Spying on the West

Soviet-Bulgarian Scientific Intelligence Cooperation

By Jordan Baev

The historiography of intelligence and security has benefited significantly from the comparatively greater accessibility of the East European secret services records in the post-Cold War era. In a way, those files revealed not only the specific tasks and activities of the intelligence services in the smaller Soviet bloc countries, but also the global aims of the superpowers, though the KGB's operational archives are still almost entirely unavailable so far. A review of the formerly top secret Central-Eastern European documents seems to confirm the established view that the Warsaw Pact intelligence services were established as a "mirror" image of the KGB First Main Directorate (PGU).[1] This conclusion is also supported by a confidential instruction from the first secretary of the Bulgarian Communist party, Todor Zhivkov, after a meeting with KGB Chairman Yuri Andropov in Sofia in November 1969, stating that the Bulgarian State Security services (DS) should become "a worthy branch" of the KGB.[2]

The history of cooperation within the Soviet bloc in the area of Scientific and Technical (S&T) intelligence is still rarely discussed in the contemporary historiography; however, it represents a "strange phenomenon" in the international history of intelligence services. While the Western countries developed their scientific intelligence branches independently, and indeed had sharp and often competitive secret rivalries among themselves, the Soviet bloc intelligence services coordinated their actions within the coalition's framework of "distribution of goals". The most important strategic tasks in specific regions and areas were assigned by the KGB masters, at least, in the initial years of East European S&T intelligence activity. The strongest arguments for an intensive development of the S&T Intelligence collaboration were the necessity of overcoming or avoiding the Coordinating Committee for Multilateral Export Controls (COCOM) barriers in the new era of technological acceleration of the Western economic system and a raging arms race between the two military blocs.[3]

Discussions of the Warsaw Pact's cooperation in the field of S&T intelligence have understandably focused on the more developed Soviet allies such as Eastern Germany, Czechoslovakia, or Poland. In addition, there were relatively large diasporas of Central Europeans inside the US, Canada, and Western Europe, which facilitated the attempts to obtain secret military, economic, and scientific information. The Bulgarian intelligence service has been discussed as no more than an executor of the KGB's "dirty work" or of "wet" covert joint actions in the West. Even the newly published Russian monographs on Soviet postwar intelligence services note only a few basic examples of S&T cooperation with East German, Polish, Czech, and Hungarian "comrades", totally ignoring the KGB's "most loyal" Balkan ally.[4] One of the reasons for this neglect was obviously the lack of reliable documentary information.

Meanwhile, in the last decade some interesting personal testimonies of Bulgarian S&T Intelligence veterans have been published in Sofia with a few more publications by investigative journalists that shed some light on the hidden history of this secret service.[5] In December 2006, a new law on the disclosure of state security and military intelligence officers and agents was accepted by the Bulgarian parliament. According to the law, the entire documentation on the intelligence and security services for the period September 1944–July 1991 must be turned over to the newly established Archive of the Committee for Disclosing the Documents and Announcing Affiliation of Bulgarian Citizens to the State Security and the Intelligence Services of the Bulgarian National Armed Forces (*ACDDAABCSSISBNA*).[6] In 2008–2010, in accordance with the current regulations, a great amount of formerly top-secret Bulgarian intelligence records were made available for the first time to the public. They could contribute, in particular, to answering the question how it was possible for a small underdeveloped agricultural country in the Balkans to gain leading positions within the Eastern European economic system in areas of high-tech industry such as electronics, chemistry, pharmaceutics, and heavy machine construction.

The author of these notes was among the first historians to gain access to those files, which resulted in a documentary volume and a monograph on KGB-DS collaboration.[7] Almost all of the documents presented here were taken from the

records of the Bulgarian Foreign Intelligence service (Fond 9). One of the documents [Doc. No. 3] was kept in the files of the Ministry of the Interior Secretariat, while two others [Docs. No. 1 and 2] are stored in the Central State Archive – CC BCP Politburo (Fond 1-B) and the Todor Zhivkov (Fond 378-B) files.

