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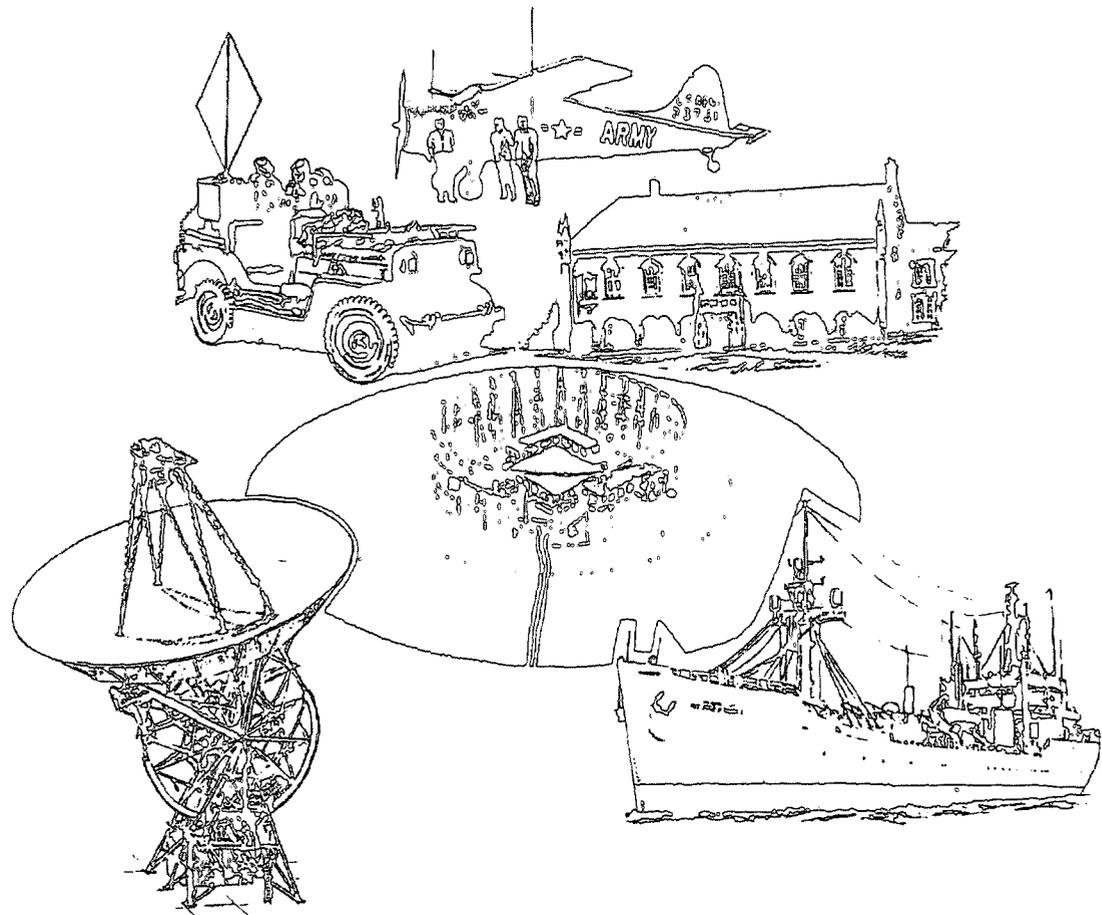
American Cryptology during the Cold War, 1945-1989 - Book III

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national security agency
central security service

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UNITED STATES CRYPTOLOGIC HISTORY



*(U) American Cryptology during the
Cold War, 1945-1989*

(U) Book III: Retrenchment and Reform, 1972-1980



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UNITED STATES CRYPTOLOGIC HISTORY

Series VI
The NSA Period
1952 - Present
Volume 5

*(U) American Cryptology during the
Cold War, 1945-1989*

(U) Book III: Retrenchment and Reform, 1972-1980

Thomas R. Johnson



**CENTER FOR CRYPTOLOGIC HISTORY
NATIONAL SECURITY AGENCY**

1998

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Foreword

(U) The publication in 1995 of Books I and II of *American Cryptology during the Cold War* by Dr. Thomas Johnson created the NSA equivalent of a "best seller." Books I and II were distributed widely to offices and individuals and have been used as textbooks in courses at the National Cryptologic School. These two volumes filled a great need in the U.S. intelligence community for a comprehensive treatment of cryptologic history.

