of its Department of Police, was an important component of the Tsarist Russian COMINT "community." The internal security and surveillance functions of the MVD, including the monitoring of communications of both anti-Tsarist revolutionary groups and the general populace of the Empire as a whole, have been rather well-documented elsewhere.9 What is not generally wellknown is that for at least a short period of time, the MVD expanded its jurisdiction to include monitoring the communications (as well as the movements) of foreign ambassadors, ministers, and military attachés based in Russia. This extension of the MVD into an area normally under sole control of the MID occurred between 1904 and 1906. Included among those whose communications were being monitored by the MVD was the U.S. Ambassador. The monitoring of U.S. diplomatic communications, according to the former chief of this "Top Secret" MVD bureau, Colonel M. S. Komissarov, had "enormous significance" for Tsarist diplomatic initiatives. On 4 May 1917, in testimony before the Extraordinary Investigating Commission of the Provisional Government,10 Komissarov stated:

During the Portsmouth Treaty (conference), we knew all the American conditions (positions) earlier than the American Ambassador in Petrograd."

This statement may have been only post-revolutionary bluster on the part of Komissarov, but it might be added that the principal Russian delegate to the Portsmouth conference, Sergej Witte, received the title of "Count" from the Tsar upon Witte's return to Russia specifically for his work at Portsmouth.

Russian COMINT in World War I

Army Radio Intelligence

The integration of radio communications into the military forces of the major world powers at the beginning of the twentieth century greatly expanded the horizons of COMINT in obtaining information on one's adversaries. It is unknown precisely when a radio intelligence service was first established in the Russian Army, but it undoubtedly was connected with the successful radio intelligence services set up by the Baltic and Black Sea Fleets in the autumn of 1914.12 Although there does not appear to have been any centralized control of intelligence, COMINT or otherwise, within the military command structure overseeing both Army and Navy operations, according to a former Soviet Communications Service chief close cooperation did in fact exist between the army radio intelligence services of Russia, Great Britain and France. This cooperation included frequent exchange of information on the operating characteristics of enemy radio stations, callsign constructions, and signal codes.13

^{*} For example, Kahn, op. cit., pp. 618-621.

¹⁰ The Extraordinary Investigating Commission was set up by the Provisional Russian Government after March 1917 to take testimony from former Tsarist officials on the functioning of the old regime. Its operations were ended with the Bolshevik Revolution.

[&]quot;Cited in "The Revolution of 1905-06 in the Reports of Foreign Diplomats" by M. G. Fleer, Krasnyj Arkhio (Red Archive), Vol. 3 (16), 1926, p. 220. The Portsmouth Peace Conference (August-September 1905), which took place at Portsmouth, New Hampshire, ended the Russo-Japanese War of 1904-05. President Theodore Roosevelt won the Nobel Peace Prize for his mediation efforts at the conference.

[&]quot;See "Navy Radio Intelligence," below.

¹³ Peresypkin, op. cit., p. 57. The existence of Russian Army COMINT liaison with the COMINT services of Great Britain and France has not heretofore been acknowledged in any western publication concerning Allied COMINT activities in WW I.

In the Russian Army, at each Army Headquarters, radio intelligence operations were controlled by the chief of army communications through his assistant for technical matters. Each army's radio battalion had a radio intelligence squad, or section, which operated two radio stations: one station monitored the radio waves for enemy communications and, once detected, the other station then recorded them. Presumably, the radio direction finding (RDF) stations also located at each Army Headquarters were controlled via the assistant for technical matters too. (See Chart I.)

Although information on Russian Army radio intelligence operations is almost nil, one example can be cited. In April 1915, on the eve of the German breakthrough in Galicia. Russian Army COMINT-provided information revealed the appearance of several new German Corps at the front, including a Guards Corps which had just been transferred from other areas in Galicia. The radio intelligence service had discerned this information on the basis of certain peculiar operating characteristics of these Corps radio stations and by the distinctive "fists" of their radio operators. Russian radio direction finding stations were also being used extensively at this time.

By the end of 1915, encrypted German Army radiograms were being intercepted on at least the Northern Front and sent to a "special bureau (SPETsIAL'NOE BYuRO) of the Chief Directorate of the General Staff in St. Petersburg" for cryptanalysis. According to one former high-ranking Tsarist Army intelligence officer, however, tangible results of the work of this bureau were not passed on, and the radio intelligence work itself was poorly organized in the Army when compared to similar work in the Russian Navy.¹⁴

Navy Radio Intelligence

If communications intelligence was organized and operated poorly in the Army, the exact opposite was the case in the Russian Navy. In fact, the organizational structure of the radio intelligence service was so thoroughly developed in the Baltic Sea Fleet that operations undertaken by the fleet were almost always successful. Like the Baltic Sea Fleet, the Black Sea Fleet also had an effective, if somewhat less well-developed, radio intelligence effort. From available evidence, it appears that each fleet's radio intelligence service was independent and responsible ultimately only to its respective fleet headquarters.

