

Studia i Materiały. Miscellanea Oeconomicae Rok 21, Nr 4/2017, tom II Wydział Prawa, Administracji i Zarządzania Uniwersytetu Jana Kochanowskiego w Kielcach

Security and International Relations in the North

Krzysztof Kubiak1

NORWAY AND THE NAVAL RADIO-ELECTRONIC INTELLIGENCE (SIGINT). HISTORICAL draft

Abstract

The Norwegian Military Intelligence (Etterretningstjenesten or E-tjenesten) is not an institution often appearing in news agencies' headlines. Staying in a shadow does not mean passivity. The majority of information about E-tjenesten activities is – of course – classified, but it is also commonly known that the service is responsible for gathering information from floating platforms - the specialized reconnaissance (radioelectronic intelligence, SIGINT) ships. That activity started after the founding of Etjenesten in the present shape. It took part shortly after the end of the Second World War. At that time due to global situation and participation with the Western alliance (the role of the the founders of the North Atlantic Treaty Organization) Norway transferred the burden of intelligence operations to the Soviet Union. Looking for ways to increase the efficiency electronic intelligence (SIGINT) the Norwegians introduced the first reconnaissance ship in 1966. This article outlines the history of electronic intelligence conducted by vessels under the Norwegian flag since the beginning of such activities during early stage of the Cold War and is still conducts at present time.

Key words

Norway, naval intelligence, electronic intelligence, security policy

Introduction

Collecting and deciphering of the messages sent by the opponent (and by allies of course) is one of the routine activity of the reconnaissance service all over the world. The radio-electronic intelligence (or signal intelligence, SIGINT) is not only the capturing and deciphering the coded information but also the tool for the identification the areas where the military unites are located, the dislocation of radar stations and

¹ Krzysztof Kubiak, Professor, Jan Kochanowski University.

radio installations, the penetration of command structure, the source of information about the level of maintained combat readiness). The role of SIGINT increased significantly during and after the end of World War II. At the end of the 1950s, the data obtained from that source influenced – sometimes very significantly – the decisions taken by the leaders of the Superpowers. SIGINT was conducted by the fixed-line installations, mobile-mounted devices, specially equipped airplanes and various class ships. It appeared quickly that one of the most effective tool of acquiring was specially equipped reconnaissance vessels and ships. They had been utilizing the legal status of the open sea so they could maneuver close to the shore (the distance was determined by the territorial waters notified by the state, generally 3 nautical miles, maximum 12 nautical miles²) and conduct SIGINT activities without violation of international law. Unlike aircraft, reconnaissance ships had (and still have) the ability to conduct long-term operations. Additionally the cost of maintaining them was significantly lower than the cost of developing and deploying a satellite SIGINT systems³.

Due to of the advantages which were providing by the SIGINT the American National Security Agency (NSA⁴) had organized in the early 1960s. the special

 $^{^{2}}$ A nautical mile is a unit of measurement defined as exactly 1852 meters (about 6076,1 feet or 1,1508 statute miles). Historically, it was defined as one minute of latitude, which is equivalent to one sixtieth of a degree of latitude. Today it is an SI derived unit, being rounded to an even number of meters and remains in use for both air and marine navigation and for the definition of territorial waters. One tenth of a nautical mile is a cable length. The derived unit of speed is the knot, defined as one nautical mile per hour.

³ Intelligence Warfare, Crescent Book, New York 1987, p. 176-195.

