Chapter Five

The Army Cryptographic Branch Expands in Every Aspect; Widespread Use of the KTB Technique; Participating in the Discharge of Duties in the New Stage of the Revolution (1955–1965)

The war of resistance against the French colonialist aggressors ended in victory. Along with the entire military, the army cryptographic branch entered a new period of development, a period of building a revolutionary army, advancing gradually, step by step, into becoming regular and modern. In accordance with duty requirements, during this period the army cryptographic branch had to ensure service to guidance and command in the new conditions according to modern operational procedures, while at the same time building the branch, to progress toward becoming regular, with respect to tight organization, advanced technique, and a strict and clear regimen for the cryptographic task.

In August 1956, the General Staff organized the eleventh army-wide conference of cryptographic cadre, aimed at thoroughly grasping the situation of the new mission and coming out with a course of action for building the branch in the coming stage. The conference came up with three principal duties, namely:

1. Continue in-service professional reeducation and arrange for training in classes of appropriate levels, aiming at raising professional ideology for cadre and personnel with love and dedication toward their duty responsibilities, while at the same time raising the level of technique and principles of employing technique in order to ensure the essence of the cryptographic task.

2. Apply the KTB technique throughout the army and raise the technical level to a modern standard, placing special importance on solving the problem of mixed key at a sound level of technical requirement, and defining tightly the principles for the use of technique, while, at the same time, researching and preparing types of technique for use in operations in accordance with the army's line of preparation for combat.

3. Build a system for the cryptographic task in all categories, and plan to bring about branch-wide unification in the [cryptographic] field, organizing a system of monitoring and tightly controlling the implementation.

Reviewing accomplishments in the two years, 1954 to 1956, the cryptographic organizations army-wide had ensured secrecy, accuracy, and speed for the contents of leadership, direction, and command vis-a-vis the responsibilities of implementing the cease-fire order; concentrating the army and regrouping in the North; taking over the capital of Hanoi; taking over the 300-day zone; countering forced evacuation to the South;wiping out bandits in the Northeast and Northwest; eliminating the enemy's stay-

behind reactionary gangs and the enemy commando-spies spread through the North; and implementing land reform throughout the North, etc.

In the 1956 army-wide conference of cryptographic cadre, Cde Hoang Van Thai, Deputy Chief of the General Staff, expressed his appreciation: "In fulfilling the heavy, difficult, and complex duties of our military and people, the army cryptographic branch has gone all out – its comrades are the people who have communicated secret instructions from Central and the Main Military Committee down to lower echelons and situation reports up from below, working so that these orders and instructions were fully comprehended, from South to North, over all the theaters. The extremely tense situation back then demanded timeliness by the hour – by the minute – and, first and foremost, to ensure absolute secrecy, and the comrades fulfilled that duty. Truly, the significance of that was extremely great."

From 1955 on, army cryptographic was realigned in accordance with the chain of command, from the MND-High Command down to the basic units. Many new cryptographic organizations in turn were established. Army cryptography expanded many times over, compared to the period of resistance against the French.[1] The General Staff Cryptographic Bureau proposed to appoint tens of cadre-in-charge and to supply hundreds of cryptographic cadre and personnel[2] in order to augment and strengthen the Military Region (quan khu-MR) and division cryptographic organizations, especially the newly established cryptographic organizations, such as the cryptographic sections of the 335th, 328th, 332nd, 330th, and 324th divisions;[3] the Western Mission group; the convalescence groups; the cryptographic mission teams with the Cease-fire Commission in the regions; the Cryptographic Section in the Directorate of Civil Aviation; MR 3, MR 4, MR Viet Bac, and Central Party Cryptographic; and supplementing the printing plant personnel. The adjusting and arranging of cadre-in-charge was reconciled with mission needs and level of ability of each person. The Cryptographic Bureau of the General Staff organized two additional sections, the Telegram Management Section and the Administrative Section.

As of the end of 1956, the system of organization of army cryptography comprised the Bureau of Cryptography of the General Staff as the lead professional organization of the branch, directly guiding the cryptographic task throughout the military. In the general directorates, MRs, divisions [su doan] and equivalent units, there was a Cryptographic Section. In regiments and small units there was a subsection or cryptographic team.[4] [This marks the 1955 change in terminology from the wartime term *dai doan* used in the preceding paragraph, to the conventional Vietnamese word for division, *su doan*, used hereafter. The change evidently was part of the "regularization and modernization" movement that also introduced rank and insignia and resulted in divisions of three infantry and one artillery regiments plus supporting battalions and companies. – Tr./Ed.]

Each year the Army Cryptographic School's classes training personnel enrolled more than the year before, students going about their studies enthusiastically and with a sense of urgency. In 1955, ninety comrades were trained; in 1957, a class of ninety-two comrades; in 1959, 307 comrades; and 143 comrades in 1960. School graduates were

supplied as augmentees to bring unit organization and numbers up to strength army-wide. "An army proceeding to regularize and modernize is in much need of cryptography--needs many additional, skillful cryptographic personnel: even with machines there must still be people, people with a solid political stance, high class-ideals, skilled in technique, with a sense of dedication and endurance in performing the task of encrypting and decrypting."[5]

In order to improve the quality in the ranks of cadre and personnel, and to bring the organization up to strength, the branch opened many professional reeducation classes. In the year 1954–1955 there were 358 instances in which cadre and personnel took part in in-service professional reeducation and 245 comrades who took professional refreshers in school.

In 1956 the cryptographic branch organized professional refresher classes, one class for thirty-five comrades previously assigned in Intersector 5, one class for forty-five comrades previously assigned in Nam Bo, one for thirty-three cadre and personnel in various odd stations and nets, and one for KTB refresher and culture for seventy-five comrades.

Also that year, army cryptographic branch soldiers and cadre studied professional politics, task arrangement, and work style of cryptographic cadre and personnel.

Through study, criticism, and self-criticism, each cadre and person grasped thoroughly and profoundly their revolutionary responsibility and the responsibility of the army in the new phase, constantly displaying alertness and a willingness to fight on the front of keeping command secrecy through cryptography, opposing the enemy's schemes for collecting information through cryptanalysis, implementing regulations and speciality knowledge.

Understanding the three principles of cryptographic technique and general methods of applying the relationship of secrecy, swiftness, and accuracy, cadre and soldiers of the army cryptographic branch gradually overcame unsound perceptions and thoughts, calm and content in the task, prepared to carry out the responsibilities they had been given.

ESTABLISHING THE CRYPTOGRAPHIC SECTION OF CENTRAL AND THE CENTRAL PARTY SECRETARIAT, PROMULGATING TASK REGULATIONS FOR THE VIETNAMESE CRYPTOGRAPHIC BRANCH

On 21 July 1956 the Central Party Secretariat issued Decree No. 10-NQ/TW[6] establishing the Central Cryptographic Section, with these responsibilities:

- To help the Central Party research, oversee, and lead the cryptographic task in the regions and branches.
- To make plans for cryptographic assignments and oversee and guide the execution of the plans of assignment.

- To research and oversee the cadre and personnel situation, and to look after the matter of raising the political, cultural, and professional levels of the cadre and personnel.
- To be directly involved in assisting the cryptographic organizations of Party, government, and army at Central with respect to the profession and the problems deriving from the principles and regulations of the cryptographic task.
- To be directly involved in research and production of cryptographic systems for the branches and organizations of the Party, the government, and the army, guiding and assisting the cryptographic organizations in executing the work of selecting, developing, and refreshing the cadre and personnel.
- To research and propose to Central the promotion, appointment, and branch transfer of cadre and personnel.
- To inspect the implementation of the cryptographic regulations in the regions and branches.
- To report to Central concerning the task of Central cryptographic organizations and the situation of the cryptographic task in the regions and branches, etc.

The Central Cryptographic Section was placed under the direction of Central, under the direct charge of Cde Hoang Anh, committee member of the Central Party.

As for cadre in the Central Cryptographic Section, the Secretariat (Ban bi thu) decided as follows:

Cde Le Thanh Hai, Chief of the General Staff Cryptographic Bureau, was to be acting chief of the Central Cryptographic Section.

Cde Nguyen Manh Hoan, Chief of the Cryptographic Bureau of the Central Party Secretariat [Van Phong], was to be deputy chief of the Central Cryptographic Section.

After the August Revolution, the cryptographic branch of the army, the cryptographic branch of the Party and government, and the Public Security cryptographic branch were established in turn to serve the leadership and direction of the Party and government and the command of the army by means of cryptographic technique via communications means. In the course of building and working, the cryptographic branches had cooperated in helping one another in various aspects: cadre and personnel, cryptographic material, and professionalism, concerning technique and task experiences. The army cryptographic branch especially contributed positively in the building of the ranks of cadre and personnel and the routinizing of the technique task and professionalism of the fellow branches, until there came about unified directives concerning professional technique from the Central Cryptographic Section, opening up conditions for building the branch in the new stage.

On 17 December 1956, Cde Chief of the General Staff issued Decision No. 676/G8-TC detaching the Research Section and the Printing Plant of the General Staff Cryptographic Bureau to the Central Cryptographic Section.

Based on the nature of the cryptographic task and mission, in order to guarantee the unification and concentration of direction and ensure the secret tasks of Party and nation, on 20 November 1958 the Central Party Secretariat issued Circular #178-TT/TW, promulgating the "Task Regulations for the Cryptographic Branch" in order to bring about unification in the branches using cryptography nationwide.

These task regulations comprised nine chapters, ninety-six sections, which clearly defined the mission essentials of the cryptographic branch, general principles, principles of organization; regulations for cadre and personnel; regulations for technique research and allocating the use of techniques; regulations for encrypting and decrypting; regulations for electrical transmissions; and regulations for inspection and responsibilities of executive committees and chiefs of organizations (units) using cryptography or relating to the cryptographic task.

After getting the task regulations, the army cryptographic branch made a plan of study for cryptographic cadre and personnel army-wide, aimed at thorough comprehension of the objectives and meaning of the promulgation of the task regulations and to discuss ways in which to implement seriously and strictly the principles and definitions of these task regulations.

Based upon the Party's guidelines for strengthening organization in order to ensure the successful realization of every respect of the concrete guidance for the cryptographic task throughout the nation, and in accordance with a decision of the Main Military Committee and Central Cryptographic Section, the Central Party Secretariat [Ban bi thu] resolved to delegate to the Main Military Committee helping Central guide every aspect of the cryptographic task nationwide and to closely administer the cryptographic organizations of central.

Cde Hoang Van Thai, member of the Main Military Committee and deputy chief of the PAVN General Staff, was assigned by the Main Military Committee the responsibility of providing guidance to the Vietnamese cryptographic branch.

"The Cryptographic Section of Central and the Cryptographic Branch of the General Staff are united in producing an organization to guide the cryptographic task, with the mission of assisting Central and the Main Military Committee via the cryptographic bureau of the Central Secretariat and the Cryptographic Bureau of the Ministry of Public Security Secretariat in order to guide the cryptographic task of the Party and the government and to directly guide the cryptographic task of the army."[7]

Thus it was that the professional organizations of the Cryptographic Bureau of the General Staff had to carry out responsibilities vis-a-vis the army cryptographic branch while helping the Cryptographic Section of Central carry out responsibilities vis-a-vis the cryptographic branch of Viet Nam.

On 24 January 1959, the Naval Directorate established the Naval Directorate Cryptographic Section[8] under Cde LTjg [thuong uy] Vu Bao Phong, a comrade deputy section chief, and five cadre and personnel directly subordinate as Cryptographic of Base 1,

Base 2, Cryptographic of the school, and of a number of boat units and islands under construction.

The Navy's responsibility for action is on the battlefield of river and sea. The requirements of leadership and command are very broad and increase daily; the means of liaison in use is essentially by radio. The system of cryptographic organization expands down to unit level, in accordance with requirements for expansion and growth on the part of the naval forces.

On 10 March the Cryptographic Team of Group 130 was formed;[9] on 22 December 1959 the Cryptographic Team of Group 135 was formed. In April 1960, Naval Directorate Cryptography was augmented by fifty cadre and personnel. Afterward the Navy accepted from MR Left Bank and MR 4 the transfer of the system of the string of islands--Long Chau, Cat Ba, Co To, Vinh Thuc, Hon Ngu, Hon Mat, Hon La, and Mui Si. The number of naval cryptographic cadre and personnel rose to nearly 150 comrades.

In March 1959, Cryptographic of the Armed Public Security [Forces] was established. The Main Military Committee and the General Staff entrusted the Central Cryptographic Section and the Cryptographic Bureau of the General Staff with responsibility for building a system of organization and cryptographic-liaison network for Armed Public Security from HQ down to border defense sectors, isolated posts, maritime units, etc.

Initially, sixteen army cryptographic cadre of MR Viet Bac, Northwest, Left Bank, MR 4, divisions 350, 316, etc., were posted to Armed Public Security. Cde 1st Lt Hoang Quyen was decided upon as chief of the Armed Public Security Cryptographic Section. From the end of March 1959, the forces and cryptographic organizations of Armed Public Security took shape in the critical localities.[10]

In order to serve direction and command of the military transportation group supporting the South, in May 1959 the Cryptographic Section of Group 559 was established. Cde Nguyen Duc Mai, in charge of the Cryptographic Section of Group 559, received the mission of building the cryptographic organization of the Truong Son ["Ho Chi Minh Trail"] troops.

Afterward, in September 1959, the cryptographic system [he thong] of Group 959 was expanded, the section chief being Cde Nguyen Ba Dzung. This group was responsible for organizing cryptographic liaison to serve the internal situation of the Specialists Group [doan chuyen gia] and our Volunteer Army fighting on the soil of our friends, while organizing and maintaining cryptographic liaison between the Group and the General Staff and liaison down to the Vietnamese specialist teams in the friends' provinces and districts, and to organize classes to train cryptographic cadre and personnel for the friendly Lao nation, and to help the friends in this task.

In 1959 the army cryptographic branch appointed in turn 279 cadre and personnel to open many additional cryptographic liaison nets for these units: cryptonet of Group 800,[11] cryptonet for Group 301,[12] organizing [cryptography] additionally for Air Defense HQ at ten radio stations subordinate to the 260th Regiment, 10th Regiment and newly

established 280th Regiment, four stations of MR 4,[13] four stations of MR Left Bank,[14] two Thanh Hoa border defense stations,[15] four stations of MR Northwest,[16] eight stations for the Intelligence Directorate [Cuc Tinh bao], one station for the Air Force Directorate,[17] and again organized a bandit elimination net in Ha Giang [Province] of MR Viet Bac.[18]

On 20 August 1960, the Cryptographic Sub-Section of the 202nd Tank Regiment was established, afterward expanded to become the Cryptographic Section of the Armored branch. Cde Khong Trieu was designated section chief.

While continually preparing to serve the forces, the army cryptographic branch was also training to change over to new technique and ensuring the training of a line-up of cadre and personnel for the party and Government cryptographic branch. The Army Cryptographic School successively organized many different classes of instruction. These were refresher courses in changing from the use of KTA to KTB, combining the raising of the cultural level, for forty-five comrades, training four new classes, a class of thirty-five comrades for Party-Government Cryptographic, a class of sixty-nine especially for Armed Public Security, and two classes for the army.[19]

Compared to 1958, in 1959, army-wide, there were an additional sixty-six units using cryptography.