Since its establishment after the Bolshevik revolution, the Soviet foreign intelligence service developed its scientific branch. During the World War II, a new 15th Division at the foreign intelligence department was responsible for developing scientific intelligence. Its greatest success was in the area of atomic espionage on the top-secret US Manhattan Project.[8] Three months after the establishment of the KGB in March 1954, a separate S&T department was formed within the First Main Directorate (PGU), which was renamed the 10th Department in 1959. In 1974, a couple of years after the appointment of Yuri Andropov as the KGB chairman, that department was expanded to become Directorate "T" – PGU KGB.

In the postwar years, the chief of Soviet scientific intelligence was Col. Leonid Romanovich Kvasnikov (1947–64). He was succeeded by Col. Mikhail Ivanovich Lopatin (1964–74) and Gen. Leonid Sergeevich Zaytsev (1975–91). In the early 1960s, the 10th Department of the PGU had seven intelligence orientations: nuclear, aerospace, electronics, medicine, chemistry, new technologies, and information and analyses. The S&T Intelligence officers at KGB representations (*rezidentura*) abroad were codenamed "Line X". After the establishment of Directorate "T" in 1974, the Soviet leadership approved Andropov's proposal to double the staff abroad. Thus, in 1975, the Soviet S&T intelligence services activated 77 of its agents and 42 informers who focused their activity on the US alone, and specifically on 32 principal objects (General Electrics, Boeing, Lockheed, McDonnell-Douglas, Westinghouse, etc). According to a KGB report to the Central Committee of the Communist Party of the Soviet Union (CC CPSU), during the period 1972-7, S&T intelligence obtained about 120,000 pieces of new information with 20,000 schemes and diagrams, which were mainly delivered to the state Defense Industry Committee. In 1979 alone, the Soviet Scientific Intelligence Directorate realized 557 "measures involving operational agents" abroad. In 1980, the KGB delivered more than 14,000 pieces of information and 2,000 models of different technical equipment to various governmental departments and agencies, and to state firms and research institutes.

In 1981, it provided 13,500 items and 3,000 models, and in 1982, 10,000 pieces of information and 4,000 models.[9] The geographic distribution of the intelligence obtained from the leading Western countries was as follows: 61.5 per cent from US sources, 10 per cent from West German sources, 8 per cent from French sources, 7.5 per cent from British sources, and 3 per cent from Japanese sources.

The Bulgarian scientific intelligence service was formed later than those of the Central European allies. In May 1950, four months before the establishment of DS First Directorate (Foreign Intelligence), a Bulgarian delegation visited Moscow for talks with the Soviet intelligence chiefs, Gen. P. Fedotov and Gen. S. Savchenko. The Soviets suggested that the Bulgarian intelligence service should consist of four operational divisions, the first of which was to deal with political, economic, and scientific intelligence.[10] During the first multilateral Soviet bloc intelligence conference in Moscow in March 1955, the Bulgarian delegation had bilateral talks with KGB Chairman Gen. Ivan Serov and the chiefs of Soviet intelligence and counterintelligence services. One of the issues discussed was Soviet support for starting scientific intelligence activities in Bulgaria. The KGB leadership informed the Bulgarian "comrades" that one of the main foreign intelligence goals should be the recruitment of "highly skilled agents" to obtain information regarding Western nuclear weapons, anti-aircraft radars, jet aircraft, and new inventions in the field of chemistry and geology. The Soviets also provided information about the reorganization of the British scientific intelligence division, which was geared towards obtaining new information on the Soviet Union's nuclear weapons, aircraft industry, and anti-aircraft systems.[11]

The first Bulgarian S&T intelligence division was formed in December 1959 within the 13th Department of the foreign intelligence service, which dealt with economic issues. It consisted of only three intelligence officers, headed by Lt. Col. Raicho Karakolov. Subsequently, the S&T intelligence service was established in 1964 within a separate 7th Foreign Intelligence department, headed by Col. Ivan Ivanov. A year before its creation, Sofia requested that the KGB send "for consultations" Col. Leonid Kvasnikov, a veteran of Soviet nuclear espionage and the head of the KGB's scientific intelligence unit for more than 15 years. His advice had

been taken into consideration when the structure and principal tasks of the 7th PGU-DS department were being clarified.