⁴ The National Security Agency (NSA) is a military intelligence organization and a constituent of the United States Department of Defense (DOD). NSA responsible for global monitoring, collection, and processing of information and data for foreign intelligence and counterintelligence purposes, a discipline known as signal intelligence (SIGINT). NSA is concurrently charged with protection of US. government communications and information systems against penetration and network warfare. Although many of NSA's programs rely on "passive" electronic collection, the agency is authorized to accomplish its mission through active clandestine means, among which are physically bugging electronic systems and allegedly engaging in sabotage through subversive software. NSA maintains physical presence in a large number of countries across the globe, where its Special Collection Service (SCS) inserts eavesdropping devices in difficult-to-reach places. SCS collection tactics allegedly encompass "close surveillance, burglary, wiretapping, breaking and entering". Unlike the Defense Intelligence Agency (DIA) and the Central Intelligence Agency (CIA), both of which specialize primarily in foreign human espionage (HUMIT), NSA does not unilaterally conduct human-source intelligence gathering. Instead, NSA is entrusted with assistance to and coordination of SIGINT elements at other government organizations, which are prevented by law from engaging in such activities without the approval of the NSA via the Defense Secretary. As part of these streamlining responsibilities, the agency has a co-located organization called the Central Security Service (CSS), which was created to facilitate cooperation between NSA and other U.S. military cryptanalysis components. Additionally, the NSA Director simultaneously serves as the Commander of the United States Cyber Command and as Chief of the Central Security Service. Originating as a unit to decipher coded communications in World War II, it was officially formed as the NSA by President Harry S. Truman in 1952. Since then, it has become one of the largest US intelligence organizations in terms of personnel and budget, operating as part of the Department of Defense and simultaneously reporting to the Director of National Intelligence. M. X. Heiligenstein A Brief History of the NSA: From 1917 to 2014, [online:] http://www.saturdayeveni ngpost.com/2014/04/17/culture/politics/a-brief-history-of-the-nsa.html, (09. 05. 2017); G. F. Howe, The Early History of NSA, [online:] https://www.nsa.gov/news-features/declassified-documents/cryptologicspectrum/assets/files/early history nsa.pdf, (08.05.2017).

"reconnaissance flotilla". At that time, it was decided to adapt for reconnaissance tasks the transport vessels of the Second World War era. In organizational and operational terms they were the part of the US Navy, but the NSA was responsible for conducting SIGINT missions and provided specially trained personnel. The first Reconnaissance vessel was *Pvt. Jose F. Valdez* (T-AG 169). She entered service in November 1961 and for the next 10 years conducted radio-electronic collecting in African waters. In the following years *James E. Robinson* (T-AG 170) and *Sgt. Joseph E. Muller* (T-AG 171) entered the service. At the same time, the fleets of the naval intelligence vessel absorbed also: *Oxford* (AG 159), (AGTR 2, operated on the Caribbean during the Cuban Missile Crisis in 1962), *Jamestown* (AGTR 3, operated around Africa), *Belmont* (AGTR 4, Caribbean region – played an important role during American intervention in Dominican Republic, 1965), *Liberty* (AGTR 5, Mediterranean Sea, damaged by Israeli Air Force and Navy during Six Days War in 1967), *Banner* (AGER 1), *Pueblo* (AGER 2, captured by North Korean Navy in 1968) and *Palm Beach* (AGER 3)⁵.

The Norwegians took a different way. It must be underlined that Norway had richer then the USA experience in radio collecting in very difficult political situation and harassing meteorological circumstances. Etterretningstjenesten was collecting SIGINT data in the High North (the Norwegian Sea and the Barents Sea along the borders of Soviet territorial waters). For most of the year the sea was very rough as well as the Soviet reaction to the presence of Norwegian units was difficult to predict. Due to the two reasons the collecting of data must be treated as the extremely risky task⁶.

At first the Norwegians installed radio collecting equipment on board of fishing boats. The crews, some of them were veterans of the World War II resistance, cooperated to military intelligence. In the early of 1950s. Norwegian naval officer, Lieutenant (Capteinløytnant) Alf Martens Meyer⁷ proposed to use especially prepared vessel to conduct SIGINT activities. They organized a false ship-owner company called Egerfangst AS which provided the cover to intelligence operations. Next Egerfangst AS ordered the 30 meters long trawler in the Bolsønes Ship Yard of Molde. She was named *Eger*. The whole project was implemented in close cooperation with the American Central Intelligence Agency (CIA) and financed mainly by CIA's funds. The ship was conducting normal fishing and only the shipper was aware of what the trawler was actually doing. Such a solution was associated with a number of benefits, but also a lot of risks and in the final analysis such operations were considered to be

⁵ The History of Information Security: A Comprehensive Handbook, Amsterdam 2007, p. 504-509.