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In 1955 the Cryptographic Bureau had a plan to provide guidance and expand the replacement of the cryptographic system army-wide, replacing [with] system KTB in the divisions [dai doan] and independent regiments, researching a system for the international net, researching a system for the Intersector and division nets, for units directly subordinate to HQ, the General Directorate of Supply, military intelligence [quan bao],and various odd nets, such as the Graves Registration Committee, Consultation X, and the HQ delegation group in Saigon.

The direction of the mission for the technical task of the branch was to change the direction for use of the KTB dictionary code from one-part [lit., half-mixed] to two-part [lit., completely mixed], especially in the divisions and main force units, implementing the use of KTB broadly at sector level. KTA was to be improved to serve basic units and directly subordinate branches.

Code books [lit., "cryptographic dictionaries"] are constructed as either one-part or as two-part, raising the degree of security and creating conditions for ease of production and use. The contents of the code books gradually became perfected, suitable to the vocabulary of leadership, guidance, and command of the High Command and of every organization and unit.

The Hoa Binh [PEACE] system had more advanced construction--from the end of 1955 until the beginning of 1956, it was put into use between HQ and the MRs, for main force

units and the Cease Fire [Commission]. The Dzan Chu [DEMOCRACY] System and the Doc Lap [INDEPENDENCE] System were constructed according to the half-order principle [nguyen tac nua thu tu].

Random [loan] key also began to be researched and produced to achieve a high level of security.

Cryptographic security consciousness in production, allocation, maintenance, and use was also increased. Concerning technique KTA, the number of "compound words" in the code charts was expanded to enrich the content of the system. The structure of the key strips was unified and strict usage determined, overcoming part of the weaknesses of the KTA technique.

Regulations for use, mainly [cryptographic] key regulations, were improved, cancelling some complicated regulations that were not indispensable but were still ensuring secrecy. It can be said that this was a time in which the level of technique KTA to ensure secrecy, accuracy, and speed reached its peak.

With the above advancements, the types of cryptographic techniques met the requirements of handiness in use and protection of secrecy, faced with the increase in activities by the enemy to collect information through cryptanalysis. The army cryptographic branch elevated its technique exactly according to instructions from the Main Military Committee and the General Staff.

Moving into 1956, the system of use of technique KTB started to expand, from MR nets to regiments directly subordinate to the MR's, main force units, airfields, etc. – 14,352 sets of types KTA and KTB were produced in one year.

To implement the line of changing the technique, in 1957 many refresher classes in the new KTB technique were organized at HQ and in the MRs: two refresher classes in changing from technique KTA to KTB for 180 comrades; short, day refresher classes on changing technique in MR 4, MR Left Bank, and MR Viet Bac were undertaken by MR cryptographic sections while keeping quality relatively high and strictly implementing the content of HQ's plan.

Also in 1957 there were 170 comrades (mostly new graduates from school) sent by the Cryptographic Bureau to augment the units and MRs in expanding the changeover in technique. By the end of the year, more than 100 comrades had completed study of KTB and gone back to replace comrades using KTA so the latter could go to school for KTB training.

By the end of 1957 army-wide liaison nets (including internal MR nets) were using KTB, a major advance in the technique of the army cryptographic branch.

Also after 1957 the army cryptographic branch did not work on research into technique KTA, but concentrated on research and development and raising the level and productivity of technique KTB. All three components of this form of technique – codebook, random key, and principles of use – were considered. The content of the codebooks was

made "richer," and as a result, more closely aligned with the command vocabulary particular to each unit. Random key was researched and produced according to new formulas and methods to attain a reliable level of security. Principles for use were closely defined. The "superenciphered, random numbers chart system," the "superenciphered, random numbers handbook," the walkie-talkie system, etc., were researched and began to be put into use, with results that built-up feelings of elation and enthusiasm on the part of cadre and personnel.

In 1957 the branch's printing plant received much additional equipment: a printing press, paper cutting machine, serrating machine, automatic type setter, etc., so the matter of printing was more favorable.

In 1958 the plant produced sixty-three types of the KTA and KTB systems, with tens of thousands of sets supplied to the army cryptographic, the Party, Government, and Public Security, comprising eight type-KTB two-part, eight telephone codes, ten codes for secret letters [mat thu], and eleven of the one-part type. KTA comprised sixteen of the spell-chart type, twenty-four specially made for cadre in independent action, two for Central for point-to-point liaison with two places. Production and distribution for the units was 1,777 sets of key of various types (army, 1,410 sets; cryptographic of the Central Secretariat, 269 sets; and Ministry of Public Security Cryptographic, 98 sets).

In 1959, the Techniques Research Section had completed research on ten new dictionary-type codes for the liaison nets of the army, intelligence [tinh bao], Party and Government, including a type of system used for liaison between Sector 5 and Nam Bo, researched eleven thin dictionary-type systems for the special liaison nets, with two systems for Group 301, three types for the Armed Public Security, Navy, and Air Defense border posts and observation stations, and one type of system for Group 959.

In addition, the army cryptographic branch made three more types of operations code [mat ngu] of the A-code form for the air defense observation stations and command cadre use (not embraced in the cryptographic system [he thong]).

In the use of the technique: Ensuring 100 percent accuracy in encryption and decryption was laid out as an essential requirement in overcoming adverse influences on guidance and command. The decisive attitude in the branch was that there could be no cessation in elevating the level of productivity above the basic 100 percent accuracy insurance, and that, above all, was the matter of ensuring secrecy. The entire branch was determined to strive to achieve the norm in real-life practice, not to have to reencrypt messages, not to garble the contents of secret messages so as to impact adversely on command. In training and practice, we had to carry out 100 percent accuracy in encryption and decryption. And we wanted to achieve that besides raising the sense of responsibility while still having to carry out precisely the practices and rules of encrypting and decrypting and checking thoughtfully after encrypting and decrypting.

The training task is always the most important task. The annual, quarterly, and monthly training plans became more adequate and more suitable every day. Training and study gradually became a mass movement. Voluntarily and enthusiastically, cadre and

personnel participated in study of politics, military [matters], culture, technique, and professional [duties]. The results enthusiastically aroused the cryptographic cadre and personnel of the entire army to strive harder, to advance more each year than the year before. Many new records were set; the number of people achieving the norm gradually increased.

In 1955 the average productivity branch-wide in encrypting and decrypting with technique KTB was 350 groups per hour with an accuracy of 99 percent, with the 325th Division Cryptographic surpassing the entire branch with an average of 500 groups/hour.

Many individuals attained the record in productivity and accuracy. Cde Dinh Van An, a 325th Division cryptographer, encrypted 520 gps/hr and decrypted 758 gps/hr, with an accuracy of 99.50 percent. Cde Vu Hai,General Staff Cryptographic Bureau, encrypted 500 gps/hr and decrypted 700 gps/hr regularly, ensuring accuracy at 100 percent.

Average productivity in the branch, vis-a-vis technique KTA, was rather high: 320 gps/hr, 99 percent accuracy.

As a result of doing a good job with the ideological task, army cryptographic cadre and personnel clearly received the place and role of responsibility of party members performing the cryptographic task, and the ideology of never being content if the cryptographic task slipped a notch.

By the end of 1959 average productivity in encrypting and decrypting by the cryppies was 356 gps/hr vis-a-vis the nets using technique KTB.

The grand total of messages encrypted and decrypted by the units army-wide during the year was 271,436 official messages.[20]

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Simultaneously with the strengthening of organization and the raising of technique, in two years (1954-1956) the army cryptographic branch carried out reorganization and getting the professional task on the right track. The internal regulations for the task promulgated and implemented from the tenth army-wide conference of cryptographic cadre in October 1954 were built upon to produce provisional task regulations and initially brought into play effectively. Cadre and personnel clearly sensed that "work style is a manifestation of one's ideology and service role – good work style is a concrete manifestation of the implementation of the task regulations."[21]

By mid-year 1955, the research, production, and allocation of cryptographic technique was unified and consolidated in the Cryptographic Bureau of the General Staff. Implementing decisions concerning the collecting of statistics, oversight, maintenance, use, retrieving and destroying by burning the various types of cryptographic systems, and

the implementation of regulations and procedures for encrypting and decrypting messages became tighter, stricter, and more serious.

Cases of violating principles, such as using the same key for encrypting and decrypting, diminished. "Checking" after encrypting and decrypting was implemented, thus promptly detecting and correcting mistakes in work style and technique. The implementation of message regulations also clearly evolved in the cryptographic organizations as in the command organizations. The sense of vigilance on the part of cryptographic cadre and personnel was raised in activities and social relations.

Cryptographic organizations at the various levels were aware that "Because of the nature of the technical and professional task of the branch with respect to the content of the task, principally concerning the technical aspect, there is a close relationship from top to bottom and a ripple effect throughout the whole branch. One mistake, large or small, on the part of one unit or one region, with respect to technique, work style, or regulations can have adverse repercussions for the whole branch. One initiative, one experience of this unit can be applied to advantage by another unit and the whole branch";[22] therefore, there was an increase in the task of professional guidance by means of concrete measures. Cryptographic organizations above kept in close touch with cryptographic organizations below to aid them in building and the task of advancement; cryptographic organizations below did a good job of routine reporting to seek opinions and help from cryptographic organizations above, enabling them to grasp the situation thoroughly and more accurately, thus making guidance more to the point, and feelings of unity and affection in the branch became more pronounced, increasing additionally the power to fulfill the shared mission of the branch.

Each relationship between the cryptographic organizations at the various levels with unit commanders, operations organizations, and communications also became closer each day, so the organization to ensure command secrecy by cryptographic technique over the various means of communication made much progress.

For the years of building and working under peacetime conditions in a completely liberated North, the army cryptographic branch "fully completed its responsibilities in face of the historic situation . . . it absolutely contributed certain accomplishments and made clear progress."[23]

Aside from the accomplishments and gains, the army cryptographic branch still had shortcomings and limits in the results of the task and in the building of the branch. In the task of cadre organization, the branch had not yet fully grasped and correctly applied the Party's viewpoint concerning cadre policy, and with realignment and strengthening of organization, therefore, we had many cadre and personnel who, through training, were tested and stored up many experiences in the professional and technical tasks, so that, depending upon cryptographic task conditions, they could be transferred to other tasks or demobilized and discharged. As for the old cadre, the comprehensive upgrading had not yet been truly a matter of concern, so there were adverse influences on development with respect to branch organization and technique.

In January 1959, the fifteenth congress of the Party Executive Committee decreed: Except for the revolutionary path, the people of the South have no other road to escape the yoke of slavery, "the basis for development of the revolution in the South is the use of violence."

Central Party also decided "to liberate the South, to escape from the domination of imperialism and feudalism and bring about the independence of the race and give fields to the plowmen, completing the people's democratic racial revolution in the South."

The resolution pointed out the direction for building for combat on the part of the people's armed forces, creating conditions for our troops to have additional time and initiative to prepare in every respect, making ready to respond to the developing requirements of the revolution.

From the troop movement and regroupment until 1956, of the number of Cryptographic cadre and personnel remaining in the South most had been transferred to other assignments. A few continued the use of cryptography for the secret "white letter" [bach thu - open mail?] liaison line in order to ensure contact between the Nam Bo Regional Committee (Xu uy Nam Bo) with the various places and with Central.

After having the resolutions of the fifteenth [congress], implementing instructions from above, the cryptographic branch implemented the building of cryptographic organization in the armed forces in the South, so as to ensure command from Central and a cryptographic liaison net over the entire South. The Central Cryptographic Section and the General Staff Cryptographic Bureau assembled cadre and personnel who were native to the South and regrouped in the North, and built them up in every respect, preparing them to be ready to return to the South on assignment. The comrades who received this important mission and honor were very enthusiastic and proud of the trust of the Party and army, eager to study and thoroughly comprehend the way, the revolutionary mission, to grasp the technique. Early in September 1959, Cdes Tung and Pho went with a cadre group down to Sector 5. Starting out from Relay Station 354 by automobile, they arrived on the north side of the Ben Hai river, then continued on foot. After nearly two months of climbing mountain passes and fording streams, on the march during the day, resting at night and encrypting and decrypting contacts with HQ, the comrades arrived at the Sector 5 Sector Committee at the end of October. During this time many cryptographic cadre and personnel went down south along with groups of Party cadre, leadership cadre, and army cadre, going down to perform their missions in the South.

Even though distant from Central's professional guidance, the cryptographic cadre and personnel in the South overcame so many difficulties and hardships in order to serve, bringing up a spirit of industry, self-reliance, economizing with every scrap of paper, every drop of ink, etc.

ESTABLISHMENT OF THE DIRECTORATE OF ARMY CRYPTOGRAPHY

In the years of peacetime activity, under the guidance of the Main Military Committee, the Ministry of National Defense, and the General Staff, the army cryptographic branch had new progressive developments.

From 1954 to 1960, the number of points in contact increased sixfold, the volume of messages encrypted and decrypted increased fivefold; the ranks of cadre and personnel never ceased to grow stronger in terms of quantity and quality. Almost all cadre and soldiers were party members of the Vietnamese Lao Dong Party. The army cryptographic cadre and personnel comprised nearly 70 percent of the total cryptographic cadre and personnel nationwide and more than 60 percent of the units nationwide having cryptographic liaison.

The task of research to develop the science of cryptographic technique and to produce professional technical means of ensuring the secrecy of command loomed large, in order to counter the enemy's cryptanalytic tricks and schemes. The need to produce the types of systems, cryptographic key and other materials, along with the distribution of guidance on usage throughout the military increased from day one. The system of cryptographic organization in the MRs, services [quan chung], and branches [binh chung], and that of Armed Public Security cryptography was brought up to strength and expanded very rapidly.

Faced with these urgent needs, in March 1961 the Ministry of National Defense decided to transform the General Staff Cryptographic Bureau into the General Staff Directorate of Cryptography. Organizations of the Cryptographic Directorate were brought up to strength with respect to responsibilities, mission, and tables of organization. Cde Le Thanh Hai was appointed chief of the Directorate, with Cde Nguyen Dzuy Phe as deputy. Organization of the Directorate and units directly subordinate comprised

- The Bureau of Cadre Organization, under Cde Nguyen Chanh Can,
- The Bureau of Technique Research, under Cde Le Van Bang,
- The Bureau of Message Encrypting and Decrypting, under Cde Luong Van Tin,
- The Army Cryptographic School, with Cde Pham Tu Cap as commandant,
- The Printing Plant, with Cde Chu Van Hoan as director.

Thoroughly grasping the mission of building the ranks of army cadre and the realities of the cryptographic branch, the Cryptographic Directorate worked with the Directorate of Military Personnel to prepare cryptographic tables of organization for the MRs, services and branches.

The Directorate decided that, in order to resolve long-standing deficiencies in manning, units having missions in Theater of War C [Laos], such as MR Northwest, the 351st Division, the 367th Division, etc., would receive supplemental personnel.