In pursuance of the CC BCP Secretariat Resolution I-980 of 3 August 1966 [Doc. No. 1], 30 new intelligence officers with graduate degrees or even PhDs in technical subjects and the humanities were employed, and 20 of them were sent for one year to the KGB PGU Special School near Moscow (known as "School No. 101"). A few months later, in March 1967, the head of Bulgarian State Security, Gen. Angel Solakov, reported at a confidential plenary session of the CC BCP: "In fact, our Scientific and Technical Intelligence started to function in 1966." Gen. Solakov specified the basic areas of interest in the field of S&T intelligence – electronics, chemistry, and mechanical engineering.[12] In May 1968, Bulgarian State Security leadership arrived in Moscow for consultations with the new KGB Chairman Yuri Andropov. He acknowledged confidentially that the KGB was far behind the CIA in the field of information technologies and computers – approximately seven to ten years. Andropov raised the issue of acquiring exact and current intelligence information on the new generation of US computers.[13]

According to the agreements approved during Yuri Andropov's first visit to Sofia in November 1969, the exchange of scientific intelligence between the two countries was significantly increased over the following two to three years. In March 1971, a KGB reference indicated that the Bulgarian S&T intelligence department had delivered 161 pieces of information in the previous year, of which 5.6 per cent were assessed as "extremely valuable", 22 per cent as "valuable", and 39 per cent as having "information interest". In December 1971, Andropov sent a special letter to Sofia expressing his appreciation for scientific information received [Doc. No. 3]. On 8 April 1972, a basic long-term agreement and a perspective plan for "intelligence interaction" between the KGB and the DS were agreed in Moscow. Regarding cooperation in the area of S&T intelligence, the plan outlined joint efforts for acquiring secret information by extending the operational teams in the US, West Germany, Italy, France, Switzerland, and Japan. "In view of the difficult operational environment" for the KGB in Great Britain, the agreement stipulated that "more skilled" Bulgarian intelligence officers would be sent to that country at the request of the Soviet Union. The principal areas of interest were weapons of mass destruction,

the aerospace industry, nuclear energy plants, electronics, and "other scientific and technical achievements".[14] Following the agreement, the exchange of S&T intelligence increased visibly in the next two years [Doc. No. 4]. In 1975 and 1976, PGU-KGB chief Vladimir Kryuchkov as well as Andropov himself again expressed their gratitude for information received.

According to the next long-term agreement for the period 1975–80, collaboration between the two allied secret services in procuring military S&T intelligence included acquiring new information on US Trident nuclear submarines, Minuteman cruise missiles, the B-1 strategic bomber, and other items.[15] As a result, in the period 1976–8, the PGU-KGB's Directorate "T" sent 643 S&T intelligence references to Sofia, 313 of which were military-related. In 1976 and 1977, the Bulgarian Scientific Intelligence Department sent 463 classified references to Moscow, eight of which were assessed as "extremely valuable", 82 as "valuable'', and another 174 as "interesting information" [Doc. No. 5].

In particular, the newly accessible documentation of the PGU-DS 7th Department reveals quite intensive activity on the part of its very important agent, codenamed "Delon". In the early 1960s, he was appointed to the United Nations office in Geneva and initially maintained contacts with other Bulgarian foreign intelligence departments using the codename "Hamlet". Over the years, his career as a UN employee progressed well, and in 1972, he was transferred to the 7th Department. "Delon" continued to work for the Bulgarian intelligence service until his retirement in 1988, and after his death he left all his property in Switzerland to his own country. During the period 1973–4 alone, "Delon" sent to Sofia 1,209 pieces of S&T intelligence, 655 of which were passed on to the KGB. In 1976–7, 668 more documents from "Delon" were delivered to the KGB, 164 of which dealt with electronics. A report from the PGU 7th Department of 30 May 1978 emphasized that "Delon" had passed on 12 per cent more information in 1976–8 than in the period 1973–5. The Soviet experts assessed 3 per cent of that information as "extremely valuable", 28 per cent as "valuable", and 54 per cent as being of "information interest". Another report of 1979 revealed that in the meantime, the KGB had reassessed some more of "Delon's" documents as "extremely valuable" or "valuable".[16]