The decision to set up radio intelligence services in the Navy (and probably in the Army as well) stemmed from the Russian recovery of German naval radiotelegraphic codebooks from the cruiser *Magdeburg*, which had been sunk by Russian ships on 26 August 1914 in the Baltic. Shortly thereafter Captain 1st Rank M. A. Kedrov and Captain 2nd Rank M. I. Smirnov were sent to England with copies of the German codebooks, ¹³ which they handed over personally to the First Lord of the Admiralty, Winston Churchill.¹⁶

Probably following consultations with the English, the Commander-in-Chief of the Baltic Fleet, Admiral N. O. von Ehssen, jointly with the Baltic Fleet's chief of Communications Service, Captain 1st Rank (later Vice-Admiral) A. I. Nepenin, decided on the immediate establishment of the first "special purpose (OSNAZ) radio intercept station" in the western part of the southern shore of the Gulf of Finland, between Baltijskij Port (now Paldiski) and Revel (now Tallin). The chosen site was

[&]quot;Ceneral-Major N. Batyushin, Tajnaya Voennaya Razvedka i Bor'ba s Nej (Secret Military Intelligence and the Struggle with it), Sofia, Nov'Zhivot' Press, 1939, p. 73.

According to Yankovich, op. cit., p. 116, the French also received a photocopy of the German naval codebooks from the Russians.

^{16 &}quot;Mine Warfare in the Black Sea" by Senior Lieutenant I. I. Steblin-Kamenskij, La Revue Maritime (Naval Revue), November 1932, p. 620.

BASIC COMINT STRUCTURE IN RUSSIAN ARMY (ca. 1915)

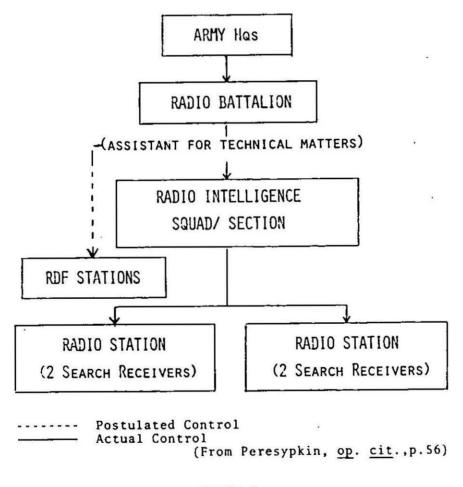


CHART I.

located in the woods, far away from populated areas, in order to achieve better monitoring of the radio waves. The secluded location was also selected in order to protect the station from German espionage activities and to create an ideally quiet place for carrying out the work of radio intercept and cryptanalysis. The buildings were hidden from outside view, and the station's personnel were allowed no contact with the outside world. A reinforced guard was set up around the station for added protection. The necessary supplies were delivered to the station at specified times by car from Revel. Captain 2nd Rank Przhilenskij was placed in charge of this OSNAZ station, with his closest collaborator a Ministry of Foreign Affairs cryptanalyst named Fetterlein.17 Several naval officers who knew the German language well and had some experience in cipher work were detailed to assist Fetterlein in attacking the encrypted German communications. All information obtained by the intercept station was then sent by underground cable to Captain Nepenin at the southern region administration of the Communications Service in Revel. During World War I, the chief of the fleet's Communications Service wore two hats: communications and naval intelligence.18 A similar radio intercept station was set up about the same time at Sevastopol in support of the Black Sea Fleet.19

Before going into specific examples of the use of COMINT information by the Russian Navy, let's look at the radio intelligence structure as it was set up in the Baltic and Black Sea Fleets.