Of the students who were graduated from the training class at the Army Cryptographic School, ninety-three comrade personnel were allocated to units in the North: Air Defense, Air Force, Navy, Engineers, Artillery, MR Left Bank, MR Right Bank, MR Viet Bac,MR 4, and units directly subordinate to HQ. The organization of a reserve element of the Directorate, comprising thirty-six people (thirty-three of them noncommissioned officers), among them newly graduated students from the school, was prepared to augment the units, doing work that had just popped up or replacing cadre and personnel in units with people off studying in professional refresher courses. Because of the reserve forces, the Directorate was able to augment on a timely basis and serve the campaigns well.

The printing plant also selected an additional number of comrades, among them a number of soldiers who had completed their military service in the units, in order to ensure production of [cryptographic] materials. In the first six months of 1962, the printing plant of the Cryptographic Directorate exceeded the planned production by 9.5 percent for cryptographic systems and professional papers.

The task of serving the assistance planned for the South was carried out zealously. After reexamining the situation involving the groups on operations and the means of professional [cryptographic] materials that had been sent to the South, the Directorate issued a communique to Central Office cryptographic concerning the situation of augmenting cadre and personnel up to that time, after which they implemented a summarization of the cryptographic task of ensuring service to Theater of War B [South Viet Nam]. From the middle of 1961 to April 1962, Northern Cryptographic assisted the Southern theater of war with 287 comrades, among them 118 people for Nam Bo cryptographic, 90 for Sector 5 cryptographic, 41 for Sector 6, 56 for Intelligence [tinh bao],12 for [Quang] Tri- [Thua] Thien, and 17 for Group 559.

After an army-wide cryptographic professional conference (in 1961), the Directorate corrected the documents and guidance for concrete implementation of the contents of conference resolutions and conveyed this down to the units. Vis-a-vis the large units, the Directorate sent cadre down to publicize this in person.

So as not to flag in efforts to raise the level of cryptographic cadre and personnel, the Directorate issued guidance and made plans for units such as the Navy Cryptographic Section, the cryptographic sections of the Left Bank and Right Bank MRs, the Cryptographic Section of the 367th Air Defense Group, and the Cryptographic Section of Armed Public Security to start professional training classes.

The Army Cryptographic School essentially trained personnel for the military regions and divisions. The classes achieved lofty results in practice, with respect to productivity and degree of accuracy, the highest productivity in encrypting being 225 gps/hr by book code and 331 gps/hr by chart code. For decrypting, the highest was 321 gps/hr by book code and 382 gps/hr by chart code.

The training classes for Theater of War B also achieved good results. One class of forty people was especially for Military Intelligence, two classes of eighty-seven and sixty-one

people for Sector 5 and the Highlands, and a cryptographic organization from Sector 6 to go back down south.

Harking back to the South of their birth, cryptographic warriors trained, studied their specialty and studied politics day and night, patiently enduring military studies, enduring realistic training, training in carrying heavy loads over a long distance, preparing to go down the Ho Chi Minh trail into the South to strike America.

The Techniques Research Bureau in the first six months of 1962 completed research on five types of systems for the Central Office, nineteen for the services and branches in the North, ten for preparing assistance for the units in the South and six types for units in different theaters. An element of Research Bureau cadre finished 30,000 units of key of various types and analyzed and rechecked it for accuracy prior to putting it into use. Besides all of this, cryptographic key models of the five- and ten-column type were modified.

As for the task of instruction in use, the functional organizations of the Directorate issued cryptographic key and replaced cryptographic systems for many units, with 2,956 sets of cryptographic key used for the lateral contact form, skip-echelon contact, and combined operations contact, issuing thirty-two types of systems, consisting of 759 sets, promptly ensuring the requirements of the units (the campaign liaison net).

At the beginning of 1962, the Directorate organized a summarization of the situation of rectifying technique and ensuring cryptographic secrecy throughout the nation. Through this would come a standard for equipping cryptography at the various levels.

Also during the year the Directorate organized an inspection group at the cryptographic work places of a number of units (MR 4, comprising MR HQ Cryptographic, Cryptographic of the 325th and 341st Divisions, and Armed Public Security Cryptographic in Vinh Linh, Quang Binh, and Nghe An). Directorate cadre went down to basic units to inspect the management of technique and grasp the materials of the liaison nets of the 305th Division and of MR Northwest (comprising the 316th and 335th Divisions). Through inspection, the Directorate could clearly see the situation involving the cryptographic task, with respect to staffing, organization, ratio of cadre to personnel, and the concrete regulations covering cryptographers on the job (both from the standpoint of material and spirit). Also through inspection cryptographic cadre achieved a meeting of the mind with unit commanders and cryptographic sections concerning the relational task involving command guidance and service organizations, producing improvements.

In the Message Encrypting and Decrypting Bureau, the liaison net was arranged on a wide sphere with many elements, consisting of units having responsibilities within the nation and others having international responsibilities, among these units relatively fixed and units continuously on the move.

In 1962 the number of places in liaison with the bureau was 112; in 1965 it was up to 370. With the increase in number, the bureau still grasped thoroughly the principles of arranging contact and the professional equipment to ensure the work of encrypting and

decrypting with the units. Besides the system [he thong] of cryptography used for regular communication, there was a system of cryptography that anticipated a situation of sudden expansion in order to serve joint liaison, be in reserve, or be used for special nets. Never letting up in doing a good job of performing the principal mission of encrypting and decrypting, the bureau still did a good job of performing the tasks of receiving and transferring, arranging, collecting statistics, logging, extracting and closely following the situation involving usage, and the concrete requirements of each unit in the theater, giving timely help to the Directorate in guiding the task of cryptographic technique usage.

As the center for connectivity – for accepting and forwarding contact with the units, services, and branches throughout the army, many points consolidated and the liaison net expanded – it was usually not fixed; in 1965 alone the bureau used fifty-five types of systems to encrypt and decrypt 105,846 secret messages of 8,933,449 groups without any major error adversely influencing upper echelon guidance.

Thoroughly grasping the Party's 1961–1965 resolution on the military mission and the second five-year military plan, resolution #60/NQ-TW, 17 November 1962, from the Central Secretariat realigned the organization of the Central Cryptographic Section and the cryptographic organizations of the Party, the administration, and the army branches, the army cryptographic branch having to step up its task of strengthening and expanding the system of organization in the North, while at the same time building the system of organization in the South so as to satisfy every requirement of leadership and command by means of cryptography.

The system of organization of the army cryptographic branch expanded all over the two areas, South and North, as well as the Laotian theater. In the North, the army cryptographic system expanded an additional step. From 1963, the Cryptographic Sections in the military regions, arms and General Directorate organizations, and equivalent units were brought up to strength and turned into cryptographic Bureaus, directly subordinate to the staffs [Bo Tham Muu].

After the establishment of the Air Defense-Air Force service [quan chung] in October 1963 the service's Cryptographic Bureau was established, comprising the cryptographic organizations of the air defense, air force,and radar branches [binh chung]. Cde Pham Dzuong was appointed bureau chief. Based on the organization of forces of the service and the basic operational plan, the Cryptographic Bureau organized a cryptographic liaison net in the entire service and joint liaison with friendly units.

The Air Force cryptographic net was arranged according to the command system in the lines of airfields, comprising the system of permanent airfields (first line airfields from that class up), the system of reserve airfields, and the system of field [da chien] airfields. Following conditions and realities of combat service, the cryptographic nets were officially arranged in the permanent airfield system and the reserve airfield system,while for the field airfield system, its cryptographic net was arranged according to the mobile radio station model, according to the mission requirements of each battle for specific arrangements.

[Air] regiments had lateral contact with each other in regional coordinated combat. All permanent and reserve airfields had arrangements for skip-echelon contact with HQ.

The forces of the antiaircraft, rocket, and radar branches expanded rapidly. When massed for a strike, there were AA and rockets, as well as the air force, in coordinated combat, but when protecting [lines of] communication, they were dispersed by battalion on lengthy highways according to main points for which the regiment or division was charged, and stretched out over hundreds of kilometers. Around the end of 1963, there were more than ten AA and radar regiments, but still carrying the name of the 367th Group, the Cryptographic Section of Group 367 comprising the chief and ten cadre and personnel. The AA regiments had a table of organization with a subsection of five to ten cadre and personnel. The radar regiment had eight to nine cadre and personnel; each radar company had one person for encrypting and decrypting. Cryptographic at the regimental level had a commissioned officer in charge. Normally this officer comrade had combat and command experience and a high sense of responsibility. Thus they built in an orderly manner the management and tight organization of their elements, implementing the mission well, building up confidence on the part of the people in command,

From 1963 to 1965 the technical branches of the service expanded more and consolidated their strength more. Rocket and AA regiments and air defense divisions were established to guard the various sectors. The cryptographic sections of these divisions took shape and became fully worked out day by day.

Encrypting and decrypting is the work of ensuring service day after day to the direction and command of the service, having closely adhered to the requirements of the service in every battle.

During this time the units of the service had numerous means of rapid communication-liaison, not much message volume going via cryptography, but messages regularly having high precedence (the latter making up 60-70 percent of the total). Air Force messages were regularly sent out from 1800-2000 hrs. the day before until 0500-0600 hrs. the day after execution. Preflight messages, meteorological forecasts, transport service, assistance to our friends. Work was concentrated, for the most part, at nighttime. The fellows in cryptography understood quite clearly that, to serve a modern service and branch, the task of leadership and command via cryptography carries importance and much urgency. The duration of operations is figured in seconds – in minutes – but the task of preparation demands the very best. That applies to the exact time period for much of the cryptographic task.

In the campaign to protect the city of Vinh in 1965, the staff of the service [Bo tham muu quan chung] requested the transmission of orders by encrypted messages with the time from issuance of the order to unit receipt being five minutes. The service cryptographic bureau organized a shift of comrades with a rather good specialist attitude to go to the CP to work directly in reading or listening to the order and encrypting it at once, at the same time decrypting and reporting directly to the command cadre. The

results achieved the command requirement for timeliness set by HQ, victoriously striking the enemy in the campaign, and received commendation by the staff.

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In order to be compatible with the conditions and essence of the task activity of the Naval service, the service cryptographic organization organized short day-training classes. The study content comprised study to thoroughly grasp the mission situation of the service and the branch, generally speaking, and, specifically, the responsibility to build navy cryptography. Navy cryptographic also made efforts to organize and straighten out their ranks, to make the cadre and personnel love the branch of work, to become attached to the service, to the sea, to the islands.

In 1962, cryptographic of the 2nd Patrol Sector, Naval Base 2,[24] serving the unit striking the American-Puppet commando boats encroaching upon the Central region coast, used technique KTB and a command operations code [mat ngu chi huy].[25]

On 11 August 1962, Petty Officer Third Class Bui Dang Dzuong, a cryptographer at Naval Base 1, received an order to go out to Long Chau island on assignment. When the boat went past the zero buoy, it met a misfortune. In big waves and heavy wind, the comrade continued firmly at the con, unruffled he rowed and steered, and, together with his mates, bailed water from the boat. The misfortune continued. Wind and wave on the sea [suddenly] large, the boat being small, the mast and the oar locks snapped, and the boat capsized. Before the boat sank, Cde Dzuong calmly destroyed the entire set of [cryptographic] materials and continued to encourage and help his mates get out of the boat and swim to the island. Big waves, heavy wind, and sapped of strength – Cde Dzuong gave his life.

In the Three Firsts emulation movement, May 1962, Navy cryptographic organized the first technical competition and exhibition meet at Do Son. Through the meet, many forms of study or skill drills of the service's cryptographic [organization] were publicized in the branch.

After the 3 January 1964 decision to establish Naval HQ [Bo tu lenh Hai quan], the Cryptographic Section of the Naval [Directorate] became the Navy Cryptographic Bureau, under Cde Vu Bao Phong. The encrypting-decrypting, message, and technique elements of the bureau had veteran cadre in charge, with the capacity to respond to the service's leadership and command requirements for combat at sea.

In January 1964, the Cryptographic Section of Group 125[26] was formed to serve the unit transporting weapons and munitions, means, and assistance forces for the Southern theater. Cde Nguyen Duc Bao was section chief. The ranks of cryptographic cadre and personnel chosen to go down south by boat were comrades with high sense of responsibility and valor.

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MR 4, as the front line unit of the North, directly in touch with the enemy at the temporary demarcation line, had a long border and coastline. MR cryptographic organizations had to ensure combat readiness for internal units, while at the same time having to cover our action and that of our friends in Theater of War C. That situation meant that MR cryptographic tables of organization could not be fixed.

In order to consolidate plans for defense and for combat readiness and to arrange cryptographic materials, MR cryptographic proposed to the Directorate the organization of a meeting comprising MR cryptographic and divisions and brigades subordinate to the MR, with Armed Public Security units, MR Right Bank cryptographic, and naval and antiaircraft [units] stationed in the MR's sector of responsibility.

In initial combat service, MR 4 cryptographic encountered a number of difficulties, but, through the direct professional guidance of the Cryptographic Directorate, MR cryptographic overcame a number of shortcomings and accomplished the mission. The armed forces in the MR expanded rapidly, and the use of cryptography also increased. In 1964, the MR had thirty-four units using cryptographic, and in 1965 that had gone up to seventy-one units. At times they had to assign four to five assault [radio] stations for engineer and AA units, etc. The cryptographic cadre going on independent missions were excellent, and had recently ensured timely encrypting and decrypting of messages and corrected errors in the handling process. Therefore the MR cryptographic bureau had to divide up the number of people remaining at the bureau to create two to three elements to work. Three comrades worked the message task day and night, replacing each other in receiving messages, sending them off, making copies, getting them back.

Confronted by the lack of cryptographers, the MR HQ, the comrade chief of staff, the military personnel and guard organizations, and the Party committees at the various levels assigned cadre to go down to units to select people to come to HQ to study. But by the end of 1965, the MR had only accomplished 70–75 percent of the troop strength HQ provided. The MR cryptographic bureau and a number of division cryptographic sections,such as those from the 341st and 325th divisions, took advantage of the time for professional replenishment for their cadre and personnel, so that they would have sufficient capacity to perform the task of encrypting and decrypting independently and would grasp and accurately apply the principles for the use of technique and procedures to encrypt and decrypt a message. By means of the replenishment form of on-the-job training, in less than a year there were twenty comrades recently out of school who had taken on task responsibility in an isolated station or replaced the former comrades so they could go to different units. Summarized through the reeducation sessions resolved by Central and the MR Committee, cadre and personnel raised their awareness of the new mission situation, the mission of liberating the South, of guarding the North, of supporting the Lao revolution. Many comrades rushed to go receive missions in places most difficult

and arduous, or far distant places, such as Hon Co, in AA units, or in Theater of War B or Theater of War C.