(U) The first book in the projected four-volume series dealt with the origins of modern American cryptology, particularly its organizational struggles in the 1940s and the great debates over centralization. The second book resumed the narrative in 1960, showing how the great strides in communications and overhead technology changed, renewed, and energized the cryptologic organizations. In both volumes, Dr. Johnson analyzed the successes and failures of cryptologic activities as well as support to national decision makers. Book II also gave an overview of cryptologic operations during the Vietnam War.

(U) Book III, which discusses and analyzes cryptologic operations from the fall of Vietnam through 1980, promises to have an impact on our knowledge and cryptologic education equal to its predecessors. This was a period of retrenchment in budgets and personnel, a period of shocking public revelation of improper intelligence activities, the beginnings of declassification about intelligence activities, and a period of technology changes that rivaled those of the previous eras.

(U) This is to say, Book III deals with the period of cryptologic history that, as much or more than previous times, determined the shape and capabilities of the cryptologic organizations of our own day. For this reason, the Center for Cryptologic History recommends Book III, *American Cryptology in the Cold War: Retrenchment and Reform, 1972-1980*, as especially important professional reading for all members of the intelligence community today. Plus, it's a darn good story.

DAVID A. HATCH
Director,
Center for Cryptologic History

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Preface

~~(TS-CCO)~~ Expansion and centralization dominated American cryptologic history from the end of World War II to the end of the first Nixon administration. From 1945 through at least 1970, cryptology forged ahead in a virtually unbroken expansion of people, facilities and influence in the halls of government.

[REDACTED]

The paradox (true in general but not in particular instances) resulted from the exploitation of everything else that was important about adversary communications, and from the enforced centralization and modernization of the cryptologic system to milk everything possible from that which was exploitable. Successes were most pronounced on the SIGINT side but were also noteworthy in COMSEC.

~~(C)~~ The decade of the 1970s is remembered by most cryptologists as a scarcely mitigated disaster. Expansion came to a halt, beginning with the withdrawal from Vietnam from 1970 to 1975. The cryptologic system contracted in every way possible: people, facilities and money. Through the administration of three presidents - Nixon, Ford and Carter - the downsizing continued.

(U) Nixon's resignation in August of 1974 was followed only five months later by exposure of CIA operations by journalist Seymour Hersh. The result was a thorough airing of intelligence operations, including some by NSA, before two congressional committees, and further ignominy and public suspicion of intelligence and cryptology. Jimmy Carter came to the White House with a mandate to clean out the intelligence closet and a predisposition to do so. He set to it with a will.

~~(S-CCO)~~ But the days were not as dark as they seemed

[REDACTED]

Even with decreased money, cryptology was yielding the best information that it had produced since World War II. Two strong directors, Lew Allen and Bobby Inman, ably steered NSA through the post-Watergate mire. In the end, Jimmy Carter became a believer in intelligence, especially what was called in the White House "technical intelligence." It was he, rather than Ronald Reagan, who first arrested the decline in the fortunes of American intelligence.

(U) Reagan, who never understood intelligence as well as Jimmy Carter came to understand it, still had his heart in the right place. He directed an intelligence rebirth that resulted in a bonanza of money. The new dollars were shoveled into highly sophisticated technical systems rather than into more people (although cryptology did add

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some billets). By the end of the Cold War in 1989 the cryptologic system had lots of shiny new toys, and was using them to very telling effect. The decade of the 1980s marked the high-water mark of a cryptologic system that had been in evolution since 1945. And it had a presidential administration that believed in it.

THOMAS R. JOHNSON

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Acknowledgments

(U) A work of this size cannot be produced without the labors of many people whose names are not on the title page. Among them are NSA's archival and records management staff, with whom I have worked closely over the past ten years to find the needed files of material. Two research assistants, Yolande Dickerson and [redacted] helped ferret out materials. My thanks also go to the librarians and archivists at the presidential libraries who spent long hours in dingy basement vaults while I toiled through the national security files looking for reflections of cryptologic information. I especially want to thank Donna Dillon at the Reagan Library, Leesa Tobin at the Ford Library, and Martin Elzy at the Carter Library, but others on their staffs also assisted.

(U) The mapmaking was handled by [redacted] and [redacted]. Numerous people in NSA's photo lab helped get the pictures ready for final publication. The Center for Cryptologic History's editorial staff of Barry Carleen, Barbara Vendemia, and [redacted] probably spent more time than anyone getting the book ready for publication.

(U) The book had many readers and consultants. Most important were Milton Zaslow, Eugene Becker, and Richard Bernard, all retired NSA officials who volunteered their time to read, correct, and advise.