In the 1970s, the main priorities of the Bulgarian S&T intelligence service besides the "military field" were Western achievements in the so-called "new technologies" – microelectronics, biochemistry, pharmaceutics, etc. According to a summarized report from 1980, Bulgarian S&T intelligence-gathering had included a decade-long program called "Electronics-S" (1970–80), under which 487 comprehensive documents totaling 38,582 pages and 102 models and patterns of integrated circuits, data storage devices, and micro computers were obtained. The information contributed significantly to the development of electronic production at the first Bulgarian computing machinery company "IZOT" (established in 1968) and at the "DZU" factory for data storage devices (established in Stara Zagora in 1973), which became a leading source of new "Winchester" type hard and floppy memory discs for the Soviet bloc. During the implementation period of Program "Electronics-S" in the mid-1970s, there were 12 factories and research centers in operation in different parts of Bulgaria. The first 56 MB hard discs were obtained in 1975 from the US company Memorex, the next generation of 200 MB hard discs were bought in 1977 in Japan, and the 317 MB "Winchester" hard discs, produced by a leading US firm, were obtained in 1978, also via Japan.

From the beginning, the strategic guidance of the S&T intelligence services was supervised by an influential member of the Politburo of the CC BCP, who reported directly to Todor Zhivkov. From the mid 1960s to the early 1970s, the scientific intelligence activity was supervised by Prof. Ivan Popov, minister of Machinery Building and a Politburo member. In 1977, he was replaced by Ognyan Doynov, a CC BCP secretary and also a Politburo member. The most important and top-secret decisions regarding scientific intelligence were made personally by three Politburo members – Todor Zhivkov, Ognyan Doynov, and the interior minister, Dimitar Stoyanov. It was also during those years that a secret governmental resolution of 8 April 1975 established the first S&T intelligence joint venture firm registered abroad: INCO (INdustrial COoperation). Its primary goals were to facilitate the purchase of modern electronics and machinery equipment, which was subject to sales restrictions by the COCOM, from Austria, West Germany, and Great Britain. In 1973, the Bulgarian S&T intelligence service started the development of a "subsystem for scientific, technical, and economic information with limited

distribution". This subsystem was managed by a special Centre for Applied Information (TsPI), which worked under cover at the state Central Institute for Scientific and Technical Information (TsINTI).

On 30 October 1979, the Politburo of the CC BCP approved a secret decision to expand the 7th Department into the Directorate on Scientific and Technical Intelligence (DSTI)[17] at the DS First Main Directorate (PGU). The chief of the new directorate for the whole period of its existence (1980–90) was Gen. Georgi Manchev, who was promoted to Foreign Intelligence deputy chief. According to the Politburo decision, the DSTI's activity was under Zhivkov's personal control.[18] At the time of this transformation, the DSTI staff consisted of 98 officers. The Directorate had operational officers in 13 countries. For instance, 20 officers worked abroad on Program "Electronics-S". A top-secret resolution by the Politburo of the CC BCP of June 25th 1980 stipulated that the scientific intelligence personnel was to be increased by 95 new officers, 65 of which were designated for work abroad. The new Directorate was structured into five departments. Two were geographic (linear) departments: the first department covered the US and Canada, and the second department was responsible for Europe, Japan, and India. The third department coordinated the intelligence activity inside the country. The fourth department ("Information and Analyses") included the Centre for Applied Information, and the fifth department dealt with "embargo operations". The fifth department also controlled the work of the foreign trade firms INCO and Insist. Under the secret governmental order R-41 of 19 April 1983, INCO was ordered to establish branches in Vienna, Frankfurt, and Tokyo. At the end of the 1980s, Bulgarian S&T Intelligence registered the new firm Setron in Liechtenstein, which had a branch called DPA in Israel with the principal goal of circumventing COCOM export limitations. Finally, via a cover firm in Vienna, DSTI bought the British company Data Magnetics Ltd. In 1980, a special representative of KGB-PGU Directorate "T" was assigned to DSTI in Sofia. In the early 1980s, this position was held by Col. V. A. Zaytsev (1980–6), and in the last Cold War years by Col. V. G. Belyakov (1987–9).