At the beginning of the war, the Baltic Fleet Communications Service was divided into three regions: northern, stretching from Helsingfors to the Abo-Aland Islands; southern, from the Kunda Inlet in the west to the German border; and eastern, covering the Gulf of Finland east of Helgoland Island. Each of these regions had a Central Radio Station (CRS) attached to it which not only provided communications support to the fleet but also received intelligence information from aerial reconnaissance and shore-based observation posts in addition to radio intelligence from intercept and RDF stations. Except for the southern region, which served as the headquarters for the chief of the Baltic Fleet's Communications Service, it is unknown when the other regions first set up their COMINT stations. By the autumn of 1916, however, the northern region had five RDF and five radio intercept stations in operation, while the southern region had expanded its operation to five RDF and four radio intercept stations. It is possible that the eastern region did not have a COMINT effort at all, or the effort was only of limited duration. In March 1915, a so-called "Radio Intelligence Center" was set up at Revel, subordinate to the CRS of the southern region. This "Center" was probably connected with all radio intercept and RDF stations within the southern region by underground cable. It is possible similar "Centers" were established within the other regions to deal strictly with COMINTrelated data before forwarding the information on to their respective CRSs. Once the COMINT information reached the CRS, if it was extremely urgent and time-sensitive it would be transmitted immediately to commanders of Russian ships operating in the Baltic. (See Chart II.)

¹⁷ After the Revolution in 1917, Fetterlein apparently was employed by the British Government Code and Cipher School as a cryptanalyst, a position he was still occupying in World War II. See Patrick Seale and Maureen McConville, *Philby: The Long Road to Moscow* (Simon and Schuster, New York, 1972), pp. 152, 158. One former employee of the Tsarist Ministry of Foreign Affairs has characterized Fetterlein as a most gifted cryptanalyst. See Vladimir Korostovetz, *Lenin Im Hause Der Vater* (Lenin in the House of the Fathers) (Verlag für Kulturpolitik, Berlin, 1928), pp. 50-51.

¹⁰ Rear Admiral S. N. Timirev, Vospominaniya Morskogo Ofitsera (Recollections of a Naval Officer), New York, American Society for Russian Naval History, 1961, pp. 46-47; Yankovich, op. cit., p. 116.

Although the Black Sea Fleet's radio intelligence organization was similar to the Baltic Sea Fleet's, there are fewer details available. The Communications Service of the Black Sea Fleet was divided into a northern region, stretching from the mouth of the Danube to Fedosiya, and an eastern region, extending from Fedosiya to Batumi. Except for the initial radio intercept station set up at Sevastopol early in the war, it is unknown if or when other similar stations were established. (See Chart III.)

It might be added that while some of the equipment for the radio intelligence services was provided to the Russians by foreign firms, some of the equipment was constructed by specialists of the Russian Navy Department itself,²⁰ possibly associated with the Naval Ministry's own radiotelegraphic equipment factory (now called "COMINTERN" factory).²¹

The use of COMINT information by the Russian Navy during the war, especially in the Baltic Sea Fleet, proved to be very effective. Part of the reason for this effectiveness, according to a former high-ranking Tsarist Baltic Fleet officer, lay in the analytical judgments of Captain Nepenin as chief of the Baltic Fleet Communications Service.

Nepenin had developed to the highest degree the gift of establishing a complete picture of the movements of enemy ships and from this determining the plans and intentions of the enemy. Nepenin was able to accomplish this task by logically comparing facts and conjectures, which had been provided to him by Communications Service posts, both on the basis of decrypted German radiograms and bearings obtained by radio direction finding. His predictions of enemy movements, sometimes very bold and apparently with little basis, almost always were vindicated... Not one operation was undertaken (by the fleet) without first receiving a detailed and almost always correct interpretation (of information) on the requested area from Nepenin.²²

The information provided by the radio intelligence service, under Nepenin's direction, was looked upon with such favor by the Russian Naval Command that it was one of the reasons Nepenin was designated as the new Commander-in-Chief of the Baltic Fleet in 1916. Nepenin was probably succeeded at that time as chief of the fleet's Communications Service by Captain 1st Rank Novopashennyj, who was noted as chief of the Baltic Fleet Communications Service in 1917.

In the Baltic Fleet, the first operation known to have been undertaken on the basis of COMINT information took place on 14 February 1915, when the Russians learned in advance the scheduled times for the arrival and departure of a German cruiser at the port of Libau (now Liepaya). A Russian submarine was immediately dispatched and sank the cruiser as it left Libau. COMINT information also played a major role in mine-laying operations against German ships entering and leaving the Gulf of Riga. One example of the utilization of time-sensitive COMINT by Russian ships afloat occurred on 1 July 1915. A detachment of Russian cruisers, while in transit to bombard German targets in Memel (now Klaipeda), received a report on the location of a projected rendezvous between the cruiser Augsburg and a group of other

[&]quot; Ural'skij, op. cit., p. 84.

²¹ Zernov and Trukhnin, op. cit., p. 107.

[&]quot; Timirev, op. cit., pp. 14-15.

¹³ Possibly the same Novopashennyi who "... had rendered good service during WW I in the Imperial Russian Navy..." and, from 1922 on, served as a senior assistant to the chief of a German cryptanalytic organization. See Wilhelm F. Flicke, War Secrets in the Ether: Volume 11 (Aegean Park Press, Laguna Hills, 1977), pp. 292-293.