(U) Countless people agreed to oral history interviews to further the progress of the book. I especially want to thank four former directors: General Lew Allen, Admiral Bobby Inman, Lieutenant General Lincoln D. Faurer, and Lieutenant General William Odom, all of whom were willing to dedicate their time to set the record straight on important issues with which they were concerned. (Admiral Inman has sat for no fewer than four interviews over the years.) George Cotter and Robert Hermann provided unique information and seasoned judgments. John Devine and Marlin Wagner both gave important testimony on Bauded Signals Upgrade. The list of interviewees in the bibliography section is filled with the names of people who have provided detailed information on a host of projects and organizations. Much of these two books could not have been written without oral histories.

~~(S-CCO)~~ Finally, I was given access to two special collections which provided information of unique value. [redacted] the last incumbent in the old Soviet analysis office, A2, provided the executive files accumulated by him and his predecessors over a number of years. [redacted] of the Executive Registry loaned executive files of the deputy directors - this was generically the most valuable set of files used in the preparation of the four-book set.

THOMAS R. JOHNSON

(U) Chapter 14 Cryptologic Retreat from Southeast Asia

~~(C)~~ Direct American involvement in Vietnam ended with the cease-fire of February 1973. The Vietnamese were left to struggle on alone. [redacted]

[redacted]

(U) THE WAR IS VIETNAMIZED

~~(S-CCO)~~ The cease-fire that took effect in February of 1973 required that all U.S. military people be out of the country. The cryptologic infrastructure was already safely in Thailand, but the NSA office in Saigon had to remain to provide support to the ambassador

[redacted] Moreover, NSA was committed to advising the South Vietnamese SIGINT service, renamed the DGTS (Directorate General of Technical Security). There were NSA advisors at each of the major DGTS field sites, and as DoD people, they were technically illegal according to the peace accords [redacted]

[redacted]

~~(S-CCO)~~ As soon as Americans were out of South Vietnam, support for the military budget was reduced. The 1974 cryptologic budget almost dropped off the edge of the table, as major field sites [redacted] took huge decrements. The Air Force EC-47 operation was discontinued in May of 1974, replaced by the much smaller remnants of the ASA U-21 program. ACRP programs declined by 50 percent, as many programs were either canceled or reduced. [redacted] was closed in April, and the huge ASA station at Ramasun was ratcheted down by about 40 percent.²

~~(S-CCO)~~ The actual effect of the cryptologic drawdown varied by entity. It was most severe on North Vietnamese civil traffic, which could no longer be heard by reduced RC-135 operations forced to fly south of the 17th parallel. NSA also reported substantial reductions in its capability to monitor GDRS (General Directorate of Rear Services, and thus infiltration) traffic. On the other hand, the ability to report on North Vietnamese air defense traffic suffered little or no decline.³

(U) In Vietnam, South Vietnamese military capability did not toughen up as fast as the Nixon administration had hoped, but the picture was not entirely dark. With only partial U.S. support (mostly from the air), the 1972 Easter Offensive had been blunted. Once American troops had left Vietnam completely, American arms and supplies bolstered ARVN capabilities. Vast quantities of military hardware arrived at South Vietnamese ports. So many trucks and jeeps sat on the wharves at Cam Ranh and Vung Tau that one

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congressman wondered whether the objective of Vietnamization was to "put every South Vietnamese soldier behind the wheel."⁴ The ARVN became, by the end of 1974, one of the largest and best equipped armies in the world, and its air force was the world's fourth largest.

~~(S)~~ The SIGINT situation was very complex. Although confronted with major deficiencies in manpower and equipment, [redacted] DGTS had developed at least the rudiments of what NSA had hoped for when the Vietnamization program began. It did a good job of collecting [redacted]

[redacted] Its performance in traffic analysis was spotty, mainly because the DGTS often did not see the value. It had an outstanding ARDF capability on paper, although that program was hindered to some degree by the reluctance of Vietnamese pilots to fly in areas of hostile fire. The EC-47 fleet that NSA bequeathed to Vietnam was aging and prone to mechanical failure, which drove aircraft downtime to unacceptable levels. The DGTS used ARDF results primarily for order-of-battle rather than for tactical targeting.⁵

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(U) [redacted] at NSA with John Harney, then commandant of the National Cryptologic School

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~~(S-CCO)~~ [] had picked his SIGINTers carefully, and DGTS dedication was very high. It was hindered by a corrupt and inefficient government and by declining American financial support. Moreover, NSA had been very slow to recognize the need to give DGTS first-class SIGINT training. The philosophy in the early years had been to "buy off" the government in order to develop political support in Saigon for the build-up of American cryptologic capabilities. NSA never permitted a level of SIGINT exchange with the ARVN SIGINT organization that the wartime situation demanded, and its lack of technical expertise was consequently low. When the Americans left, DGTS had a long way to go.⁶