In the late 1970s and early 1980s, more intensive bilateral and multilateral intelligence cooperation took place. The Soviet bloc's first multilateral meeting on S&T intelligence was held in Budapest in 1979, and the second one in Sofia in

October 1983. The Sofia meeting was attended not only by all Warsaw Pact members except Romania,[19], but also by intelligence delegations from Cuba and Vietnam. Regarding bilateral exchange, in the period 1978–9, the Bulgarian State Security service received 256 pieces of S&T information from East German foreign intelligence service (HVA), most of them rated "valuable". In 1980, DSTI sent 121 pieces of S&T information to its Hungarian counterpart. During the bilateral meetings in Havana in January 1981 and in Sofia in July 1981, the Cuban intelligence chiefs informed the Bulgarians that they had gained access to US technical documentation via their agents inside the Cuban emigré community, and from the territory of a "third country" (Mexico).[20]

However, in the early 1980s, the Eastern European scientific intelligence services suffered several failures with serious consequences. The most destructive of these was the so-called "Farewell" affair between 1979 and 1981, when former Directorate "T" officer Lt. Col. Vladimir Vetrov handed over to the French secret services the names of more than 250 KGB S&T personnel and about 50 other foreign agents and informers. In July 1981, French President François Mitterrand passed on this extremely sensitive intelligence information on Soviet S&T penetration to his US colleague Ronald Reagan during a NATO summit in Ottawa. Urgent US countermeasures were taken, including the signing of President Reagan's Executive Order No. 12333 of 4 December 1981, two categorical requests to expand COCOM's "List of Goods Controlled for Strategic Reasons and Subject to Embargo", and finally the National Security Decision Directives NSDD 66 of 13 November 1982 and NSDD 75 of 17 January 1983. The two presidential directives, in particular, called for "[a]n agreement to add critical technologies and equipment to the COCOM list" (NSDD 66) and advanced "controls on advanced technology and equipment beyond the expanded COCOM list" (NSDD 75)[21].

In June 1981, the FBI arrested one of the most successful Polish S&T intelligence officers, the president of the Polish American Machinery Company (POLAMCO), Marian Zacharski, described by the Western media as the "Silicon Valley Spy". In December of the same year, he was convicted and sentenced to life imprisonment. On 23 September 1983, during a secret meeting with a potential informer on US nuclear weapon systems in a small restaurant in New York,

Bulgarian S&T intelligence officer Penyu Kostadinov was arrested by FBI agents. Lt. Col. Kostadinov had been working undercover in the US posing as a deputy commerce counselor at the Bulgarian mission in New York. A month later, a physicist from Dresden was arrested in Boston. Alfred Zehe had been tasked by the East German HVA foreign intelligence service with examining new documentation on US submarine sonar technology.

In the following months, the Warsaw Pact intelligence services exchanged views on how to resolve those new issues. The Zacharski and Kostadinov cases were discussed during a visit of the Bulgarian intelligence chief, Gen. Vasil Kotsev, in Warsaw in September 1984. On 1 November 1984 in Moscow, the head of the Soviet intelligence service, Gen. Vladimir Kruychkov, informed Col. Dimo Stankov, the chief of PGU-DS 8th Department (Active Measures), that the previous day the KGB chairman, Victor Chebrikov, had noted that "we have two or three Jews in reserve, who could be suggested for exchange with P. Kostadinov".[22] However, during back-channel negotiations with the US authorities via the East German lawyer Wolfgang Vogel over the next few months, the Soviets refused to release Soviet dissident Anatoly Shcharansky.[23] Finally, on 11 June 1985, the biggest prisoner exchange in recent intelligence history was accomplished at the famous Glienecke Bridge in Berlin[24]. Marian Zacharski, Penyu Kostadinov, Alfred Zehe, and a KGB courier, Alice Michelson, were exchanged for 19 East German and six Polish "low-level" CIA agents. An interesting epilogue of the case was the unusually open Radio Address to the Nation delivered by Ronald Reagan "on Counterintelligence Activity", just two weeks after the swap in June 1985:

> "As the West pulled ahead, the Soviets embarked on a major effort to catch up by stealing or buying what they need from classified information on American satellites, reports on future weapon systems, including our combat aircraft bombers, to our most advanced technologies from high-tech areas like Silicon Valley in California […] We should begin by recognizing that spying is a fact of life and that all of us need to be better informed about the unchanging realities of the Soviet system […] Next, we need to reduce the size of the hostile intelligence threat we're up against in this country. Some 30 to 40 percent of the more than 2,500 Soviet-bloc officials in this country are known or suspected intelligence officers […] Now, we intend to take steps to accomplish this, and we need to better control foreign intelligence agents working at the U.N., who have utilized that organization as a spy nest."[25]

The collaboration and interaction between KGB and DS Scientific Intelligence became even more intensive in the mid-1980s. This trend is relatively well illustrated by some of the documents, included in the present collection [Doc. No. 8-12]. The results of the mutual exchange of S&T intelligence between Moscow and Sofia were highly appreciated by KGB chairman Victor Chebrikov during his talks with Bulgarian minister of the interior and Politburo member Dimitar Stoyanov in June 1985 in Moscow. At a meeting in Sofia in July 1988, the representatives of the PGU-KGB Directorate "T" especially highlighted the "extremely valuable" intelligence received by DSTI agents "Popov" and "Belov".[26] A year later, "Popov" was invited to Moscow to define his new, more important intelligence tasks.

Among the most important joint Soviet-Bulgarian S&T intelligence projects in the 1980s were the bilateral agreements for the construction of factories making high-tech automated flexible manufacturing systems (FMS) and disk memory storage devices on Soviet territory using the capabilities of the Bulgarian Scientific Intelligence Service and its cover foreign firms. The first Soviet requests on the matter were raised in 1981 by the Soviet Ministry of Radio Industry, and more followed after a visit by the future general secretary of the CPSU CC, Mikhail Gorbachev, to the leading Bulgarian data storage device company DZU in Stara Zagora in September 1984, just half a year before his election as leader of the USSR. The first project was codenamed "Don", an extension to the broader Soviet secret program "Amur". It envisaged the building of a factory for disc storage devices in the city of Penza, about 600km from Moscow. The equipment for that factory had been procured through a foreign branch of the Bulgarian S&T intelligence company INCO in Frankfurt. The next project, codenamed "Neva", started in 1987, aiming to secure the equipment for a larger Soviet factory in the city of Kostroma on the Volga River. The contractors from the Bulgarian side were the S&T intelligence companies Insist and Setron in collaboration with DZU in Stara Zagora (in 1987, DZU was transformed into economic group coordinating the activity of more than 30 smaller branches in the country). Bulgaria dropped out of the project in 1990, and when the factory was finally built in 1994, all of the constructions and equipment were totally outdated.

At the end of 1987, another episode created trouble for Todor Zhivkov in his personal relationship with Kremlin and forced him to remove Ognyan Doynov from his powerful positions. In the next two years, the supervisor's control over the Scientific Intelligence Service was assigned to another Communist party official, Andrey Lukanov, who became the

next prime minister of Bulgaria after the downfall of Zhivkov in November 1989. The replacement of Doynov was the result of an indirect request [following a "suggestion" by Gorbachev] from Moscow. Even during the Kremlin's Perestroika policy and the official rejection of the Brezhnev Doctrine at the end of the 1980s, Gorbachev personally "advised" his Bulgarian allies on several occasions not to follow the "pro-Western" course of too close cooperation with West Germany. A significant dialog took place in the Kremlin on 16 October 1987, when Gorbachev directly warned Zhivkov:

> "We have been informed that there are people in the immediate circle of comrade Todor Zhivkov who favor the transformation of Bulgaria into a "mini-FRG" […] Talks like these are worrying us. There are people with pro-Western orientation close to you. You should know that. There are people from your circle who believe that technologies from the FRG, from the West should be adopted. We find such talks, such orientation disturbing. And if there are people in your circle who even only dream of a "mini-FRG" and a "mini-Japan", you should not keep them close to yourself."[27]

The third – and last – multilateral meeting of the Soviet bloc S&T intelligence services was scheduled for May 1989; however, it was postponed to the end of June. This time, the meeting was attended not only by the Warsaw Pact countries, Cuba, and Vietnam, but also by a representative from Mongolia [Doc. No. 13]. The last ever bilateral meeting between the KGB-PGU Directorate "T" and DS-PGU DSTI representatives was held in Sofia from 23 to 26 October 1989. According to a report by DSTI Deputy Chief Col. Lyubcho Mihailov of 30 October, the two delegations discussed possible new opportunities for further joint interaction in the NATO countries and Israel. At the end of the working meeting in Sofia, a quite ambitious "table of mutual obligations" was agreed [Doc. No. 14]; however, it never came into effect.