⁶ The episode which took place over the Baltic Sea at the beginning of 1950s. June 13 1952 Soviet fighter shot down maneuvering in the international space Swedish reconnaissance plane Douglas DC-3 (Swedish Tp 79). Three soldiers (crew) and five civilian technicians were killed. It appeared near to Sandön Island. On June 16th flying boat PBY Catalina (TP 47) was shot down in the same area. The five-man crew was rescued by the West German vessel *Münsterland*. Douglas C-47, [online:] http://www.spyflight.co. uk/c47tp.htm, (02.05.2017).

⁷ During the Second World War he coordinated the transfer of Special Operations Executive (SOE) agents from Shetland to Norway, overseeing and was responsible for the supplying of a guerrilla base which was situated in the Matre region, around 40 kilometers north of Bergen. The second task he accomplished during the last stage of the war.

non-prospective. After ten years the Norwegians, together with American partners, have decided to radically change the SIGNIT strategy⁸.

In 1966 the new vessel called Marjata came into service. The name is derived from Scandinavian legends, among others, from the Finnish national epic Kalewala or (according to the more "conspiratorial" version) commemorated Alf Martens Meyer, because it consists of the first letters of his nearest relatives' names. The vessel was bought from the civilian owner called Melsom & Melsom of Larvik. Previously she was whale catcher named Globe XIV. The vessel was built in 1951 at the A / S Stord Yard for the ship-owner Hvalfangerselskapet Globe A / S (Melsom & Melsom). She was launched on May 8th. Her length was 51,6 m, beam 9,0 m and draught 5.5 m with a gross capacity of 613 units (Gross Register Tonnes, GRT⁹) and a net capacity of 202 units (GRT). Originally the vessel was powered by a steam engine with two coal burned boilers. Her last fishing season was in the years 1961-1962. Then, in 1965, the vessel was sold for 300 000 crowns to the Forsvarets Forskningsinstitutt (Horten) - Military Research Institute. Repair and adaptation was made by Mjellem & Karlsen A / S from Bergen. The steam engine was replaced by a 1 400 hp (375 rpm) MaA 4CY / SA diesel engine, produced by Maschinenbau Kiel G.m.b.H. Above the existing bridge platform, a dome with a reconnaissance equipment was built. Three generators were also installed (related to the energy demand of special equipment) with a total power of 150 kW. After refurbishing, the gross capacity of the vessel was 631 units (GRT) and the net capacity was 160 units (GRT). The ship (formally a civilian vessel, she was not incorporated into the naval forces and therefore she did not raise the ensign) was heavily exploited. According to preserved relations she has a good seaworthiness, but during winter storms reconnaissance devices installed on a relatively small hull often failed to maintain electromagnetic tracking, which reduced the effectiveness of the missions. Marjata was most useful between May and September¹⁰.

In 1976 the ship had been transferred to the navy and, after another adaptation, manned by Norwegian Coast Guard (Kystvakten¹¹) and named *Vadsø*. In 1986, after

⁸ Vi skjøt etter norsk spionskip, [online:] http://www.klikk.no/produkthjemmesider/vimenn/article53540 2.ece, (22.04.2017); O. Riste, *The Norwegian Intelligence Service, 1945-1970*, Roudlege Taylor & Francis Group, London and New York 1999, p. 53-84.