⁴⁴ Timirev, op. cit., p. 165.

EARLY DEVELOPMENT OF COMINT SERVICE IN BALTIC FLEET(ca. 1915)

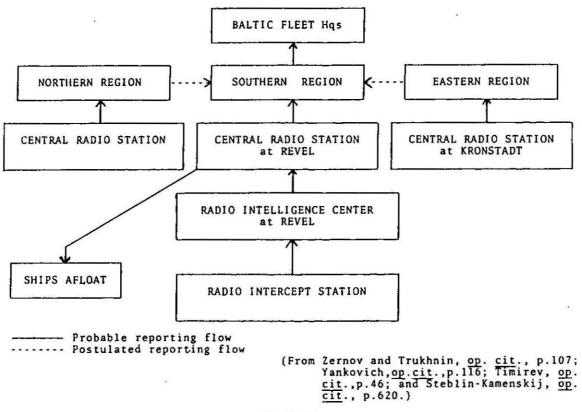


CHART II.

EARLY DEVELOPMENT OF COMINT SERVICE IN BLACK SEA FLEET(ca. 1915)

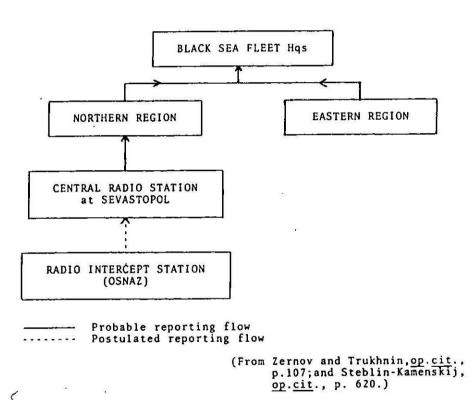


CHART III.

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Tsarist COMINT

German ships. The Russian detachment then broke up the rendezvous by forcing the German ships to retreat.²⁵ The high point in the operations of the Baltic Fleet's radio intelligence service was reached on 31 July 1915, when the Russians obtained foreknowledge of the German Navy's proposed forcing of the Gulf of Riga in conjunction with the German Army's seizure of the city of Riga. Information obtained by cryptanalysis as well as from aerial reconnaissance and shore-based observation posts provided the proposed time and date of the offensive, including deployment of enemy forces. When the German Navy attempted to carry out the operation on 8 August 1915, ships of the Baltic Fleet were already in place and broke up the attack.²⁶

The earliest known example of an operation undertaken by the Black Sea Fleet based on COMINT occurred in September 1916, although undoubtedly there must have been earlier operations. The Russians were aided in their Black Sea Fleet radio intelligence effort by the Turkish Navy's reliance on the Germans for cryptographic material, which the Russians already had in their possession. On 15 September 1916, Black Sea Fleet radio intelligence units (subdivisions) intercepted information from a shore-based Turkish radio station regarding the sweeping up of Russian mines obstructing the approaches to the Bosporus. A large Turkish transport ship was to pass through the swept area with a cargo of coal from Zonguldak. Russian ships were quickly sent to re-lay mines, and the Turkish ship was sunk. In December 1916, the Russians decrypted an order for a German submarine to return to Constantinople (now Istanbul), along with the coordinates of the mine-swept channel through which the submarine was to pass. Torpedo boats were immediately dispatched from Sevastopol to re-mine the area. It was learned by the Russians within 48 hours, through another decrypted radiogram, that the submarine had been sunk by the mines. This was the last German submarine to embark for the Black Sea during the war. 27

Conclusion

It is clear from the above that communications intelligence was an integral part of information-gathering under the Tsars. The invention of radio and its integration into the military forces of the major powers at the turn of the century also opened up a new horizon for Tsarist COMINT activities, although the Russian Military Command appears to have been somewhat slow in recognizing the possibilities inherent in using the radio for intelligence purposes. Nevertheless, Tsarist Russia for all of its faults was not totally inept in intelligence-gathering, as implied by some historians, and despite its slowness, it did achieve some success, at least in the Navy, with its use of COMINT.

¹⁵ Zernov and Trukhnin, op. cit., p. 107; Yankovich, op. cit., p. 117.

^{**} Vladimir Korostovetz, Seed and Harvest (Faber and Faber Limited, London, 1931), pp. 220-221; Yankovich, op. cit., p. 117; Zernov and Trukhnin, op. cit., p. 108.

[&]quot;Steblin-Kamenskij, op. cit., pp. 621-622; Zernov and Trukhnin, op. cit., p. 110.