(U) The improvements in overall ARVN capabilities had resulted in at least a marginal improvement in the situation in the countryside. Village security was better in many areas, and the government, still corrupt and oppressive, had nonetheless announced a new land reform program. At year's end, a shaky stalemate existed between the ARVN (Army of the Republic of Vietnam) and the NVA (North Vietnamese Army). Little had changed in the government's ability to control geographical areas since the cease-fire.⁷

~~(SC)~~ But trouble was afoot. NSA reporting since the cease-fire documented huge NVA shipments to the South. Unhindered by American bombing, they brought in engineers and road-builders, and turned the Ho Chi Minh Trail into the "Ho Chi Minh Road," an all-weather highway suitable for heavy transport. By early 1975, NVA forces were better equipped than at any time in the past.⁸ They were obviously waiting for the opportunity to renew conventional warfare.

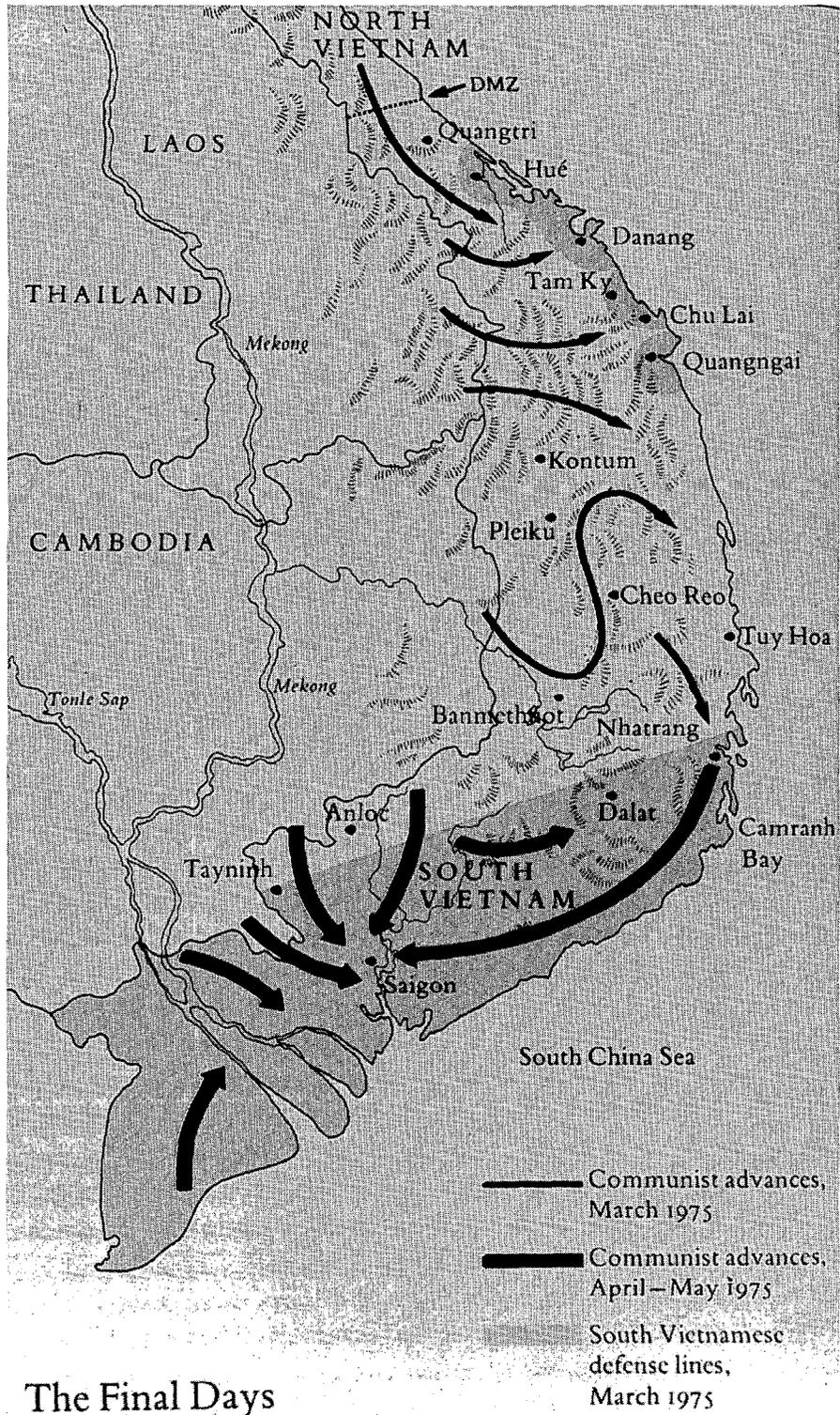
(U) THE FALL OF SAIGON

(U) Hanoi's Final Campaign

(U) The final round of the Vietnam War was apparently planned by Hanoi as early as August of 1974. With American support for the government in South Vietnam beginning to weaken, victory appeared to be just a matter of time. But the timetable was not 1975 - it was 1976. No one in Hanoi really envisioned the imminent collapse of the opposition.⁹