⁹ Gross Register Tonnage (GRT, grt, g.r.t. "gt") a ship's total internal volume expressed in "register tons", each of which is equal to 100 cubic feet (2.83 m³). Gross register tonnage uses the total permanently enclosed capacity of the vessel as its basis for volume. Net register tonnage subtracts the volume of spaces not available for carrying cargo, such as engine rooms, fuel tanks and crew quarters, from gross register tonnage. Gross register tonnage is not a measure of the naval ship's weight or displacement and should not be confused with terms such as displacement. Since 18 July 1994 the gross and net tonnages, dimensionless indices calculated from the total moulded volume of the ship and its cargo spaces by mathematical formulae, have been the only official measures of the ship's tonnage. However, the gross and net register tonnages are still widely used in describing older ships. ¹⁰ Marjata, [online:] http://www.globalsecurity.org/military/world/europe/knm-marjata.htm,

^{(05.03.2017), 1951} DS GLOBE XIV (LVK200195101), [online:] https://skipshistorie.net/Larvik/

LVK200Melso m%20Melsom/Tekster/LVK20019510100000%20GLOBE%20XIV.htm, (05.03.2017). ¹¹ The Norwegian Coast Guard (*Kystvakten*) is a maritime military force, the part of the Royal Norwegian Navy. The coast guard's responsibility consists of fisheries inspection, customs enforcement, border control, law enforcement, shipping inspection, environmental protection as well as search and rescue (SAR).

leaving the flag, vessel the unit was sold to Simon Møkster from Stavanger. She changed the name to *Strilfaks*. After that, as *Globe*, she became the property of Bjørn Svendsen of Sandefjord and was used as a passenger vessel around Svalbard. Between 1992 and 1994, the vessel, as *Globe Whaler*, served as the fishing inspection boat in Namibia. Finally, after arresting due to doubts in Spanish Ceuta the former intelligence vessel was damaged by a fire and scrapped around 2010¹².

Evidently, the experience of the rebuilt vessel had not been entirely good so the second Marjata was built as the special reconnaissance ship. She entered service in 1976. The vessel "was born" at Mjellem & Karlsen Mekaniske Verksted shipyard of Bergen. Second Marjata 940 units of capacity length 46,6 meters and beam 11,1 meters. It was driven by two diesel engines working on two screws. The relatively spatial hull provided the opportunity to install a large number of reconnaissance equipment and gave the vessel large modernization potential. Her icon was (and still is) a cylindrical hangar enclosed, as you might guess, the antennas of the reconnaissance devices. The modernization possibilities of the ship were used in 1982 when Marjata was deeply rebuilt. They extended the hull by 14 meters and installed the new reconnaissance equipment. The works were done in record time – in summer 1983 the ship re-appeared at sea. It should be that it was very hot time at the international policy – the last phase of the Cold War reached apogee, the Soviets invaded Afghanistan in Poland the martial law was declared by the communistmilitary junta. Data acquired from radio-electronic reconnaissance could prove the crucial information for Western decision makers¹³.

After modernization *Marjata* was, with a gross tonnage of 1 385 units, 62,0 meters long, 11,1 meters beam and 5,6 draught (deadweight was estimated at 659 tons). Another serious modernization was carried out on 90.s of the previous century. At that time the ship received a new stern mast. Under Norwegian flag the unit remained until 1994 when she was sold, after the dismantling of special equipment, to the British company called Gardline. It is a leading global firm specializing in commercial marine research activities including geophysical works, geotechnics, marine environmental assessment and protection, seismic testing, etc. The offer is addressed both to countries that do not have their own scientific background and to commercial companies (including firms from oil and gas sector). Currently the ship, using the name *Sea Explorer* sails under the flag of The Bahamas¹⁴.

Compared to the predecessors, the third *Marjata* was a vessel built according to a very modern design but she also appeared to be considerably more costly. Construction began in 1992 in Langsten Aker Yards of Tomrefjord. Launch was made on December 18, 1992 and she reached the operational readiness in 1995. The hull of the ship has an unusual structure, its shape is similar to the triangle. On the one hand it provides considerable stability and on the other ones (and it is probably the most important thing) the stern towing area is much bigger than at the classical hulls which

¹² Marjata Intelligence Collection Ship, [online:] http://www.globalsecurity.org/military/world/europe/knm-marjata.htm, (06.03.2017).