In Theater C, Cde Cong Thanh was bombed by enemy planes while working – his ears were deafened and ran blood; Cde Le Hong Qui, out on an operation, tripped an enemy mine that snapped his leg – two comrades calmly preserved the cryptographic systems and means for the task, and only when there was a replacement was he content to go to the hospital for treatment. Many comrades had fits of fever, yet when messages came they pushed themselves to encrypt or decrypt and would not let the messages be delayed.

On Hon Co, many nights there were hourly report messages, and cryptographic personnel had to stay awake continuously on many nights in order to promptly encrypt and decrypt so as not to lose any of the time element on which the message depended. In the 929th and 925th regiments, up in the mountainous forests of the Vietnamese-Laotian border, oil lamps, pencils and paper were inadequate for the job, and they gave their own money to go out and purchase.

In 1965 the MR 4 message volume went up by 191,684 compared with the official messages of the previous year. At MR HQ, in particular, there had been a peacetime daily of some eighty to ninety secret messages – in 1965 the average was 200 official messages a day, with days in which there was a three- or fourfold increase, and 70–80 percent were high precedence (Immediate and Priority) [TK va TGK].

During this time, service to leadership guidance and combat command in the two parts of our nation and the friendly Laotian nation was rather urgent, especially when the military and people of the South opened the counteroffensive against the American imperialists' "special warfare." Daily messages volume increased, carrying significant content concerning the line, resolutions, strategy, tactics, campaigns, stratagems and combat, etc. Cadre and soldiers of the entire army cryptographic branch heightened political responsibility and unity, determined to strive to complete the mission in every condition. Cryptographic organizations at the various levels attached special importance to the task of encrypting and decrypting messages, concentrating to exert themselves to the utmost in this important mission. One great difficulty and well known during this period was the lack of many cadre and personnel. The peacetime tables of organization were not compatible with the developing situation of revolutionary warfare taking place on a scale that grew larger each day. The urgent work of training and development, although having obvious effect, had many shortcomings in terms of basic requirements, thus was impossible to sustain over a long time.

ESTABLISHING A SYSTEM OF CRYPTOGRAPHIC ORGANIZATION IN THE SOUTH

From 1960, the revolution in the South underwent new advancements. In the spirit of "whatever's necessary, because the South is our brother," mission reinforcements for the Southern Region were increased.

In early May 1961, the Central Military Committee and the MND organized Phuong Dong ["orient"] Group 1 to go down to B2 and Phuong Dong Group 2 to go down to MR 5. In both of these two groups were elements of cryptographic cadre and personnel selected as augmentees to be the nucleus in creating cryptographic organizations for the various theaters. Besides the responsibility of the operation itself, the cryptographic cadre and personnel were also responsible for ensuring operational command liaison between the groups and the General Staff.

Comrade Tran Van Quang, Deputy Chief of the General Staff, took direct control over Phuong Dong Group 1, handing this responsibility to the Cryptographic Directorate and the cryptographic element in the group: ensure close cryptographic liaison between the group and the Central Military Committee and the General Staff during the troop movement; most especially, organize a cryptographic liaison system linking the [Southern] Region Military Affairs Committee with the Central Military [Party] Committee, with the General Staff, and MRs 7, 8, 9, and Saigon-Gia Dinh; upon arrival, set up a cryptographic system [he tong] for the Region's armed forces and the MRs.

The formation of a cryptographic organizational system [he tong] in the South was basically prepared from Phuong Dong Group 1 and Phuong Dong Group 2. The Cryptographic Directorate had thoroughly grasped the mission and zealously organized he implementation, concentrating on the training and augmentation of cadre and ıersonnel and an increase in assistance with respect to technique, equipment, and ırofessional means.

Tons of equipment means, cryptographic systems, and cipher key of various types were pportioned to each team, to be backpacked by each individual.

In Phuong Dong Group 1, there were twenty-nine cryptographic cadre and personnel. ły the end of July, the group arrived at the regroupment position (the receiving station in Ia Da, subordinate to old War Zone D).

People and means were both safe. Throughout the itinerary the cryptographic cadre nd personnel ensured timely and reliable traffic between the group and the Central ilitary [Party] Committee and the General Staff.

The cadre and personnel concerned with the cryptonet, together with the necessary ıeans, were arranged to go at once to the military regions. In MR 7 (T1--the region of ıstern Nam Bo) there were four comrades under 1st Lt Nguyen Ngoc Sinh. MR 8 (T2 – ıe region of central Nam Bo) had three comrades under 2nd Lt Nguyen Tuan Suong. MR

9 (T3 – the region of western Nam Bo) had four comrades under 2nd Lt Nguyen Van Duoc. The Saigon-Gia Dinh MR (T4) had three comrades under 2nd Lt Vo Xuan Tra.

The Cryptographic Bureau of the Region Military Affairs Section (R) and the units directly subordinate to Region had fifteen comrades under Comrade Captain Nguyen Hoang. After a few days' rest, the personnel moved the Region organizations down to Sector B (Trang Chien-Tay Ninh). The Cryptographic organization of the Region Military Affairs Section, carrying the designator [phien hieu] B8[27] had the mission of cryptographic liaison between the Region Military Affairs Section and the Central Military Party Committee and the General Staff. Each day an average of forty messages was encrypted and decrypted.

From the end of 1961 to the beginning of 1962, units directly subordinate to Region were established. The cryptographic comrades from the Region Military Affairs Section took turns going to the cryptographic units: Region Forward, under comrade 2nd Lt Dzuong Minh Tri; cryptographic of the Ben Tre Maritime Transportation Supply Station [Tram]; under comrade 2nd Lt Tran Minh Dat; the Ma Da area [vung] Rear Services Base, under Comrade Warrant Officer Pham Ngoc Linh; cryptographic of the U50 Guard Battalion under Sergeant Major Huynh Huong; cryptographic of the 1st Infantry Regiment under Comrade Warrant Officer Dzuong Tan Hoa; cryptographic of the 2nd Infantry Regiment under Comrade Warrant Officer Ngo Xuan Tu; and cryptographic of Group 80[28] under Comrade Warrant Officer Tran Van Tuoi, etc.

From its establishment until May 1962, the Region Cryptographic Bureau had a Party team colocated with the cell of the Operations Bureau. In June 1962, the first [Party] cell in the [Cryptographic] Bureau was established.

The Bureau table of organization comprised sections for encrypting and decrypting messages, and a technique research section.

Because of having to worry about transportation for the necessities of life and transportation of cryptographic materials and professional means for the CPs ahead and behind and a number of units, in 1965 administrative sections [hanh chinh quan tri] were established. Means of transportation were mainly pack bicycles, with two Honda 90s and an electrical generator. Mobile organization sections were also established by the Bureau.

Three cryptographic comrades from MR 8 arrived at the Military Affairs Section of the Central Nam Bo region on 8 October 1961 and immediately set to work developing a liaison net with the General Staff, the Region, and with the 261st Battalion.

At this point MR 8 cryptographic was in contact with HQ and Region using type KTB4, and in contact with the 261st Bn by KTA. From the end of 1961 to March 1962, Comrades Minh and Hoa, cryppies of the 261st Bn, went to study KTB4 and returned to initiate contact with the 261st Bn by KTB4.

In the provinces, at the start, military cryptographic and Provincial Committee cryptographic were colocated [cung chung mot dau moi]. In 1965, they were split into Provincial Committee cryptographic and Provincial Unit cryptographic. Comrade Xe was

in charge of the Ben Tre Provincial Unit cryptographic section,Comrade Linh in My Tho, Comrade Phu in Long An, Comrade Xuan in Kien Tuong, Comrade Nhan in An Giang, etc. Along with the nets and systems, such as MR combat commands [doc chien] (combat command 1, combat command 2); four directly subordinate battalions, 261, 263, 265, 267; the supply terminals [ben hang]:Region terminal, MR terminal, Rung Sat terminal; the schools: MR military administration, artillery school,mail units – a total of twenty-nine points.

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In MR 9, at the beginning the cryptonet comprised these points: Region [Party] Committee, Phu Loi 1, Phu Loi 2, Rach Gia, Can Tho. In May 1963 the MR's 2nd Main Force Regiment was formed, along with the cryptographic element of the regiment, after which cryptographic was organized in the newly formed regiments and provincial units of the MR.[29]

In August 1963 we opened the Dam Dzoi campaign in Ca Mau province – the comrade chief of the MR 9 Military Affairs Section came right to the front cryptographic [element] to work in time to grasp the situation and command the two Region Main Force regiments and the Ca Mau province regional force battalion, wiping out two military sub-zones, Dam Dzoi and Cai Nuoc, in one night. The following day the units ambushed and defeated a battalion arriving as relief, and shot down many helicopters. The people of Cai Nuoc rose up and destroyed more than a hundred strategic hamlets. Comrade Bay Ngoc, the cryptographer, went to serve in this operation, and, before he was sacrificed, had told his teammate how to accomplish the mission and ensured the safety of the cryptographic material. The comrade chief of the Military Affairs Section of Region 9 commended "Cryptographic's speedy performance, a timely factor in securing victory in this action."

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Group Phuong Dong 2, going to MR 5, also had an element of cryptographic cadre and personnel, prepared to go down and set up a cryptographic organization in MR 5, MR 6, and for Military Intelligence. Along the line of march, keeping in contact was very difficult, sometimes on the march, sometimes ensuring cryptographic liaison with HQ, with Region [Party] Committee, and with Cde Vo Bam's station (Group 559),with the three MR battalions, and internal elements of the operation – after more than two months they arrived at the regional base of Region 5 [Party] Committee.

In July 1961, the Region 5 Cryptographic Section was formed and made directly subordinate to the staff elements of MR HQ. At the start, MR 5 Cryptographic Section comprised five comrades, with comrade Nguyen Van Long as section chief. At the end of

November of that year the section was augmented by four comrades just returned from a Region [Party] Committee refresher course.

The initial cryptographic liaison system comprised a cryptonet with HQ, with Region, with the sector Party committee, with a few of the main force battalions of the MR, and, afterward, with the provincial units. Cadre and personnel overcame many adversities and difficulties initially and [with] the number of people to work, with respect to professional means, ensuring service to guidance in building the armed forces and building the revolutionary movement, ensuring service to small battles while at the same time increasing support to production of foodstuff, building the basis for expansion for MR 5 cryptographic from that point.

The following years (1962–1964) were years of even greater revolutionary struggle by the people, during which the armed forces of the region expanded, and a system of cryptographic organization was established broadly with the directly subordinate cryptographic organizations: cryptographic of the main force units, three regiments, one infantry battalion, two sapper battalions, a number of branch units, and the provincial units.

From the standpoint of technique, the cryptographic units in the MR essentially used KTB 4. Annually the MR cryptographic section organized the receipt of tons of cryptographic materials and means from the North brought down via the western Truong Son [Ho Chi Minh Trail] line of communication, having to man-pack for two to three months to reach the MR rear area, but still not having enough to use. The Technique Research element of the MR Cryptographic Section had to produce code chart systems and handbook systems themselves; had to duplicate cryptographic key to arrange for outstations.

The Cryptographic Bureau was very zealous in assisting Sector 5 with people and means, but the augmenting groups of cryptographic cadre and personnel were inadequate for expanding in accordance with the expansion requirements of the armed forces. The Cryptographic Section organized training and development so as to have people to work.

At the end of 1964 and beginning of 1965, the revolutionary movement in the Sector had become powerful. Cryptographic forces in the main force troop units of the MR and provincial units ensured the secrecy of command in battles, eliminating the mass of small enemy posts in the mountainous jungle and the border plains, helping the masses destroy the "strategic hamlets."

In Region 6 the cryptographic organization comprised the Region Cryptographic Section under Comrade Zuong Tan Dong and the directly subordinate cryptographic organizations.

The Region Military Intelligence [tinh bao quan su] Cryptographic Section with the cryptographic organizations directly subordinate, the sectors, groups [cum] – Cde Truong Tan Them was the section chief initially.

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Alternately building and performing their task in conditions of endless difficulty and hardship, the cryptographic organizations of the Liberation Army served guidance and command in the political struggle, opposing the strategic hamlet posts established by the people, and served guidance in the victorious destruction of strategic hamlets. Especially in the Binh Gia campaign (late 1964), the Cryptographic Bureau of Region HQ [Bo chi huy Mien], along with cryptographic of the 9th Division and other units, organized and did a good job of carrying out the "campaign cryptographic task," drawing a number of experiences with respect to organization, technique, professional staff [work], etc. The Southern cryptographic organizations did a good job of serving leadership, guidance, and command in defeating the tactics of "armored mobility" and "helicopter mobility" as in the dry season plans of the American imperialists, such as the Staley-Taylor and Johnson-McNamara plans. The cryptographic organizations of the Liberation Army took part in defeating the American imperialists' special warfare strategy. Through combat service, cryptographic cadre and personnel displayed boundless loyalty toward the Party and the people. There were many examples of dauntless sacrifice to avoid leaving cryptographic technique and secret contents of the Party and army to fall into enemy hands. A number of units and individuals were awarded decorations – many cadre and personnel were presented with the appellation, "Ap Bac Warrior," "Valiant Soldier of Victory," and "Emulation Warrior."*

COMPLETING THE CHANGEOVER TO THE USE OF TECHNIQUE KTB4 AND PREPARING FOR A NEW DEVELOPMENT OF CRYPTOGRAPHIC TECHNIQUE IN THE ARMY

In September 1959 the Central Cryptographic Section and the Cryptographic Directorate of the General Staff organized a conference of cryptographic cadre nationwide and army wide, in order to thoroughly grasp "A platform for the development of technique." In this conference, an ideological struggle concerning technique brought good results. Conservative attitudes toward technique KTA, along with subjective attitudes satisfied with the strong points of technique KTB rejected the strong points and contributions of technique KTA and severely criticized both. In order to counter espionage activity, technical intelligence, and the collection of cryptanalytic information at the high technical level of the enemy, the conference decided on the line for expanding the technique of the army cryptographic branch, namely:

*Ap Bac, in Dinh Tuong Province, thirty-five miles southwest of Saigon, was the scene of a 2 January 1963 action in which a "VC" battalion, outnumbered four to one by forces of the Republic of Viet Nam, supported by armor, artillery, and helicopters, trounced the republican forces and escaped, killing three American advisors and shooting down five helicopters. – Tr./Ed.

"Never cease to raise the level of the KTB system in all aspects: it is essential in using the two-part codebook system, to take compound words as the basis; superencipher with objectively randomized numbers; apply a method of constructing and making them more suitable for each condition and circumstance of assignment; implement the principles for the use of bilateral [or "link," tay doi] cryptographic systems (own sending/own receiving, own sending/general receiving); restrict the use of general systems (one general codebook, own random numbers); on the principle of technique KTB, prepare the basis for gradual mechanization of encryption and decryption." [Own, or personal [rieng], in the sense of being limited to one user or link, point-to-point, as opposed to a general, or common [chung], "circular" system shared with others. Tr./Ed.]