~~(SC)~~ Through the fall, NSA was reporting infiltration figures unheard of except prior to the 1972 Easter Offensive. The NVA launched the first attack shortly after the first of the year against Phuoc Long Province in MR 3. After the seizure of the province, Hanoi sat back to judge the American reaction. There was none, so the NVA renewed the offensive in MR 1 and 2 in March.

~~(SC)~~ About the first of March, SIGINT indicators pointed to a strong NVA attack on Ban Me Thout in the Central Highlands. The NSA office in Saigon, however, believed that the real objective was Pleiku, and that Ban Me Thout was a diversion, albeit a significant one. [] the NSA representative, accompanied by [] the DGTS commander, briefed the ARVN MR 2 commander, who refused to believe them. The



The Final Days

(U) Vietnam

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commander reinforced Ban Me Thout, but it wasn't enough, and he still lost it. Meanwhile, just as SIGINT had indicated, NVA forces fell on Pleiku.¹⁰

(U) On March 15, President Thieu made the "tactical" decision to abandon the Central Highlands. ARVN troops at Pleiku abruptly abandoned the city, and it was in NVA hands within two days.

(U) This began one of the most awesome and tragic civilian evacuations in modern times. Spurred by the military abandonment and the advancing NVA forces, hundreds of thousands of refugees jammed the single road from Pleiku to the sea, Route 14. About a third of the way to their objective of Tuy Hoa, Route 14 met with Route 7B at a town called Cheo Reo. There, streams of refugees from other towns intermixed, creating gridlock. In the vicinity of the town, NVA forces attacked retreating ARVN forces, creating a bloodbath in which thousands of refugees and soldiers were killed. NVA harassment continued the length of the road, but Cheo Reo was the worst.¹¹

~~(S-CCO)~~ The DGTS center in Pleiku kept operating until the final day, and then the center's people joined the fleeing refugees. Of the 87 men and 120 dependents who took to Route 14, no more than half ever reached the coast. The rest remained unaccounted for.¹²

~~(SC)~~ NSA was picking up indications that the North Vietnamese were moving reserve divisions south. The 968th, which had remained in Laos for its entire existence, showed up in the Kontum-Pleiku area, and there were indicators that divisions in the Hanoi area, which had never done more than train men for combat in other organizations, might be moving out.

OGA

(U) But military analysts in the Pacific were not so optimistic. USSAG (United States Support Activities Group), which was really MACV in Thailand under a different name, pointed ominously to the movement of reserve divisions, and predicted an all-out effort to take Saigon during the dry season. IPAC (Intelligence Center Pacific) hinted on March 17 that the entire country could fall.¹⁴

(U) There was no let-up. Quang Tri City, defended with such high casualties in 1968, fell to the NVA on March 20. At the same time, NVA units were besieging Hue. On March 22 they severed the coastal road between Hue and Da Nang. The old imperial capital was a captive.¹⁵

(U) *The Fall of Da Nang*

(U) With Hue cut off and withering, refugees poured into Da Nang, the last important city in MR 1 still held by the government. By March 25 the city was choked with pedestrian and cart traffic. ARVN units had turned into an armed mob and were commandeering any form of transportation available to get out of the city. Mobs swarmed

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across the airport runway, and each successive World Airways 727 landing there found it more difficult to take off.¹⁶

(S) On the 26th, [redacted] the NSA advisor to the DGTS unit at Da Nang, received a call [redacted] It was time to get out. [redacted] drove his jeep to the air strip, leaving his personal goods behind, and squeezed aboard a jammed 727. He rode the overloaded plane to Saigon with a Vietnamese child on his lap.¹⁷

OGA

(U) The next day the Shell Oil personnel departed, closing the airfield refueling operation. Mobs on the runway made it impossible to land, and that morning an American embassy cargo flight was completely stripped by the mob after it landed. At that point World Airways ceased service to Da Nang.¹⁸