¹³ РЗК «Marjata» ВМС Норвегии, Заметки на полях вахтенного журнала, [online:] http://www.rena tmustafin.com/text/marjata.html, (02.03.2017).

¹⁴ Sea Explorer, [online:] http://skipsfoto.origo.no/-/image/show/2792326_sea-explorer?ref=checkpoint, (03.03.2017).

allows to use various measuring instruments (for example intelligence sonars)¹⁵. The development of such vessels, sometimes called Ramform ships, is a Norwegian achievement. The concept was developed by Petroleum Geo-Services, which explored hydrocarbon deposits, but the prototype of the entire series was financed by the government. This is an interesting example of deep coexistence between civilian business and the widely understood sphere of defense. When the third *Marjata* went through the trials, Petroleum Geo-Services decided to build its first *Ramform Explorer* geophysical ship. At present the company has additional such vessels: *Ramform Sterling, Ramform Sovereign* and bigger ones – *Ramform Titan, Ramform Atlas Ramform Tethys* and *Ramform Hyperion*¹⁶.

The innovative *Marjata* has 7 560 tons of full displacement, she is 81,5 meters long, 40,0 meters beam and 6,0 meters draught. Two diesel engines and two electric motors powered by turbogenerators are built in the engine room. This solution reduces fuel consumption during cruise speed and allows smooth maneuvering, which facilitates handling with towed equipment. Maximum speed is 15 knots. The wide stern deck made it possible to place a helicopter landing pad there. The crew consists only 14 persons but the area for the additional 31 SIGINT specialists is also on the board. In Russian publications persistently opinion is that these "scientists" are – no exception – the Americans, but it is yet another "barrack legend" (per analogy to "urban legend"). On the other hand the involvement of American specialists (from the US National Security Agency) in intelligence activities is absolutely certain¹⁷.

Marjata has provided the Etterretningstjenesten with a completely new intelligence possibilities. First and foremost, the capacities of its sensors (including sonars and seismic ones) were increased dramatically and unlike previous ships, it could operate on the Bering Sea throughout the year. The ship in Norway quickly clung to the nickname *Strykejernet (Iron*, which given the shape of the hull should not be surprised). In the Soviet and Russian fleets she is called *Masha¹⁸*. *Masha* made a media career after August 12, 2000, when she was maneuvering in the area where Kursk (Russian nuclear submarine) had sunk. The Norwegian vessel sailed only 18 km from the site of the tragedy, conducting routine observation of the Russian North Fleet's military exercises. The Russian expressed deep dissatisfaction due to Marjata's activity. Despite this, the Norwegians did not withdraw her and additionally sent to the area the next vessel – hydrographic and meteorological ones called *Sverdrup II*¹⁹.

At the first glance the successively modernized *Marjata* would meet the needs of both Norwegians and Norwegian allies over the years. Meanwhile in 2010 chief of military intelligence, Lieutenant General Kjell Grandhagen, announced that his service was going to build a new reconnaissance ship. It was obvious among the

¹⁵ Dette er et norsk spionskip – Aftenposten, [online:] http://www.aftenposten.no/norge/Dette-er-et-norsk-spionskip-165731b.html, (07.04.2013).

¹⁶ The Fleet, [online:] https://www.pgs.com/the-fleet/, (07.04.2017).

¹⁷ Marjata, Intelligence collection ship, http://www.military-today.com/navy/marjata.htm, (12.04.2017). ¹⁸ РЗК «Магjata» ВМС Норвегии, Заметки на полях вахтенного журнала, [online:] http://www.ren atmustafin.com/text/marjata.html, (02.03.2017).

¹⁹ The Russian Military Despises This Strange Wedge Shaped Spy Ship, [online:] http://foxtrotalpha .jalopnik.com/the-russian-military-despises-this-strange-wedge-shaped-1648132968/1651793431, (12.04.2017).

specialists that the idea was a part of response to new, sharp Russia's policy (war with Georgia in 2008, Crimea crisis in 2014, Ukrainian civil war). Today's vessels had reached its expected technical lifetime. The question has been whether one would operate today's ships, or building a new one. The Storting (Norwegian Parliament) approved in 2010 to build a completely new vessel. General told that the price of the new vessel will amount to NOK 1,2 billion (€148 million).