Implementing the above line, cryptographic organizations at the various levels throughout the army zealously overcame difficulties and carried out the changeover to using technique KTB in the North in 1960 and in the South in 1962. The types of KTB systems that were researched, produced, and used during this period were the "two-part codebook ["dictionary"], superenciphered, random numbers" code (some nets continued to use codebooks that were not two-part); the "handbook, superenciphered, random numbers" code; the "chart, two-part, mixed key" code; which was very compact, used in special assignments; and the "mnemonic" code, used as a back-up to the main code in those circumstances in which the [main] code could not be carried on a special assignment.

The contents of the codebook were compiled more abundantly, gradually more suitable to the content of leadership, direction, and command in each unit and in each time setting. Methods of arranging encrypted elements and plain elements made it convenient to do the work of encrypting and decrypting quickly and accurately.

Random key was developed and produced according to a production formula and regularly inspected and rated with respect to quality, so that the degree of protecting secret information was more reliable.

Principles for the use of codes were closely determined and implemented more strictly. There was implemented a step of personal encryption, personal decryption and "restrict the sphere of use of general codes."

In the research task, we began to delve seriously into the basic problems of technique, such as the frequency of plain elements, principles and formulas for the construction of random key, etc.

Based upon the mission situation as handed on from above, in 1964 the army cryptographic branch set the technique task line for 1964-1970 as: "Do not cease to raise the level of the 'superenciphered dictionary code with key randomized' type of system as circumstances permit, in order to research and produce systems with a higher level of protecting secrecy and use consistent with the requirements of the mission essentials and task conditions, changing from digital systems to literal systems; implementing through solid, urgent steps the use of bilateral systems and restricting the sphere of use of general systems; beginning to make basic preparation to create conditions for proceeding to mechanization of the process of encryption and decryption; aiming to ensure the

trustworthy secrecy, speed, and accuracy of every secret matter of the Party, nation, and army through cryptographic systems, resisting all of the enemy's schemes to collect information through cryptanalysis, which is the object of the American imperialists and [their] lackey gang."[30]

Implementing the above line, in the Air Defense-Air Force service, from the level of the service down to division, they set up a register to review codes. Through the practice of counting the frequency in the number of plain elements in the cryptographic systems, the results were that plain elements were used in a number of concrete systems: The general code of the services, 66 percent. The radar code, 68.50 percent. The air defense code, 67percent.

The air force uses many specialized terms, among which are many different types of foreign words, such as French, Chinese, English, and Russian, but at this time many terms had not been transcribed [into phonetic Vietnamese]. If one wished to encrypt and decrypt quickly and accurately, then one of the factors for technique was the construction of a special cryptographic system for the air force. With the direct help of the Cryptographic Directorate, and based on the real-world task of encrypting and decrypting, a set of cryptographic materials carrying the special characteristics of the air force was produced and relatively well done, laying the basis for future systems to be even better, consistent with the mission requirements of the air force.

Carrying out the direction of the branch's technique task, in 1964 the Technique Research Bureau of the Cryptographic Directorate expanded its research, development and production of "superenciphered, random letters dictionary" code [luat "tu dien ma kep chu loan"], having the effect of raising the level of security and reducing by one quarter the number of groups in the encrypted message. But there were many difficulties that could not be overcome in a short time, so the use of "superenciphered random letters dictionary" codes was not implemented.

Also nothing could be done about the matter of "basic preparation to develop conditions for progressing to the mechanization of encryption and decryption," for there were difficulties, both objective and subjective, among which the main bad points were that we did not yet have a regulation on training, lesson plans, the instructor corps, essential cadre, and other aspects not yet accomplished for the upper echelons and concerned organizations to perceive clearly the mission substance of the cryptographic technical task and the requirements for advancing on the path of upward development for the branch.

However, by 1964 the army cryptographic branch had completed the changeover to technique KTB4 throughout the army, and raised a notch the level and quality of cryptographic materials. At the same time, some of the preparation for taking a new step in the army's cryptographic technique was made.

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On the basis of a thorough grasp of the situation and the new mission and the political line and the military line of the Party, the army cryptographic branch obtained training for the central task of building the branch in terms of politics, frame of mind, organization, technique, and professionalism. The third army-wide cryptographic cadre conference mobilized the "three goods" emulation movement – "good study, good task, good implementation of task regulations" – and set awards for units with the highest achievements.

In the mobilization to build the army and progress towards regularization and modernization, these emulation movements in the study of politics, military matters, technical culture, and professionalism brought the entire branch to a fever pitch. In organizations that were concentrated or in odd teams on assignments, from the mainland out to the distant islands, in secluded border guard posts or on ships operating on the high seas, in the South, inside the North, and in the friendly nation of Laos – everywhere – cadre and personnel were caught up in study.

The victory of the 1961 winter-spring political reeducation program built the strength to step up the study emulation movement, to get into depth and to receive better results every day. The cryptographic organizations carried out emulation with positive action slogans, such as "Resolve to Emulate for the Highest Prize in the Task and Training in order to Achieve the Challenge Banner from the Central Cryptographic Section," or "Study Days, Study Nights, Surpass the Norm, Strive for First Place". . . Many units implemented "the three builds" – "advance in thinking, advance in work-style, advance in technique" – and "the three counters" – "counter job dissatisfaction, counter inaccuracy, counter conservatism."

The task regulations were an essential component of the annual study program. Besides study and implementation in the branch, the task regulations still had to be grasped fully and implemented in the command organizations and in other organizations that used cryptography for secret messages. As a result, the implementation of fixed principles from the outset was more serious and strict, producing more practical results throughout the military.

The training to elevate the level of technique in use was implemented with many lively forms. Each cadre, each of the personnel, individually trained in basic technical subjects, practicing encrypting and decrypting. Cryptographic organizations went on to organize reviews of work style, reviews of technique,exchange of experiences between their unit and different units, organized inspections of technique, and held technique teach-ins. Study became a routine, with a concrete quota plan, guidelines, and suitable methods. In 1962 the army cryptographic branch organized an army-wide cryptographic techniques competition and exhibition to examine, evaluate and report on the results of training. The comrade commanders of higher echelons visited the occasion and were happy to see the progress of the army cryptographic branch. New records of productivity and accuracy were set, from 400-500 groups/hour before to 600-700 gps/hr. The prize for

high productivity in encrypting (720 gps/hr) went to cryptographic of the Air Defense – Air Force, while the high productivity prize for decrypting (1,124 gps/hr) went to Navy cryptographic. The level of accuracy rose from 99.50 to 100 percent.

Professional training became more realistic, more real-world. The cryptographic organizations organized task simulations as part of tactical and campaign simulations by the staff organizations at the various levels. The cryptographic organizations, along with the communications organizations, practiced simulations in the field, the process of taking in and sending on, encrypting and decrypting, receiving and transmitting messages. In the parachute troops, cryptographic personnel trained to parachute into a hot drop zone and immediately set to work. By many other positive measures, the army cryptographic branch raised the level of organization for the cryptographic task of ensuring secrecy by cryptographic techniques under combat conditions.

In the organization of training, the army cryptographic branch attached special attention to refresher training to raise the level of capability for cadre at the various levels by means of phased training and continuing education in technique. The comrade commanders of the Cryptographic Directorate got involved in writing material and teaching, [producing] "Some Problems in Professional Instruction" (1960), "The Cryptographic Task in Modern Combat" (1962), etc. The cryptographic organizations of the MRs, services, and divisions also summed up experience for cadre refresher.

The task of training at the school, with respect to syllabus, pedagogy, and training, never ceased to be raised in quality of training, so that students leaving the school to return to their units after a short period of refresher would be able to perform in the real world. This was a very great effort on the part of the school, and it was praised by the entire branch and commended by higher echelons.

The cryptographic organizations in the South cleverly combined on-the-job training with the real-world task, taking advantage of time for training, aiming at having cadre and personnel adjust to each circumstances of work or combat. Cadre in the basic units became the nucleus of the "two goods" emulation campaign – "good work, good study." Along with refresher work to raise the level of old cadre and personnel, the military region cryptographic organizations organized training at the local level for many new personnel. From 1962 to 1964, 437 comrades were trained in theaters B1 and B2.

"A worry-free ideology of long service in the branch had clearly determined that there would be more basics and essentials than before. The comrades assigned in places of much difficulty, hardships, and sacrifice have held on to their positions, broadening the traditions of the branch in a most satisfactory way. Comrades perform the mission in places lacking accommodations with respect to material and intellect, yet continue diligently in the task, performing their mission well. Many comrades sought out assignments in places with the greatest difficulties and hardships."[31]

In the annual accounting of mission accomplishment and training, many cryptographic organizations received the "Best Training and Performing Unit" banner, such as the Cryptographic Branch of the Naval Arm, the MR 4 Cryptographic Bureau, the

Right Bank MR Cryptographic Bureau, the Cryptographic Sections of the304th and 330th divisions, and the Cryptographic Section of Group 959.

DUTY IN THE LAOTIAN THEATER

From the end of 1954, the American imperialists replaced the French colonialists and instituted a neocolonialist policy in Laos. America manipulated its Lao puppets into attacking the two provinces of Sam Neua and Phong Saly, liberated areas of the Laotian revolution. Under the leadership of the Lao Patriotic Front, the Lao army and people struck back decisively, inflicting heavy losses on the enemy and forcing them to sign the Vientiane agreement, establishing the first national unity government in Laos, including delegates from the Lao Patriotic Front. Before the Lao patriotic forces could occupy some important seats in the unity government and while the prestige of the Lao Patriotic Front was at its highest, the Americans and their henchmen pulled new tricks of sabotage. In May 1959 they seized as prisoner Prince Souphanouvong, and a number of other leadership cadre of the Lao revolution. At the same time, they surrounded and issued orders to disarm the two battalions, the 1st and 2nd, of the Lao People's Liberation Army, intending to eradicate the Lao revolution. After being surrounded for a week, the 2nd Battalion and an element of the 1st Pathet Lao Battalion valiantly and cleverly broke through the enemy encirclement and got back to the secure base area with the aid and sympathy of the people of the regions. The PAVN cryptographic organizations did a good job of serving command in the organization of the reception of the 2nd Battalion in its victorious escape.

In July 1959, PAVN cryptographic organizations served the command of Group 800 of the Vietnamese Volunteer Army in opening action on the Vietnamese-Laotian border, wiping out the Sam To and Nong Het forts,and helping our friends expand their territory and their forces.

On 23 May 1960, Prince Souphanouvong and other Laotian comrades successfully escaped jail: The Encrypting-Decrypting Bureau of the Directorate of Cryptography, the Cryptographic Section of Group 959, and the cryptographic organizations of the Vietnamese Volunteer Army did a good job serving command and control in meeting Chairman Souphanouvong and the leadership comrades in their return to the safe base region.

The Lao Patriotic Front expanded. While the cryptographic organizations of the Vietnamese Volunteer Army served the command in victorious combat, the air force cryptographic organization arranged cryptographic teams[32] assigned to the Plaine des Jarres, Sam Neua, Vang Vieng, and Tchephone airfields, serving direction, command, transport and the paradropping of supplies, weapons, and equipment for the friends and ourselves. In 1960-61, the cryptographic organizations of the 959th Group, MR Northwest, the Air Force Directorate, and other units completed the mission of ensuring command secrecy in the Plaine des Jarres-Xieng Khoang Campaign. In 1962, the organizations of

the General Staff Cryptographic Directorate, the cryptographic organizations of MR Northwest, the 959th Group, the Air Force Directorate and other units participated in the major victory of the Nam Tha campaign.

In these campaigns, the cryptographic organizations of the PAVN all accomplished the mission. Many units and individuals did so in an outstanding manner. Cde Nguyen Ngoc Khue bravely gave his life while performing his mission at Salaphukum in April 1961, receiving posthumously the Order of Military Merit. Cdes Hoang Tu and Dao Trong Luat, cadre of the General Staff Cryptographic Directorate, fulfilled the mission and returned after a special assignment trip into the enemy area of Laos and were also awarded the Military Merit medal. Service achievements of the Vietnamese Army cryptographic organizations were part of the great victory of the Lao army and people. In June 1962 the Geneva accords on Laos were signed, recognizing the legal status of the Lao Patriotic Front and undertaking to respect the independence, neutrality, utility, and territorial integrity of Laos, and establishing a tripartite government of national unity.

During this time, the 959th's cryptographic forces had 130 comrades (including cryptographic specialists helping the friends at Central and an element helping the friends at the Xuan Thanh cultural school). Alternately working and building, in conditions of endless difficulty and hardship, the 959th Group cryptographic organization accomplished their mission well. Implementing the 1962 Geneva accords on Laos, the cryptographic organization belonging to the 959th Group HQ returned home. Almost all cadre and personnel were appointed to assignments in the military regions, services and branches.

The accords had barely been signed before the American imperialists and their lackies plotted to subvert the 1962 Geneva Accords, nurturing the reactionary forces of Vang Pao and mobilizing the army of Thailand to cross over and, in succession, to open large operations aimed at the destruction of the Laotian patriotic forces.

As requested by the friends, in November 1963 the system of cryptographic organization in which the Vietnamese Volunteer Army was directly active was returned. The cryptographic organization of the 959th Group was divided into two elements and went in two directions – one over to Sam Neua, one over to the Plaine des Jarres and Xieng Khouang.

The cryptographic organizations of the 923rd Battalion of MR 3, the 924th and 927th Battalions of MR 4 (each battalion having two cryptographic teams), along with other units, crossed over to perform the mission in Laos. The cryptographic organization of the 463rd Subgroup [phan doan] was established and active in the Plaine des Jarres. The Cryptographic Section of the 959th Group alternated between performing its mission of ensuring command secrecy and helping the friends' cryptographic branch straighten out its organization, bring up to strength the ranks of their cadre and personnel, and prepare technique and equipment, so as to be ready to meet the growing mission requirements of the Lao revolution.

In 1964, the cryptographic organization of MR Northwest combined with the cryptographic organization of the 959th Group and other units and did a good job of

implementing the cryptographic assignment of ensuring command secrecy for the Plaine des Jarres-Xieng Khouang campaign. The Cryptographic Bureau of MR Northwest, the cryptographic sections of the 316th Division and 335th Brigade, along with the Cryptographic Section of the 959th Group – all fulfilled the mission on the soil of our friends in an outstanding manner.

Notes

1. During the resistance against France, there were over 30 points in liaison with HQ. In 1955-56 there were about 50.

2. In 1955, 10 cadre-in-charge and 108 cadre and personnel; the first six months of 1956, alone, 41 cadre and personnel.

3. Cryptographic Section of the 332nd Division under Cde Nguyen Trung Nghi. Cryptographic Section of the 330th Division under Cde Nguyen Cong Tru. Cryptographic Section of the 335th Division under Cde Nguyen Hoang.

4. Comprising 26 Cryptographic Sections in these units: General Directorate of Supply, the Central Joint Cease Fire [Commission], the Directorate of Civil Aviation, the Directorate of Intelligence [Tinh bao], the Coastal Defense Directorate, MRs Viet Bac, Northwest, Left and Right Banks, 4, Northeast, 367th Division (Air Defense), 351st Division (Artillery), Group 100,divisions 304, 305, 308, 312, 316, 320, 324, 325, 330, 332, 335, and 338. At this time the engineer cryptographic teams were subordinate to the General Staff Cryptographic Bureau.