(U) The next day the last Americans got out of Da Nang via ships in the harbor. On March 29 the owner of World Airways took three 727s from Saigon to Da Nang without authorization from either the Americans or Vietnamese. According to the CIA description:

At Da Nang one 727 landed and was immediately mobbed, surrounded by trucks and was forcefully boarded by GVN military on the airstrip. The plane made emergency takeoff procedures and was rammed by a truck at the left wing or hit a truck on takeoff. The plane was unable to take off from the normal runway as the VN military had it completely blocked with trucks or other vehicles. Accordingly, the plane took off on a taxiway. The pilot stated that once airborne he was unable to retract the wheels and assumed he had major hydraulic casualty. However, one of the other planes that took off (from Saigon) after him came alongside and reported that he had a body in the left wheel well that was jamming the wheel doors.¹⁹

The World Airways flight (the only one of the three that was actually able to land) arrived in Saigon with 385 passengers (about the right complement for a 747), of whom four were women, three were children, and the rest were ARVN soldiers.

~~(S-CCO)~~ The Da Nang DGTS station, at 429 people, was one of the largest in the country. The DGTS managed to evacuate two planeloads of equipment and dependents before the city fell. The operators continued operating until the site was overrun. The day before the end, the Da Nang communications operator told Saigon:

Only workers are left at the signal center and we will not be able to get out. We are just waiting to die. We will wait for the VC to come in, hold our hands over our heads for them to cut. We will be here until the last, but the government doesn't think about the workers. Please say something to ease our final hours.²⁰

Photos of Da Nang on March 30 (the day the NVA entered the city) showed only a smoking shell of a building where the Da Nang center had been. All the operators were reportedly either killed or captured.²¹

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(U) Fleeing Da Nang

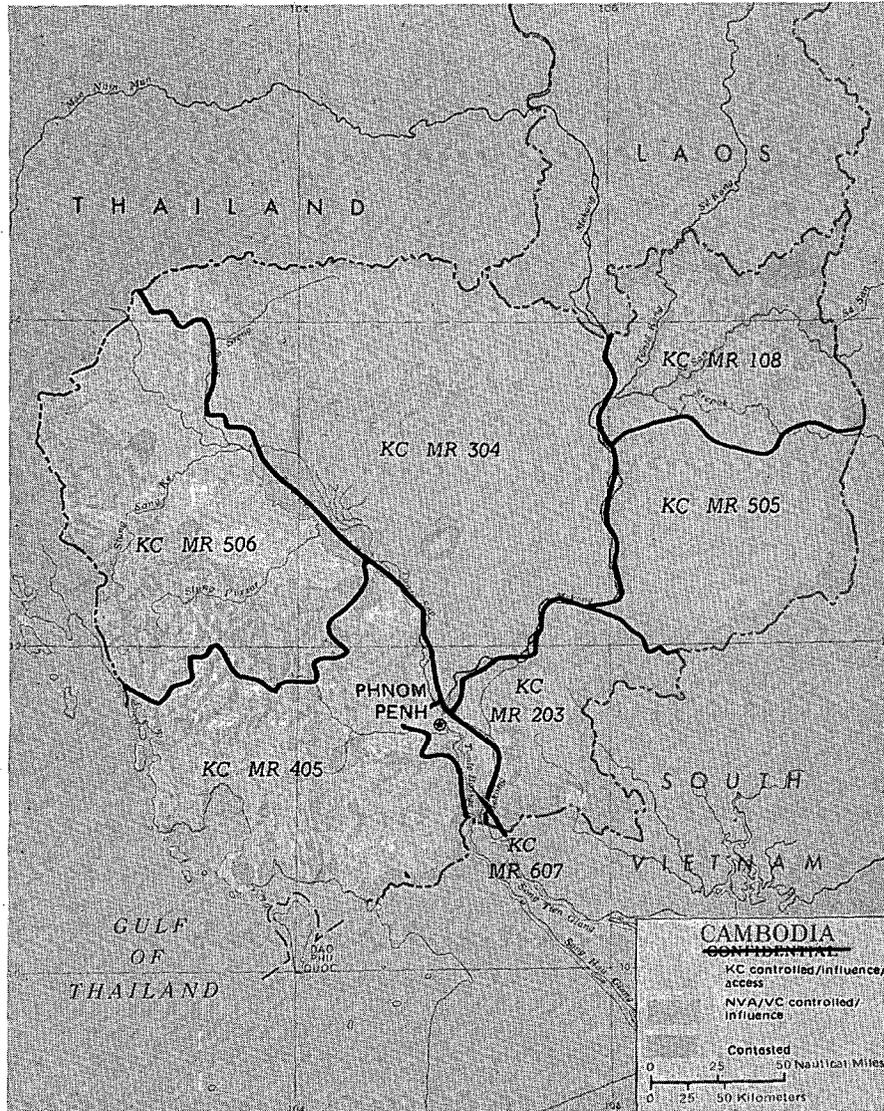
(U) *The Fall of Phnom Penh*

(U) NVA forces raced pell mell down the coast, gobbling up city after city. The advance was dizzying to hunters and hunted alike. Within a week of the fall of Da Nang, all of MR 2 was in NVA hands except for Nha Trang, which was abandoned to the enemy on April 7, but not actually entered until the 9th.²²