In March 2014 the hull of the new Norwegian Intelligence vessel was towed through the Bosporus from the shipyard in Romania towards Vard Lansten shipyard in Norway. The godmother of the new intelligence ship (BRD) Marjata became Norwegian Prime Minister Erna Solberg, who personally broke a bottle of champagne against the side of hull at the shipyard Langsten VARD group Tomreforde.

The new Marjata military intelligence collection ship is a new addition to the Norwegian Navy and joined NATO reconnaissance missions in the Barents and Norwegian Seas this spring in 2016. Marjata is one of the two ships which Norway and NATO can send into the high Arctic seas in an attempt to find lurking Russian submarines which have been terrifying the imagination of Scandinavians for the past couple of years. Current Marjata is a significantly improved and bigger version of its predecessors which have been operated by the Norwegian Intelligence Service since the days of the Cold War. The vessel is 126 meters long and 23,5 meters beam. The ship's equipment was developed by experts at the Chatham naval base in the United States. She has higher freeboard - distance from sea level to the deck. Covered is both longer and wider, and the ship has more deck than its predecessor. More space on the weather deck and increased height above sea level provides many gains in relation to the placement of antennas, including less interference, blind spots and increased range. As on its predecessor new Marjata has chimney in the front of the vessel. It probably means that she, too, has the engines completely ahead. The design is specially prepared to create at least noise and vibration by keeping the machines as long as possible away from the ship's advanced intelligence devices. The Marjata project ended up being one of the most expensive ones in the history of the Norwegian military – approximately 149 million euros. As the earlier vessels that have sailed for the intelligence service also the new Marjata is painted in civilian colors. A Navy gray stripe separates only the deep blue hull from the white covered.

The old *Marjata* is re-named to *Eger* became ready for missions in the Norwegian Sea during first half of 2017. It is not specified what kind of new equipment that was installed on board. Although Horten is the formal home port for of the two currently-in-service intelligence vessels, they are based in Kirkenes, located on the Bøkfjorden (a branch of the larger Varangerfjorden). The border with Russia runs about 8 km south-east.

Norway has become a real "super" power in maritime reconnaissance after the Marjata gained operational readiness. The country is capable to operate of two very modern ships simultaneously. This fact not only significantly increases the amount of collected information but also greatly strengthens the position of the relatively weak Scandinavian country in bilateral relations with the United States as well as with other allies and partners. There is a mythological and symbolic analogy – in the emblem of

the Norwegian military intelligence there are two ravens, two birds of Odin. One of which is named Hugin (thought) and the other Munin (memory). They left the god at dawn to fly the world to gather news. At dusk they sat on his master's shoulders and whispered to him what had happened. Both reconnaissance ships play a very similar role – they gather news, and what they do with the news will be the one for which this information ends up being a completely different matter.