5. Extract from a speech by Cde Hoang Van Thai at the eleventh cryptographic conference.

6. Signed by Cde Nguyen Dzuy Trinh, representing the Secretariat.

7. Resolution No. 59-NQ-TW dated 20 November 1958, signed by Cde Nguyen Dzuy Trinh representing the Secretariat.

8. The predecessor was the Cryptographic Section of the Coastal Defense Directorate, which, from May 1955, had been under Cde Le Dinh Lien.

9. Patrol boat group with Cde Cao Van Duc in charge of cryptography. A 79-ton ship with Cde Le Van Dien in charge of cryptography.

10. Such as Lai Chau, Dien Bien, Moc Chau, Song Ma, Quy Chau and a number of border defense posts--Muong Nhe, Muong Loi, Leng Xu Xin, Sop Cop, Na Dit, Keng Du, Vinh Linh, and Huong Lap. [See the supplement to this edition -- Tr./Ed.]

11. This group finished its duties and was dissolved.

12. With three subordinate units.

13. Namely Huoi Phong, Muong Xen, Hon Co, Na Luong, and MR 4 turned over 5 stations to Armed Public Security.

14. Bac Ninh Provincial Unit and two stations serving timber exploitation. MR Left Bank turned over stations at Cat Ba, Thai Ninh, and Dinh Lap and the maritime unit to the Navy.

15. And withdrew cryptographic in five units, the 154th and 169th Regiments, the antiaircraft battalion, and the Son Tay and Ha Dong provincial units.

16. Namely the 905th and 907th Battalions, Nga Truong, Than Uyen, and 168th Artillery Regiment, and handed over four stations – the 953rd, 955th, 957th, and 959th battalions – to Armed Public Security.

17. Lai Chau Airfield.

18. Cryptographic in three battalions – the 54th, 55th, and 3rd – were withdrawn at the beginning of the year and reorganized in December.

19. One accelerated class comprised fifty-two comrades, one had eighty-one.

20. Of the grand total of 291,152 official messages of Cryptographic, nationwide.

21. Extract from document of the eleventh army-wide cryptographic cadre conference, 1954.

22. From the proceedings of the eleventh army-wide conference of cryptographic cadre, 1954.

23. From a speech by Cde Hoang Van Thai at the 1956 army-wide conference of cryptographic cadre.

24. Patrol sector 2 at the Song Gianh, Cde Pham Minh, Chief of the Cryptographic Section.

25. Type HTA.

26. Group 759 changed designators and became 125 of the Navy.

27. Afterward, M8, Bureau 8.

28. Predecessor of the Region's artillery division

29. Namely Can Tho, Soc Trang, Vinh Long, Ca Mau, Tra Vinh, and Rach Gia (each province still having a cryptographic team in the regional battalion).

30. "Directions for the Technical Task in 1964," on file at the Cryptographic Directorate of the General Staff.

31. From the report recapitulating the training task for 1961.

32. Comrade cryptographic personnel Xuyen, Muc, Khue, and Dinh.

Chapter Six

Ensuring Leadership and Command Service in Beating the Escalating War of Destruction of the American Aggressors in the North and the Violent Local War in the South (1965–1968)

CONTINUING TO BUILD AND TO EXPAND FORCES WHILE SERVING TO DEFEAT IMPERIALIST AMERICAN DESTRUCTIVE WAR IN THE NORTH

Defeated in carrying out their neocolonialist policy by "special warfare," the American imperialists changed over to "limited war" in the South and stirred up a war of destruction in the North through their air force. They massed and brought over tens of thousands of American troops and those of their satellites into the South, and speedily increased the troop strength of their puppets. They mobilized thousands of modern aircraft along with a large part of the forces in their Seventh Fleet to strike the North.

Confronted by the frenzied plots of the American imperialists, on 27 March 1964, at the capital in Hanoi,President Ho Chi Minh convened a special political conference to raise the resolve of the people, namely their determination to solidly guard the North's socialism, while at the same time lending aid to our blood brothers in the South, and uniting our nation.

Imbued with the resolute ideology of the Central Party Politburo and the Central Military Committee, the policy line was to build peoples' armed forces in the two areas, South and North, that were strong both in numbers and in quality.

The system of army cryptographic organization also expanded wider and deeper with every passing day, in the command system of the armed forces of our people.

In 1965, the army cryptographic net increased speedily and in complexity (one net had 37 units with cryptographic organizations, but the number of points rose to 111 – internal contact, skip echelon, and combat coordination). Compared with 1964, the army-wide cryptographic net increased by 203.54 percent.

In 1966 the army cryptographic branch had 3,205 cadre and personnel, yet still was unable to meet mission requirements completely and in timely fashion.[1]

Cryptographic organizations lacked people at all levels; almost all basic units and many regiments had only one cryptographic comrade performing the mission. The daily labor intensity was high. In the Cryptographic Bureau of MR 3, compared with 1964, 1965 saw a 138 percent increase in the number of liaison nets and a 76 percent increase in troop strength, but the volume of messages encrypted and decrypted doubled.

The Central Cryptographic Section and the Cryptographic Directorate proposed to the Secretariat and the Central Military Committee the direct selection of good party members, both male and female, in production bases, business organizations, and work and agricultural sites, to be trained as cryptographic personnel.

The General Staff gave enrollment quotas to the MRs, services, branches, organizations, and units. The comrade commanders of staff organizations at the various levels concerned themselves with guidance and inspection in speeding up the accomplishment of plans for assigned quotas. The cryptographic organizations coordinated closely with military personnel organizations and guard organizations to accomplish the quota plan.

During this time the Army Cryptographic School again had to evacuate in order to ensure security; thus it met many difficulties in organizing living conditions and in teaching and study. Many classes had to be expedited to meet mission requirements. Although the curriculum and duration had to be reduced, still the school was able to ensure quality training.

The school board paid particular attention to fostering political ideology and professional technique; at the same time they had to train and foster physical strength to give each student sufficient health to take to the field and perform their mission in distant theaters. The cadre administering the students and the instructors made many efforts to improve the content and methods of teaching, reserving much time for technique practice and field exercises. Students were fired up to emulate in study, including days off and hours off reviewing training, in order to firmly grasp professional technique with the impatient wish to soon go and receive their mission, mainly to be able to go down South to fight and liberate the homeland. Cadre and personnel serving at the school also made efforts to emulate in ensuring good life style, spirit, and material, participating in the performance of training and giving refreshers to cadre and personnel faced with the new requirements.

Cryptographic nets expanded quite rapidly – the task of research and production of the technical means was stretched to the fullest. Measuring wits with the enemy on the battle front of cryptography and cryptanalysis a form of combat that is extremely arduous and decisive. With the slogan "sweat on the desk reduces blood on the battlefield" in their silent work, the comrade cryptographic cadre and personnel did the work of two, because the South was part and parcel [of the nation].

Based on the plan for code research, the technical research organization achieved 110.58 percent of the number of thick codes, 100.46 percent of the number of average codes, and 141.66 percent of the number of chart systems. (During this time, the Techniques Bureau of the Directorate was augmented by seventeen cadre and the printing plant by forty-seven workers.)[2] The regular and first priority job was to compile codes and key quickly to serve for encrypting and decrypting, but also not to lightly dismiss projects of a basic nature. In 1966 the Techniques Bureau researched and fully worked out formulae for creating cryptographic key, reviewed and selected 302,307 plain elements of code,

completed a number of types of code that accorded with public documents, to be used for a number of special nets and intelligence [tinh bao] nets, and executed a recapitulation of chart-codes.

Implementing the General Staff directive concerning the task of ensuring command secrecy over ultrahigh frequency communications, starting in 1966 cryptographic of the Air Defense-Air Force Service and Cryptographic of the Naval Service were given the additional mission of compiling and producing operational codes [mat ngu] to serve combat command in the sphere of their services. This was a brand new task and extremely complicated, for a cryptographic bureau of that period. Message usage was wide, the volume large. The objects of use were command cadre, the pilots of the air force, the skippers of the navy,[3] watch officers, and cadre of different specialities. The requirements of structure had to be simple and easy of use so that command could be rapid and relatively secret. This posed a difficult dilemma to resolve – on the one hand the matter of secrecy, on the other, convenience in use to facilitate speed. The Techniques Research Bureau of the Cryptographic Directorate assisted the two cryptographic bureaus of Air Defense-Air Force and Navy in overcoming this obstacle. They alternately worked and took advantage of the participation of the organs of command, operations, and communications to show the way; additionally, they went down to the units, seeking to understand terms used in oral commands, reporting, means of communicating when exercising command; seeking to understand the tactics and techniques of the branches, their ordnance and equipment, the equipment in their command posts, etc.

The Air Defense-Air Force Cryptographic Bureau made up many types of opcodes to serve the various services – radar, AA, rocket, air force, and other organizations.[4]

The Navy Cryptographic Bureau researched the various types of opcodes, HTA, HTB, HTF[5] and organized guidance for directly subordinate cadre to use. Annual production was a thousand charts, a thousand books of various types, from simple use to ciphers with changing keys.

That way they did their part in ensuring command secrecy when conversing by shortwave communications, reducing the volume of messages that ordinarily did not have to go through cryptographic [handling].

In May 1966, the Cryptographic Section of Engineer HQ was established, with nine directly subordinate cryptographic organizations and comrade Truong Cong Nghi as section chief. From that, the engineers' cryptography developed swiftly, serving leadership and command of the engineer troops in building and fighting in the two parts of the homeland.

In May 1966, the Navy's Water Sapper [Accepting the quaint old military term, which has become the standard American rendering of the Vietnamese dac cong, from cong tac dac biet, special task or special assignment: these elite specialists are comparable to commandos, rangers, SEAL teams, etc., in the West. – Tr./Ed.] Group 126 was established, with comrade Nguyen Chuong Lien as chief of the group's cryptographic section. The group organized a forward element called Group 1A, its cryptographic organization chief

being Cde Ngo Hai Thuyen, serving the advance CP. Water sapper activity to the South increased greatly. The 12th Company, 4th Battalion, of the group trained and professionally upgraded cryptographic comrade augmentees at the naval bases and dockings: twelve teams of cryptographers, comprising twenty-four comrades, alternating between professional study and lying beneath the surface, swimming with a breathing tube, using sapper tactics, prepared to receive orders to set out right to the units serving command, participating in combat until the South was liberated – such comrades as Hoi, Chau, Hung, Bon, Nhung, Dang, etc. There were comrades, such as Cde Ngo Van Dang who bravely gave their lives when one of our boats was discovered by the enemy and they had to destroy it. Also, from the time of its establishment until the signing of the Paris Accords on Viet Nam in 1973, Navy Group 1A had sunk hundreds of American warships on the rivers of Cua Viet, Dong Ha, Dzuy Phien, Dai Do, Xuan Khanh, and Quang Tri. By day and night, cryptographic comrades of Group 126 served command, taking much pride in their unit, but also doing their utmost in labor to have a part in the glorious saga of the group--twice cited for heroism among the armed forces in the long years of arduous and violent combat.

From 1965 to 1968, Navy cryptographic served competently and heroically in the battles of the Vietnamese People's Navy, both North and South, making many achievements.

The Cryptographic Bureau of the General Directorate of Rear Services [GDRS] was established 16 December 1966, directly subordinate to the staff of GDRS, and with thirty-two liaison nets at the beginning. A number of cryptographic organizations from rear services units in Group 559, military relay stations, various odd radio stations in Na Meo and Muong Sen, depots 710 and 486, previously subordinate directly to the General Staff Cryptographic Directorate, were turned over to the GDRS Cryptographic Bureau.

The cryptographic forces of the Ho Chi Minh trail [Truong Son] troops grew enormously, comprising three divisional cryptographic sections, forty-six regimental cryptographic subsections, and military relay stations. In September 1967, the Cryptographic *Section* of Group 559 became the Cryptographic *Bureau* of HQ [Bo tu lenh], Group 559.

The cryptographic organization of the Sapper branch took shape on 19 March 1967, with comrade Nguyen Si Chuong as section chief. At the beginning there were only cryptographic organizations in the 24thBrigade, the 246th Regiment, and the 126th Regiment; afterward, the organization of cryptography quickly spread in the units of elite special troops that wormed their way deep into the enemy's heart to strike air bases, POL depots, ports, etc.

In midyear 1967, the Western Area Task Committee (CP38) was formed on the basis of merging CP31 and the 959th Group, the cryptographic section of CP38 having, at that time, thirty-six people, covering liaison for thirteen units.

By July 1967, the system of army cryptographic organization in the North had 1,106 liaison points. The volume of outgoing and incoming secret messages had increased

manyfold, because the cryptographic warriors were present in almost all units from the mainland to distant islands, ports, naval bases, relay stations, riverside depots, main points in the lines of communications, the military groups strengthening the South, the mobile command stations [engaged in] capturing enemy flight crews and destroying delayed-explosion bombs to unclog roads and vehicles, and military intelligence [quan bao] teams.

In 1966 army-wide encrypting and decrypting elements encrypted and decrypted 1,982,225 secret messages, a twofold increase over 1965. In MR 4 in 1965 there were 274,708 secret messages, as compared to 191,681 in 1964. In the first eight days at the start of the war of destruction, the Navy's Cryptographic Bureau encrypted and decrypted 2,756 messages. In 1965, the Message Encryption-Decryption Bureau of the Cryptographic Directorate had to take care of 105,845 cryptograms comprising 8,933,449 groups. Urgent messages went and came flooding, to the point that they had to be handled on time and completed, whether day or night. But thoroughly permeated with the strategic determination of the Party, as the victory messages came flying back with enthusiasm, the young cryptographic boys and girls worked without tiring. Responding to strictly time-sensitive requirements, there were messages that had to be figured in minutes – many in which, in the space of an hour, it would have been over with. Communiques concerning activity of the enemy's B52 planes, communiques of naval gunfire shelling the mainland, communiques of the objective and time the enemy would strike; the posting of combat forces, adjustments in vehicle formations, changes in troop stationing; command of campaign transport, direction of groups on the march into the South to overcome the main points of enemy attack; command of diversionary troops, to create the sudden destruction of enemy aircraft, etc. The command contents necessitated having to ensure absolute accuracy – one incorrect letter, one digit, could cause loss of people and property. In order to act in a timely manner and ensure accuracy in message content, the cryptographic cadre and personnel and those of communications had to constantly keep up the level of their sense of mission responsibility in the matter of total message handling, in decrypting and encrypting with patience. By natural general knowledge and real world experience, the comrades discovered and rectified tens of thousands of cases of errors by fellow cryptographers, from the process of handling the encrypted signals [tin hieu ma] of radio and from people using secret messages. Thus the quality of service was raised, elating the command echelons and resulting in kudos.

In 1965, the Cryptographic Bureau of MR Northwest rectified message content accurately and promptly submitted immediate secret messages of the General Staff communicating the day and hour the enemy would strike the vicinity of the troop cantonment of MR HQ. MR HQ ordered the organizations, units, and the people to speedily evacuate the night before. At 0700 the following day, the enemy struck. We brought down an American airplane and suffered no loss of people, weapons, equipment, and material. The cryptographic cadre and personnel were commended by the MR for prompt, accurate service.