Some analysts evaluating the Bulgarian scientific intelligence activity have voiced quite diverse and contradictory views about its effectiveness and results. It is useful also to cite some assessments of the opposite side, including the confidential hearings at the US Senate Select Committee on Intelligence. A special CIA research paper on "Soviet Bloc Computers" of June 1989[28] offers a detailed 50-page comparative analysis on the development of Warsaw Pact microelectronics. The CIA document underlines that within the COMECON market, Bulgaria had become the undisputed leader in the production of hard discs for memory storage; however, the

Bulgarians dropped behind the East Germans and the Czechs in PC production because they had not acquired the modern technologies of IBM-compatible computers until quite late. The CIA experts appraised three models of Bulgarian computers quite highly: The IZOT-1037, the IZOT-1832, and the Pravetz-16, based on IBM-8086 and 80286 processors.

During the second visit of US Deputy Secretary of State John Whitehead to Sofia in February 1988, he officially raised the question of terminating the Bulgarian scientific intelligence activities on US territory. Exactly three months after the so-called "palace coup" in Bulgaria on 10 November 1989, Bulgaria was visited for the first time by a US secretary of state. In his confidential talks with the new state leaders on 10 February 1990, James Baker directly requested the liquidation of the Bulgarian scientific intelligence services as a precondition for the development of US-Bulgarian relations. A few days later, Prime Minister Andrey Lukanov insisted that the foreign intelligence chiefs organize the termination of DSTI. When the Bulgarian National Intelligence Service (NRS) was reorganized in March 1990 and subordinated to the president of Bulgaria, the new structure did not include any unit or personnel to deal with S&T intelligence matters. A year and a half later, just two months before the collapse of the Soviet Union, the last two KGB official representatives in Sofia returned home.

1 Jeffrey Richelson, *Sword and Shield. The Soviet Intelligence and Security Apparatus*, Cambridge, MA: Ballinger Company, 1986, p. 204.

2 *ACDDAABCSSISBNA – R*, fond 9, inventory 2, file 813, p. 4. Zhivkov's words were quoted again by the chief of Bulgarian Foreign Intelligence (PGU-DS), Gen. Vasil Kotsev, in 1975 and by the chief of Political Counterintelligence (Sixth Directorate-DS), Gen. Petar Stoyanov, in 1978: *ACDDAABCSSISBNA – M*, fond 1, inventory 12, file 40, p. 16.

3 Those arguments were strongly emphasized during the interviews conducted by the author in April 2005 with Gen.-Major Todor Boyadzhiev, former head of S&T intelligence office in the US, deputy chief of Bulgarian Foreign Intelligence (1981-1990), and secretary general of the Ministry of the Interior (1990-1992).

4 Сергей Чертопруд, *Научно-техническая разведка от Ленина до Горбачева* (S&T Intelligence from Lenin to Gorbachev), Москва: Олма пресс, 2002; Леонид Млечин, *Служба внешней разведки* (Foreign Intelligence service), Москва: ЭКСМО, 2004; Дмитрий Прохоров, *Разведка от Сталина до Путина* (Foreign Intelligence from Stalin to Putin), Санкт Петербург: Нева, 2005; Александр Север, История КГБ (KGB History), Москва: Алгоритм, 2008.

5 *Разузнаването* (The Intelligence), Ed. by Todor Boyadzhiev, София: Труд, 2000; Огнян Дойнов, *Спомени* (Memoirs supplemented by Zoya Dimitrova), София: Труд, 2000; Димо Станков, *След дълго мълчание. 42 години в българското разузнаване* (After long silence. 42 years in the Bulgarian Intelligence), София: Христо Ботев, 2001; Коста Ананиев, *Външното разузнаване на България* (Bulgarian Foreign Intelligence), София: Колинс 5, 2008; Христо Христов, *Империята на задграничните фирми* (The Empire of the firms abroad), София: Сиела, 2009.