Bibliography

- 1951 DS GLOBE XIV (LVK200195101), [online:] https://skipshistorie.net/ Larvik/LVK200Melsom%20Melsom/Tekster/LVK20019510100000%20GLOB E%20XIV.htm, (05.03.2017).
- 2. Dette er et norsk spionskip Aftenposten, [online:] http://www.aftenposten.no/ norge/ Dette-er-et-norsk-spionskip-165731b.html, (07.04.2013).
- 3. Douglas C-47, [online:] http://www.spyflight.co.uk/c47tp.htm, (02.05.2017).
- 4. Heiligenstein M. X., *A Brief History of the NSA: From 1917 to 2014*, [online:] http://www.saturdayeveningpost.com/2014/04/17/culture/politics/a-brief-histo ry-of-the-nsa.html, (09. 05. 2017).
- Howe G. F., *The Early History of NSA*, [online:] https://www.nsa.gov/news-feat ures/declassified-documents/cryptologic-spectrum/assets/files/early_history_ns a.pdf, (08.05.2017).
- 6. Intelligence Warfare, Crescent Book, New York 1987.
- 7. *Marjata Intelligence Collection Ship*, [online:] http://www.globalsecurity.org/mi litary/world/europe/knm-marjata.htm, (06.03.2017).
- 8. *Marjata*, [online:] http://www.globalsecurity.org/military/world/europe/knm-mar jata.htm, (05.03.2017).
- 9. *Marjata. Intelligence collection ship*, [online:] http://www.military-today.com/ navy/marjata.htm, (12.04.2017).
- 10. Riste O., *The Norwegian Intelligence Service, 1945-1970*, Roudlege Taylor &wwwwFrancis Group, London and New York 1999.
- 11. Sea Explorer, [online:] http://skipsfoto.origo.no/-/image/show/2792326_sea-exp lorer?ref=checkpoint, (03.03.2017).
- 12. The Fleet, [online:] https://www.pgs.com/the-fleet/, (07.04.2017).
- 13. *The History of Information Security: A Comprehensive Handbook*, Amsterdam 2007.
- 14. The Russian Military Despises This Strange Wedge Shaped Spy Ship, [online:] http://foxtrotalpha.jalopnik.com/the-russian-military-despises-this-strange-wedg e-shaped-1648132968/1651793431, (12.04.2017).
- 15. Vi skjøt etter norsk spionskip, [online:] http://www.klikk.no/produkthjemmes ider/vimenn/article535402.ece, (22.04.2017).
- 16. РЗК «Marjata» ВМС Норвегии, Заметки на полях вахтенного журнала, [online:] http://www.renatmustafin.com/text/marjata.html, (02.03.2017).

Streszczenie

Norweski Wywiad Wojskowy (Etterretningstjenesten lub E-tjenesten) nie jest instytucją pojawiającą się często w agencyjnych czołówkach Pozostawanie w cieniu nie oznacza jednak bierności. O ile większość działań tej służby jest - siłą rzecz niejawna, o tyle tajemnicy nie może stanowić fakt, że w jej kompetencjach leży również zbieranie informacji z platform pływających, czyli specjalistycznych okrętów rozpoznawczych. Działalność ta prowadzona jest od powstania E-tjenesten w obecnym kształcie po II wojnie światowej. Z kolei związanie się Norwegii z sojuszem zachodnim (państwo to było jednym z założycieli Sojuszu Północnoatlantyckiego) jednoznacznie skierowało zasadniczy ciężar rozpoznania na Poszukując wschód. sposobów zwiększenia efektywności rozpoznania radioelektronicznego Norwegowie w roku 1966 wprowadzili do służby pierwszy przedstawia Artykuł okret rozpoznawczy. zarys historii rozpoznania radioelektronicznego prowadzonego przez jednostki pod norweską banderą w od poczatku tej działalności do chwili obecnej.

Norweskie rozpoznanie radioelektroniczne na morzu. Zarys historii

Słowa kluczowe

Norwegia, rozpoznania morskie, rozpoznanie radioelektroniczne, polityka bezpieczeństwa.

Krzysztof Kubiak, Professor (born 1967), graduated from Polish Naval Academy and Gdańsk University. He gained PhD title in the Polish Naval Academy (1998) and accomplished habilitation procedure in the National Defense University (2003). In march 2015 the President of Polish Republic gained him the title of professor. He is dealing with contemporary war, conflicts and – such called – "flash points", as well as the not-military threats for national security (terrorism, sea piracy, drug smuggling, illegal immigration, proliferation of mass destruction weapon). The security of polar areas (both Arctic and Antarctic) is the integral part of his scientific interests. He published 17 books (among them: Disputes and Conflicts in the Arctic at the beginning of the XXI Century, Warsaw 2013, British-Icelandic Cod Wars 1958-1976, Zabrze 2014) and more than 200 scientific articles. He is also an active publicist. Now he is the professor of Jan Kochanowski University in Kielce.