The first victories of 3 and 4 April 1965 in the airspace over Ham Rong were inscribed in resplendent golden lines in the history of our air force. That feat of arms had the labor of all collectivity supporting on the ground, including the behind-the-scenes contribution of Air Defense-Air Force Service Cryptographic.

Right from the first days of March 1965, from the [Air Defense-Air Force] HQ organizations, the Cryptographic Bureau sent along message communiques assessing the situation, estimating the enemy's schemes, reminding the units to be vigilant, to make combat preparations and to train according to plan,especially the joint operations plan for the branches.

Messages from the Staff [Bo tham muu] reminded the units to check and augment the operations plan, reminded them concerning the joint signals set up between the air force and the antiaircraft, also to have the cryptographic watch for encrypting and transmitting speedily. The political, rear services, and technical organizations of the service also sent messages of guidance to ensure the tasks, and mobilized a spirit of emulation to prepare to recognize the occasion of Uncle Ho's presenting the service with the "Resolve to Strike the Aggressor American Enemy Victoriously" challenge banner.

On the morning of 3 April, numbers of meteorological documents were encrypted and decrypted accurately by cryptographic and sent to the command post promptly to help HQ have the basis for ordering the use of the forces. The enemy's capacity for a large strike was clearly anticipated by HQ from the outset: the Party Current Affairs Committee of HQ met in extraordinary session, with political commissar Dang Tinh chairing, to analyze the situation, release decisions, and discuss means of implementing the operations plan of the service as reviewed by the standing committee of the Central Military Committee and the General Staff – if the enemy struck above the twentieth parallel, our air force was to attack. HQ organized for joint battle involving the air force and AA in the Ham Rong zone. The resolution of the Current Affairs Committee and intention of HQ became orders in effect and at once, through cryptographic organizations at the various levels encrypting, decrypting, and forwarding on to the basic units along with other means of communication liaison. At the same time, on the joint network, service cryptographic organizations swiftly encrypted to go a message announcing that our aircraft were to make combat attacks, up to MR 3, MR 4, MR Northeast, and the naval service. A portion of the message said, ". . . will have four to six of our aircraft in combat over the skies of Thanh Hoa. Request units examine their signals for distinguishing the enemy and ourselves and for aircraft recognition. . . ."

Each aspect of the preparations was carefully checked over by the CP at the end. At exactly 0847, the order for the first flight to take off on a support mission – a minute later, the attack flight sortied. The decisive, lightning-like combat took place in the space of just four minutes, and our Air Force had shot down two American planes in the skies over Do Len, Thanh Hoa, and returned to base safely. This was the historically significant first victory of the Vietnamese People's Air Force, a beautiful team effort by the air force, navy, and air defense forces.

After the victory, secret messages from HQ and the organizations came pouring down to the Red Star group, with instructions to organize and draw experience from the combat, and to prepare in every respect for the next day's strike. Tactical operations plans were supplemented and fully worked out; the task of preparation went straight into the night. Exactly as estimated from above, on 4 April 1965 all hell broke loose. From 0930 the enemy mobilized the naval bombing forces on the two ships, *Hancock* and *Coral Sea*, to penetrate and strike Ham Rong. The enemy determined to use "air power" to collapse the steel bridge spanning the Song Ma seventy miles [dam] to the south of Hanoi. After using naval forces to no effect, the Americans had to launch en masse an F105 squadron of their air force for a strike. Our air force attacked. At exactly 1020 the first flight took off,with diversion its mission; two minutes later, the attack flight received orders to leave the runway. Only a few minutes later, in the skies over Thanh Hoa, our air force broke into a sudden decisive attack. Along with the navy and air defense forces, the Red Star air force group again scored outstandingly, shooting down two American F105 "Thunderchiefs," and taking part in the general feat of arms of the military and people at Ham Rong, Thanh Hoa.

The whole nation cheered with joy when they heard of the big northern area victory on 3 and 4 April,shooting down more than thirty aircraft, beating the new escalation of the American imperialists.

Messages announcing news of the victory and congratulatory messages from the Party, from Uncle Ho, and from the High Command were swiftly passed to and fro after the victory.

The Air Force-Air Defense Cryptographic Bureau extracted experience from ensuring air force command in their first victorious strike, the air force campaign to protect Vinh city. Up to the "Route 5 Campaign" in 1967, the Air Force-Air Defense cryptographic organization did a fine job of accomplishing its mission, serving continuously through fifty-six days and nights.

Service to operations having gone this way, the transmittal and receipt of cryptographic materials, professional documents, and technical means and equipment also could not be permitted to weaken, principally vis-a-vis the distant islands, the areas of responsibility, the main points subject to continuous and violent strikes. Not fearing hardship or having to lay down their lives, cadre and personnel did a good job of accomplishing the mission of the task flights, ensuring continuous connectivity for the cryptographic techniques network in the command machinery.

Prior to the violent combat and the most important mission, the branch cadre and personnel built high resolution and [sense of] responsibility. Cde Phuc, a cryptographic warrior of air defense; Cde Lung, a sapper cryptographic warrior; Cde Nghiem, subordinate to the General Directorate of Rear Services; and many other comrades had loved ones killed and homes destroyed, yet remained with their assigned units, turning grief and vindictiveness into strength to fulfill the mission. On the island of Con Co, heroic and dedicated Cde Mai Quang Dzi, cryptographic warrior, worked day and night, ensuring

the accurate sending and receiving of messages, despite the volume (some days fifty to sixty messages). There were times under the pressure of bombing, ears buzzing, head bursting, tight of breath, that the comrade continued to work. Besides accomplishing the mission responsibility of his speciality, Cde Dzi, along with hero Thai Van A, stuck close to the observation station commanding the units defeating every trick of the striking American aircraft and ships. In 1965, the Con Co cryptographic team was awarded the Military Merit decoration, second class, the comrade cryptographic personnel receiving the decoration in the third class. In MR 4, combat was furious, with many examples of heroic sacrifice by cryptographic warriors: Cde Phuc, badly wounded in both legs; Cde Mac, badly wounded in the belly and losing an eye; Cde The, taking a bomb fragment in his head; Cde Xy, burned by napalm, etc. The comrades, under pressure and in pain, stuck to their assigned positions until people arrived to treat them and replace them.

On 29 September 1966, an MR Northeast ship was attacked and sunk, and its cryptographic materials also went down. The comrade cryptographic personnel, along with some people still with the ship and regional guerrillas, resolutely groped around and brought them up.

Because the South were blood brothers, cryptographic comrades performing the mission in the North sent letters of resolve to the upper echelons, [expressing their] eagerness to go to the South to fight and work, to take part in the liberation of the nation. Comrades who received this glorious mission were elated to set out, overcoming difficulties and loss, thinking of their families in the North and the feelings and material losses of their native land due to American bombing.

In MR 3 during 1965, they prepared to support thirty-one stations and sixty-two cryptographic comrades for theaters B and C. In 1966, the Cryptographic Directorate organized for stations going to B from the General Staff and MRs 3 and 4 (consisting of forty comrades, per the tables of organization of eight regiments, a battalion of the 324th Division and MR 4 forward area) 125 sets of cryptographic systems and 13,000 sets of cryptographic organization for HQ, B5, transshipping many cryptographic organizations subordinate to the regiments, infantry battalions, artillery, units, to the tune of 475 cadre and personnel and 368 book-type systems, 23,726 sets of cryptographic key, a printing press, 25 kilograms of type and tons of equipment for Theater B.

From the end of 1967, the cryptographic organizations of the mobile reserve divisions of the High Command--the 304th, 308th, and 320th divisions – were placed on standby to prepare to enter the theater of war and were strengthened in every respect.

In the artillery branch, there were thirteen radio stations in 1967, including ten in the North. In June and September, two regiments, the 68th and 208th, went down into Theater B, the Cryptographic Section having prepared for the 68th Regiment, four stations, comprising eight cryptographers, and for the 208th Regiment, two stations with four cryptographers, etc.

In January 1968, our Central Party Executive Committee issued a resolution concerning the political mobilization of all our people to carry on to victory the mission,

"All out to beat the American aggressors." The Executive Committee and the Central Military Committee decided to open an offensive and simultaneous uprising over the entire South on Tet of 1968.

One day early in 1968, Cde Chief of the General Staff Van Tien Dzung, representing the Central Military Committee and the High Command, arrived to pay his respects and to commend the mobilization of General Staff Cryptographic Bureau cadre and personnel. The comrade thoughtfully made recommendations: the mission of the Cryptographic Directorate and the army cryptographic branch in 1968 was going to be most exacting, but most glorious. The comrades would have to concentrate their strength to the highest level in order to ensure the contents of leadership, guidance and command from the Central Military Committee, the High Command, and the various echelons of committee and office heads throughout the army – that secrecy be absolute, accuracy be the highest, and timeliness absolute. The aim of ensuring this was to secure a great victory. Cde Le Thanh Hai, Chief of the Cryptographic Directorate, on behalf of the cadre and personnel of the entire branch, pledged to the comrade chief of the General Staff to resolutely fulfill each mission that was received. Afterward, the comrade chief of the directorate sent a secret message conveying the words of congratulation and recommendation of the comrade chief of the General Staff to all cadre and personnel and mobilized the entire branch to precisely execute the recommendations of the comrade chief of the General Staff.

Serving combat both in the South and the North, each year the Army Cryptographic Directorate regularly summarized the situation, commented on the strong points and shortcomings, analyzed the causes, and derived experiences of a professional-guidance nature.

Based upon documentary summaries and recapitulations from the cryptographic organizations at the various levels, the General Staff Cryptographic Directorate compiled documents providing theory and reality in the task of professional administration and use of technique, in order to build up the cadre and personnel, documents such as "Organization and Implementation of the Cryptographic Task in Combat," "Thoroughly Grasping the Content of Compiling Code Dictionaries in order to Raise the Technical Level of Encryption and Decryption," "Checking and Predicting Errors," "Methods of Training in the Four Basic Technical Subjects and Raising the Output of Encryption-Decryption" – these were brought into play with realistic effect.

IMPLEMENTING INSTRUCTIONS CONCERNING INCREASING THE KEEPING OF SECRECY IN THE TASK OF ENSURING COMMAND SECRECY BY CRYPTOGRAPHIC TECHNIQUE VIA THE MEANS OF COMMUNICATION

From 1965, the entire nation was at war, and radio communication means became the most important means in the tasks of leadership, guidance, and command from the Party, the nation, and the army. The important economic branches, such as electricity and coal, and especially transportation lines, also used numerous stations and cryptography. In the

army, as in the branches and echelons of Party and nation, covernames [mat danh] and operational codes [mat ngu] were used in conveying essential message content via shortwave or telephone communications. The system of communications expanded, greater than before; the volume of messages sent into the ether many that had not been individually reviewed and which disclosed weaknesses and shortcomings, creating favorable conditions for the enemy's information collection and cryptanalysis. Many unessential places also organized cryptography and radio; many used incorrectly the "secret and urgent" designations; many organizations copied the transmissions and kept files of secret messages in violation of principles – [there were] even many organizations that sent messages with secret contents "in the clear"; and many branches that, on their own, set up radio stations, made up their own cover terms, operational codes or simple types of cryptographic systems, compromising many secrets through their initiatives. As a result, the work of emphasizing technique for maintaining secrecy in the task of cryptographic liaison was quite essential, and had to quickly rectify the organization and use of cryptography and radio stations in order to protect the secrecy of the Party, the nation, and the army.

On 6 June 1966, the Central Party Secretariat issued "Instructions Concerning Increased Secrecy in the Task of Radio Communication-Liaison of the Party Organizations and the Nation."[6]

The instructions laid out clearly that ". . . in a situation in which the entire nation is at war, tasks expanding rapidly every day, a number of Party and national organizations and a number of army units, in matters of radio contact, commit many serious blunders, compromising secrecy by not following exactly the instructions of the Central Party and government concerning the system of maintaining national secrecy. Such errors arise from a situation in which a number of systems have yet to be settled, but especially from cadre at all levels, all branches in charge, lacking revolutionary vigilance, not yet perceiving clearly the schemes and tricks of the American imperialists and their lackeys."[7]

The instructions reminded the echelons and branches to carry out properly a number of particulars in the maintenance of secrecy:

1. Strictly carry out instructions of the Central Party and the decisions of the government with respect to the cryptographic task system and the administration of radio stations. Pay attention to education in security consciousness and a spirit of responsibility for maintaining secrecy on the part of cadre and personnel performing the cryptographic and radio station tasks, while, at the same time, rectifying organizational and unit systems and internal regulations for protecting secrets, making them truly strict.

2. Cease the independent issuance of cryptographic systems and the use of simple systems that do not ensure secrecy.

3. Do not send messages in the clear over radio. . . .

"The Secretariat gives the Cryptographic Section of Central [the task of] research and production, allocation, direction, and control of the use of the various types of cryptography for all organizations and units. The Secretariat delegates [authority] to the appointed Party committee of the Ministry of Public Security to administer all liaison regulations of radio stations, including top secret radio stations, together with the General Directorate for Posts and Telecommunications, to research and allocate frequencies for radio stations and to monitor the use of those frequencies, to advise, and to watch over all echelons and branches in implementing the decisions concerning the administration of radio stations."

The instructions emphasized that "the protection of secrecy in communication-liaison by radio is the number one problem of importance in the protracted war between ourselves and the enemy."

Following up on the instructions from the Secretariat, on 9 June 1966 the Prime Minister issued Instruction Number 96/TTg concerning the matter of increasing the keeping of secrecy in the use of telegrams: It said in part, "Keeping the nation's secrets is a matter of national discipline: in time of war, this discipline must be more strict."

Implementing the instructions from the Secretariat and the Prime Minister's office, the Standing Committee of the Central Military Committee issued Instruction Number 48/QDTW dated 30 July 1966 concerning "The Use of Radio Stations and Cryptography in the Army." The instruction was signed by the comrade secretary of the Main Military Committee, Vo Nguyen Giap.

The Standing Committee of the Central Military Committee pointed out that "Confronted by a situation in which the whole nation is at war, notwithstanding the daily increase in urgency of the requirements of leadership and command, and the daily expansion in the sphere of liaison, our communications and cryptographic tasks basically must continue to ensure the mission. However, the use of radio stations and cryptography by the various echelons also reveals many weaknesses, and many of them serious ones. In organizing radio nets and cryptography, there are places not yet in conformity. . . . Implementation of telegraph regulations is not yet strict; namely, sending unnecessarily long messages, wordy contents, repetitious, lacking in precision. The precedence indicator used in many cases is inappropriate. From the composition and use of covernames and operational codes, the keeping of secrecy in message content, the secrecy of radio stations, the secrecy of cryptographic systems. . . still there are many shortfalls--rather many command comrades are not yet paying adequate attention to the use of radio and cryptography. . . ."