6 The documents received from Ministry of the Interior Secretariat, Collegium, and International Relations department were marked as Record Group "M", the documents from National Security Agency as Record Group "S", and those from National Intelligence Service as Record Group "R".

7 Йордан Баев, *КГБ в България. Сътрудничеството между съветските и българските тайни служби 1944-1991* (KGB in Bulgaria. Cooperation between Soviet and Bulgarian secret services), София: Военно издателство, 2009; *ДС и КГБ – връзки и зависимости 1950-1991* (KGB and Bulgarian State Security Service: Connections and Dependencies. Documentary Volume), София: МТ Студио, 2009.

8 See: Вячеслав Трубников /Ed./, *Очерки истории внешней разведки России*, т. 4, Москва: Международные отношения, 1999; John Haynes; Klehr Harvey, and Alexander Vassiliev: *Spies. The Rise and Fall of the KGB in America*, New Haven: Yale University Press, 2009.

9 The KGB Annual reports to CC CPSU were selected from the CPSU records in 1992 and stored at Fond 89 of the Russian State Archive for Contemporary History (RGANI) in Moscow. Microfilm copies can be viewed at the Manuscript Division of Library of Congress in Washington, D.C., and the Hoover Archives in Stanford, CA.

10 *ACDDAABCSSISBNA – M*, fond 1, inventory 1, file 1683, p. 2

11 *ACDDAABCSSISBNA – M*, fond 1, inventory 5, file 44, p. 14-15, 21.

12 Central State Archive (*CDA*), Sofia, Fond 1-B, Record 34, File 52, p. 92-93.

13 *ACDDAABCSSISBNA – M*, fond 1, inventory 10, file 35.

14 ACDDAABCSSISBNA – R, fond 9, inventory 2, file 816, p. 13-15; ACDDAABCSSISBNA – M, fond 1, inventory 13, file 10.

15 ACDDAABCSSISBNA – R, fond 9, inventory 3, file 435, p. 44-47.

16 ACDDAABCSSISBNA – R, fond 9, inventory 3, file 169, 171.

17 The abbreviation in Bulgarian was *UNTR* (Upravlenie Nauchno-Technichesko Razuznavane).

18 *CDA*, Fond 1-B, Record 66, File 2022, p. 3.

19 The intelligence exchange between Bulgaria and Romania was terminated under Soviet pressure in 1971. During one of the last bilateral discussions, the Romanian intelligence chief, Col. Dojcaru, informed his Bulgarian colleagues that his service was working actively on the "S&T line" in West Germany, France, Austria, and Italy - *ACDDAABCSSISBNA – M*, fond 1, inventory 10, file 447, p. 77.

20 *ACDDAABCSSISBNA – M*, fond 1, inventory 12, file 263, p. 169; file 352, p. 2; file 437, p. 42.

21 http://www.dod.gov/pubs/foi/reading_room/737.pdf, p.3

22 *ACDDAABCSSISBNA – R*, fond 9, inventory 4, file 663, p. 30.

23 Anatoly (Natan) Shcharansky was exchanged on 11 February 1986 for a Czech double agent working at the CIA, Karel Koecher, (a.k.a. Tulian), who was arrested with his wife Hana by FBI in November 1984. In the 1990s Scharansky was elected to the Israeli parliament (Knesset) and served as Israeli minister of the interior and deputy prime minister in the governments of Ehud Barak and Ariel Sharon (1999–2005).

24 "An East-West swap", *Time*, 24 June 1985.

25 *The Public Papers of President Ronald W. Reagan*. Ronald Reagan Presidential Library. archives/speeches/1985/62985a.htm (accessed on 25 October 2010)

26 ACDDAABCSSISBNA – R, fond 9, inventory 4, file 595.

27 CDA, Fond 1-B, Record 68, File 3272, p. 33-34. Published on the PHP website by Jordan Baev in the collection "The Irresistible Collapse of the Warsaw Pact : Documents from Bulgarian Archives, 1985-1991".

28 *Soviet Bloc Computers: Direct Descendants of Western Technology* SW 89-10023X 6/1/89.