The Standing Committee of the Central Military Committee instructed the party committees in the MRs, services, branches, organizations and units in some specifics regarding the use of radio and cryptography and issued some decisions:

> All command echelons will monitor and correct communications nets for conformity.
>
> In circumstances in which it is essential to open up radio communications then you must research closely and follow precisely the principle, if you have a radio station, you must have a cryptographic [capability].

Cease the use of cryptonyms and code words produced by unit organizations to write in secret messages.

Strictly forbid the sending of messages by radio in the clear.

Constantly educate and monitor the implementation of regulations and decisions concerning the use of radio stations and cryptography; at the same time, settle strictly the violations of principles for protecting secrets involving cryptography and radio stations.

All command levels and cadre using radio and cryptography are to research the task regulations from the Central Party Secretariat and the decisions of the General Staff with respect to the use of radio and telegrams.

Military students must pay attention in training to become command cadre, to know how to use the radio and cryptography in exercising command.

Under the concrete guidance of the party committee and the commander, operations, communications, and cryptographic organizations at the various echelons must constantly oversee, research, and rectify the task of ensuring command secrecy. The Directorate of Communications-Liaison and the Cryptographic Directorate of the General Staff are responsible for guarding and tightly monitoring the implementation.[8]

In August the General Staff organized a conference to thoroughly grasp and implement these important instructions from the Central Party Secretariat, the Prime Minister, and the Central Military Committee, the composition of the conference comprising as delegates the heads of the staff, operations, communications, cryptographic, and guard [bao ve] organizations in the Ministry of National Defense, the MRs, services, branches, and the organizations of equivalent units, etc. After the conference had researched and thoroughly grasped the instructions, the General Staff disseminated concrete decisions concerning organization and use of radio stations and cryptography, and the use and administration of secret messages of various types.

Afterward, the MRs, services, branches, organizations, and units in turn organized conferences to thoroughly grasp and expand the implementation of the instructions and decisions from upper echelons by means of concrete measures.

The Cryptographic Directorate and cryptographic organizations at the various levels helped their political commissars and commanders organize and implement these instructions and decisions. At the same time, they organized for all cryptographic cadre and personnel study sessions to thoroughly grasp and carry out the instructions and decisions of the Party and to mobilize for the technical and professional task of the branch.

Taking into consideration the instructions from above, cryptographic organizations, along with operations and communications organizations, closely maintained routine collective action in organizational tasks to ensure command and constantly trained in exercises to realize the unit missions of combat preparation and of combat. Some places, such as Air Defense-Air Force, organized annual "Command Secrecy Conferences," comprising the politico-military commanders, staff, operations, cryptographic, communications, and guard for an estimation of the situation involving the implementation of regulations, principles, and decisions and to bring out new

requirements and zealous measures of implementation to produce better results in the newly developing situation.

In a number of other units, commanders also frequently announced their assessments, praising good aspects – units and individuals that performed well – criticizing units and individuals that performed incorrectly, recalling to mind the decisions or making more concrete by new decisions and putting out standing operating procedures for better execution.

OUTSTANDING ACHIEVEMENT OF THE MISSION IN THE WAR OF THE PEOPLE TO DEFEAT THE AMERICAN IMPERIALISTS' "LIMITED WAR" IN THE SOUTH

In the South, right from the opening months of 1965, the Central Directorate* [Trung uong Cuc] assessed the situation and implemented a single-minded strategy, on the basis of defeating the "special warfare" of America and her lackies, continuing to hold fast and to truly develop to take the initiative in attack, preparing in every aspect, getting ready to shatter America's large-scale counteroffensive plan for the 1965–1966 dry season.

Responding warmly and well to the fifth emulation stage and taking into consideration in their emulation communiques the entire army cryptographic branch, the Cryptographic Bureau of Southern Region HQ promulgated a plan for directly subordinate units and mobilized the entire Region cryptographic in a wave that caught up the entire military, to obtain professional knowledge as central, to serve guidance in performing the task first and foremost, to pay attention to raising the quality of the task: improvement in work style to raise productivity, improvement in work routine.

Main force troops expanded rapidly; operations were continuous and mobility high. Requirements of the organizations for support to operations were urgent, time-sensitive, and tight. Region cryptographic organized many additional cryptographic nets quickly with the expansion of the forces. The year 1965 witnessed the burgeoning of cryptographic liaison nets: the rear services net, comprising thirty-four liaison points; supply stations' net of nineteen liaison points; net for receiving supplemental military personnel, with three points; R forward area net, with twenty-five points; field combat units' net of twenty-four points; and a number of nets of units directly subordinate to R.[9]

Enemy raids destroyed cryptographic bases, and there was also concern for operational units on the move. A number of command comrades were still using many cover names and slang, making it difficult to make out messages,[10] but cryptographic cadre and personnel had to really be on their toes, enthusiastically serving timely guidance. Cryptographic of the group guarding the Region base was at one moment fending off enemy attacks on the base and at the next doing a good job of ensuring the guidance to resist the raids.

*Or Central Office, South Vietnam – COSVN – to Americans. Tr./Ed.

In 1965 the HQ of the Eastern Area MR congratulated the sector's Military Cryptographic Section: ". . .building a branch with a tradition of in-place study, an attitude of speed and accuracy in use, training and developing its ranks of cadre and personnel to respond as required to the expansion of forces and timely service to guidance – a tradition of withstanding hardship and overcoming obstacles, in production, labor, base construction and in the life and health of the unit."

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The period of "limited war" was also a period in which the main-force forces in MR 5 were built up and expanded all over the place.

Regional units were also built up to a large scale, from the provincial Military Affairs Section (provincial unit) down to district and village units. Regional troops were established in each province, from one to three infantry battalions, with districts having one to two companies.

With the rapid expansion of the armed forces of the MR, organization of the MR's cryptography also had to take giant steps in order to meet the requirements to serve guidance and command at the various echelons.

In 1965 the MR Cryptographic Section became the Cryptographic Bureau of MR 5. Divisional Cryptographic Sections, regimental and provincial unit cryptographic subsections, battalion cryptographic teams, and independent company cryptographic had unified guidance concerning professionalism from the MR Cryptographic Bureau on down. Besides assistance, cryptographic cadre and personnel went down from the North, from fifty to one hundred comrades a year, yet the MR still had to send [people] off for training and development at the Sector 5 unified cryptographic section's cryptographic school, besides which, as a matter of urgency, new on-the-job training had to be done to have sufficient tables of organization and compensate for losses. Also from these years of arduous and violent combat the ranks of cryptographic cadre and personnel of the MR had grown quickly.

Applying the Party's military line to obtain guidelines for both fighting and building – building in order to serve the fighting – in the process, MR cryptographic gradually built a fully worked-out cryptonet system in its area of responsibility. The working out of a liaison net system from MR to reconnaissance and sapper companies, joint communications with friendly units, skip-echelon liaison, etc., also was a process of striving, researching, and augmentation in order to have the right code system for each strategic area [vung], each region[dia phuong], each branch and main force unit. . . .

Besides transshipping a mass of cryptographic materials and technical means sent down from the North, the MR Cryptographic Section coordinated with the Sector 5 Party Committee's cryptographic to organize and produce a portion themselves, after which they

had to hand over and protect the security of the materials in very difficult conditions. In order to receive cryptographic materials, the cryptographic units to the south of the MR,such as Phu Yen, Khanh Hoa, and the Highlands units, had to go every two months, even at times in which they had to cross enemy-controlled lines and then get back to MR rear base areas. Close-in units had to go weekly, and comrades were killed along the way back to the MR to receive cryptographic materials. Having picked them up and returning, cryptographic cadre and personnel still had to find glue to seal them in a can, and bury them for protection – the more valuable the cryptographic materials, the more one had to be careful.

Although caught up in violent fighting and a weighty mission, cryptographic of Sector 5 had to ensure service to leadership in defeating two large enemy counterattacks in the dry seasons of 1965–66 and 1966–67. From the battle at Nui Thanh (Quang Nam), in which an American unit was totally annihilated, to the victories at Ba Gia, Van Tuong, Chu Lai, Dong Dzuong, Phu Yen, Binh Dinh, Son Tinh, etc., becoming famous as "Sector 5," the MR 5 cryptographic organizations – more specifically the encrypting-decrypting comrades and personnel in the combat units – tightly clung to the arteries of liaison through cryptography, ensuring secrecy for the command task in all of the dangerous situations. In the enemy attack at Ba Gia (May 1965), the cryptographic comrades of the 1st Regiment went very close to the barbed-wire fence of the Go Cao strongpoint to serve operations command.

Cde Dinh, cryptographer of the 1st Regiment, 2nd Division, along with the regimental HQ, was in an operation through the jungle when they encountered the enemy, firing and using artillery to fire into the formation. Cde Dinh was badly wounded. Knowing that he could not live, the comrade crept around trying to find a way of digging into the hard earth to bury and secrete the cryptographic materials, then, making an unusual effort to crawl down a small stream gully some twenty meters from where he buried the materials, he died there.When the regiment organized a search for Cde Dinh, they discovered all of the materials which the comrade had concealed. The comrade had set an example of absolute loyalty, even though giving up his life, but not permitting secret materials to fall into enemy hands. The comrade was awarded the Order of Liberation Feat of Arms, third class.

By 1966, cryptographic liaison nets had increased very rapidly,[11] especially the net of the Military Committee and Region HQ and directly subordinate elements, which rose to fifty-four points and the internal Region net, with ninety points. The total number of points on the Region-wide network was 1,156 points with cryptographic liaison arrangements.[12]

As for technique, generally speaking, about half of the units used the "scrambled" ["lon xon" – presumably two-part code] system (principally MR 9), a fourth used handbook systems (regions 8 and 9), and a few remaining units used spell-charts.

The cryptographic organizations in the South also had to research and produce many types of dictionary systems and mixed key by themselves.

During 1966 the Technique Research Section of the Region Cryptographic Bureau (which was established in October 1963 with 1st Lt Manh Phuc Sanh as chief) researched and produced 136 types of dictionary codes and 1,384 sets of cipher key. (Also that year the Cryptographic Directorate assisted the South with four types of system of the KTB4 model.)

In November 1968, the Cryptographic School of Region HQ was officially approved for establishment, carrying the designator H8. Cde 1st Lt Dao Trong Loi and 1st Lt Nguyen Duc San were in charge, the mission being to prepare cryptographic personnel and give cryptographic refresher at the platoon level for the entire Region (less Sector 5 and the Highlands). In 1967, the school trained twenty-one comrades. In 1968, the school enrolled many, training 181 mobile-element comrades of the bureau, integrated into the school.

The MR 5 Cryptographic Bureau and the Highland Front Cryptographic Bureau (under Cde Do Bong as bureau chief) also implemented the mission of training new personnel. From the rainy season of 1965 to the rainy season of 1967, the cryptographic organization of the Southern Liberation Army passed through many difficulties and trials. Base areas were violently attacked by infantry, aircraft, and armor, by bomb and bullet, and by chemical substances. Along with command organizations, the cryptographic organizations had to move frequently. The Cryptographic Bureau of Region HQ moved tons of technical means and equipment by human means and did so safely. The cryptographic organization of the Region and the MRs had to be split into many detachments to serve in many CPs. Cadre and personnel routinely had to work in underground shelters deficient in air and lighting. In areas occupied by the enemy, the fellows lived and worked in secret underground shelters, or in underground passageways. In the Mekong delta, the fellows studied and worked on battlefields with many canals and irrigation ditches, immense fields of water, encountering complications and difficulties in preserving technical means. In the Highlands, almost all cadre and personnel suffered from malaria, sapping their health. In the fighting to beat the enemy back, many comrades were heroically sacrificed (in 1966 alone, twenty-nine comrades were killed). Ensuring command secrecy over many cryptographic liaison nets that were broad and deep, with complex variations, the Liberation Army's cryptographic organizations had to meet many requirements to link-up connections on an emergency basis. Message volume grew larger daily. And in these times there was much lack of cadre and personnel. The old comrades (for the most part, up in years), suffered from disease, constantly enfeebled, unable to do a good job of ensuring the task under circumstances of endless hardships – the new comrades lacked experience, needed time to become acquainted with the environment, etc.

With steel-like confidence in the ultimate victory of the revolution, in the spirit of "because the people are self-sacrificing, sacrifice to save the nation," the cryptographic warriors of the Liberation Army were united, resolved to exert themselves to strive to go forward to fulfill the task missions of training, labor, production, and combat. Many examples of dedication to the task and heroic sacrifice occurred.

Cde Ho Minh Khan, an intelligence [tinh bao] cryptographic warrior in the enemy's rear, when captured by the enemy, displayed high revolutionary courage in the face of savage torture and their subtle enticements. Not saying one word, Cde Khan was victorious and a lofty sacrifice.

Comrade Dinh Kim Sung, a cryptographic warrior in the 1st Regiment, 2nd Infantry Division of MR 5, in a battle at Tay Son Tinh (Quang Ngai), along with his team, fought off numerous enemy attacks on the regimental CP, protecting two comrades who carried cryptographic material out past the enemy encirclement to safety. Cde Sung shot and killed three Americans and with teammates brought down one American airplane. Heavily wounded, the comrade continued to fight and died heroically on the field of battle.

In April 1967, the cryptographic team of the Kien Phong Provincial Unit was raided by the enemy. The comrades separately buried the technical means and cryptographic key in one place and the code in another, and fought until the last breath.

On the night of the 30th of January and early hours of the First of Tet in the Year of the Monkey (1968), the offensive broke out simultaneously in sixty-four cities, villages, and hamlets and regions of the countryside. The army cryptographic branch fully performed its duty, contributing an important part in the work of ensuring the elements of secrecy and surprise for the offensive and uprising. It especially did its part in ensuring absolute secrecy of objectives and the preparation period throughout the theater. From upper organizations of staff and strategy to the MR, divisional, regimental, battalion, etc., organizations, the cryptographic organizations all combined ensured secrecy, accuracy, and timeliness in the contents of leadership, guidance, and command in all points of contact. The comrades assigned in the units thrusting deeply into the cities, [those] in reconnaissance units, sappers, in the Saigon front, the Tri-Thien-Hue front, and the Khe Sanh front, the cryptographic organizations of the 308th, 304th, 320th, and 341st divisions and other units, including the first tank unit to appear in the South, having overcome fierce hardships, ensured command secrecy in 170 days and nights of continuous fighting, playing their part in the great victories of our army and our people at Lang Vay, Ta Con, and Khe Sanh.

During the time of the general offensive and uprising in the South, the number of cryptographic liaison nets in the Bureau of Encryption and Decryption of the Cryptographic Directorate increased by 60 percent; outgoing and incoming messages with the theater shot from 5,000 official messages a month up to 13,000 official messages, high precedence.

The offensive and uprising of our army and our people won resounding victory, thus upsetting the strategy of the American imperialists. The limited war strategy had failed completely; the enemy had fallen into a totally defensive posture. Likewise suffering stinging defeat in the war of destruction in the North, American President Johnson had to announce a limit in bombing, then a total cessation of bombing, with no conditions on the part of the Democratic Republic of Viet Nam, and had to agree to a quadripartite meeting in Paris.