(U) Then a brief quiet descended on the land. NVA forces had outrun their supplies and their military plans. Hanoi began collecting assault forces for the final push to Saigon, and the Saigon government began steeling itself for what had clearly become inevitable.

(U) At that point, American attention refocused on Cambodia. As the NVA advanced down the Vietnamese coast, the Khmer Rouge organization in Cambodia had quietly but effectively squeezed the Lon Nol government into a trap. All that the government held by January of 1975 was a narrow water alley through the center of the country. The

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(U) Cambodia - the Khmer Rouge tighten their grip on Phnom Penh

communist forces held all the countryside, and began pinching off the Mekong waterway through which the capital obtained almost all its supplies. Each year the KC (Khmer Rouge) had done the same thing, but like a bulldog tightening its grip, each year they choked the river closer to the city.

(S) The American mission there was very small, only 140 people. It was well organized under an experienced ambassador, John Gunther Dean. Moreover, it had outstanding intelligence support, almost all of it SIGINT.

Moreover, the small

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ASA ARDF effort out of Thailand showed the tightening of the vise as the various KC headquarters moved closer to the city. But without American commanders to act on the information, there was little the U.S. could do. [redacted]

[redacted] But, as it was New Year's Eve, they were all at parties, and the army made no preparations whatever. Gas tanks weren't filled, guns weren't even loaded.²³

(S) On April 11, the AFSS unit [redacted] intercepted KC plans for an all-out assault on the city. Admiral Gayler, by then CINCPAC, called Ambassador Dean to say it was time to leave. Dean agreed with him, and Gayler implemented Eagle Pull, the dramatic rescue of embassy personnel by helicopter from a sport field in downtown Phnom Penh. By the end of the day on April 12 the entire operation was over, and Phnom Penh waited for the KC to march in. Most of the cabinet refused evacuation and waited for the doom that would befall them. They were all executed.²⁴

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(U) The Fall of Saigon

(S) As the NVA repositioned and refurbished for the final assault, an air of unreality settled on the American embassy. Ambassador Graham Martin believed that the government could somehow hold out until the rains began in June. SIGINT, both from the DGTS station in Saigon and from the U.S. SIGINT system, showed the NVA massing around the city. Thieu, who knew the end was near, resigned. In Washington, the White House understood what was happening. But Martin refused to heed the signs. He [redacted] [redacted] believed that the SIGINT was NVA deception. A bill was pending in Congress to send an additional \$700 million in military aid to the government in Saigon, and they held out the hope that this would pass and that it would come in time. The regime in Hanoi, Martin thought, was really getting in position to impose a coalition government, not a military victory.²⁵

OGA

(S) NSA station chief [redacted] main concern was his people. When the country began falling apart, he had forty-three employees and twenty-two dependents. The dependents he began evacuating on civilian commercial flights, along with the thousands of Vietnamese fleeing the country. Ambassador Martin put the evacuation of the government employees on hold. He feared that the SIGINT system would not support him if they left, and that the DGTS would not work without NSA assistance.²⁶

(S) The signs of collapse became more ominous, and [redacted] made almost daily trips to the ambassador's office, pleading for permission to get people out of the country. The exchanges became angry, and [redacted] went to the director of NSA, Lieutenant General Allen, for help. In mid-April, Allen sent a distressed cable to the DCI:

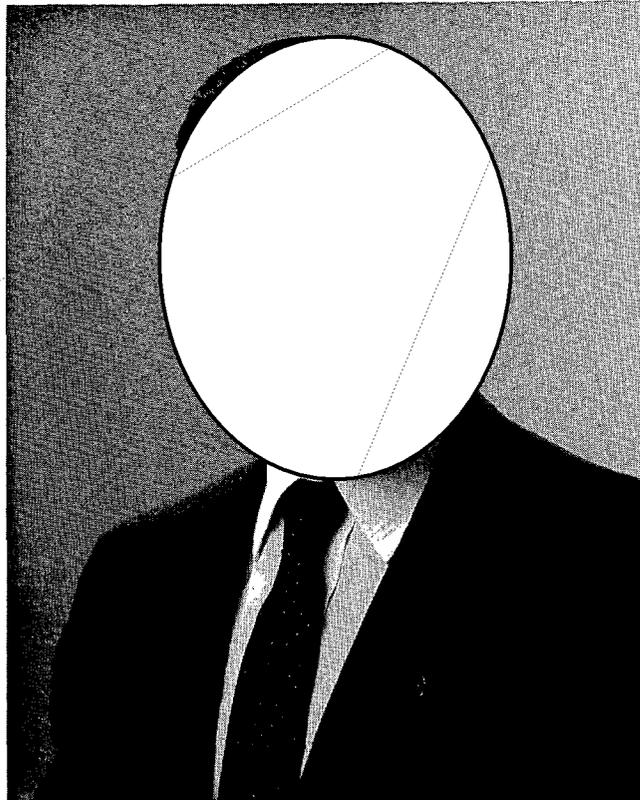
I am fully aware of the complex political issues involved in any withdrawal of U.S. Government personnel from the RVN. I wish to reiterate, however, that the safety of the cryptologic personnel in the RVN is my paramount concern.²⁷

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Not even this was sufficient to change minds in the embassy.

[redacted] "smuggled" people out of the country by buying them commercial tickets, and his staff gradually shrank to just a few. Those who remained spent almost all their time at work, often sleeping in the office rather than returning to the hotel where they were billeted.²⁸

(C) The final assault began on April 26 with the attack and capture of Bien Hoa. On the 28th, [redacted] made a final visit to Martin, with a message from Allen directing him to secure his communications and depart. Still, Martin refused. The next morning, the NVA began rocketing Tan Son Nhut, and the airfield was closed to even military aircraft. The embassy and its people were now caught in a trap, and the only escape possible was by helicopter.²⁹



(U) [redacted] the last NSA representative in Saigon

~~(S-CCO)~~ The evacuation plan was called Talon Vise (later changed to Frequent Wind). It envisioned the evacuation of all Americans and almost 200,000 of their Vietnamese allies. Evacuees would be airlifted by fixed-wing transport from Tan Son Nhut or picked up at the port of Vung Tau on the coast. Helicopters would be employed to ferry pockets of people from exposed locations to Tan Son Nhut. Politically sensitive Vietnamese, such as those who had participated in the Phoenix program, or SIGINT transcribers (the Dancers), and their families would be afforded special evacuation priority.³⁰

(U) But with the ambassador bewitched by clouds of intelligence opiates, there was no time left to implement such an orderly departure. All that was left was to use the helicopter option to try to get the Americans out. Martin, debilitated further by walking pneumonia, stood alone. With shells landing on Tan Son Nhut, the president gave the order, and Admiral Noel Gayler directed the evacuation. Martin was obdurate to the end.

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(U) Graham Martin

(U) Gayler had been assembling a vast armada in the South China Sea. It contained seventy-seven vessels, including five aircraft carriers. On the morning of the 29th, the principal carrier to be involved in the operation, the *Hancock*, downloaded fighters and uploaded choppers.³¹

~~(S-CCO)~~ At NSA, Director Lew Allen had been putting together a SIGINT support effort since mid-April. Most important was the monitoring of North Vietnamese communications to provide warning to the evacuation aircraft, since the NVA had brought SAMs into the vicinity of Saigon. A special AFSS SIGINT support team was flown to Clark Air Base to brief MAC (Military Airlift Command) crews on warning measures, should they be targeted by NVA anti-aircraft units. As it turned out, MAC aircraft were not used in Talon Vise, although they did continue to fly into Tan Son Nhut until the morning of the 29th.³²

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~~(S-CCO)~~ The [redacted] U-2 collection [redacted] served as the primary monitoring system for NVA communications, and also monitored U.S. communications to keep tabs on the progress of the evacuation. This information was passed to Gayler and on to the White House. In addition, RC-135 missions were tasked with both NVA and U.S. communications.³³

(U) When, on April 29, President Ford directed the implementation of the evacuation plan, military planes had already evacuated almost 40,000 Americans and South Vietnamese over the preceding eight days. But since the plan called for over 200,000 to be evacuated, this was just a start.³⁴

(U) The helicopters began flying from the deck of the *Hancock* on the afternoon of April 29. All through the night, the heavy thump of chopper blades was heard above the embassy. The operators at [] monitored the voice frequencies used by the chopper pilots, and sent their reports to Gayler in Hawaii.



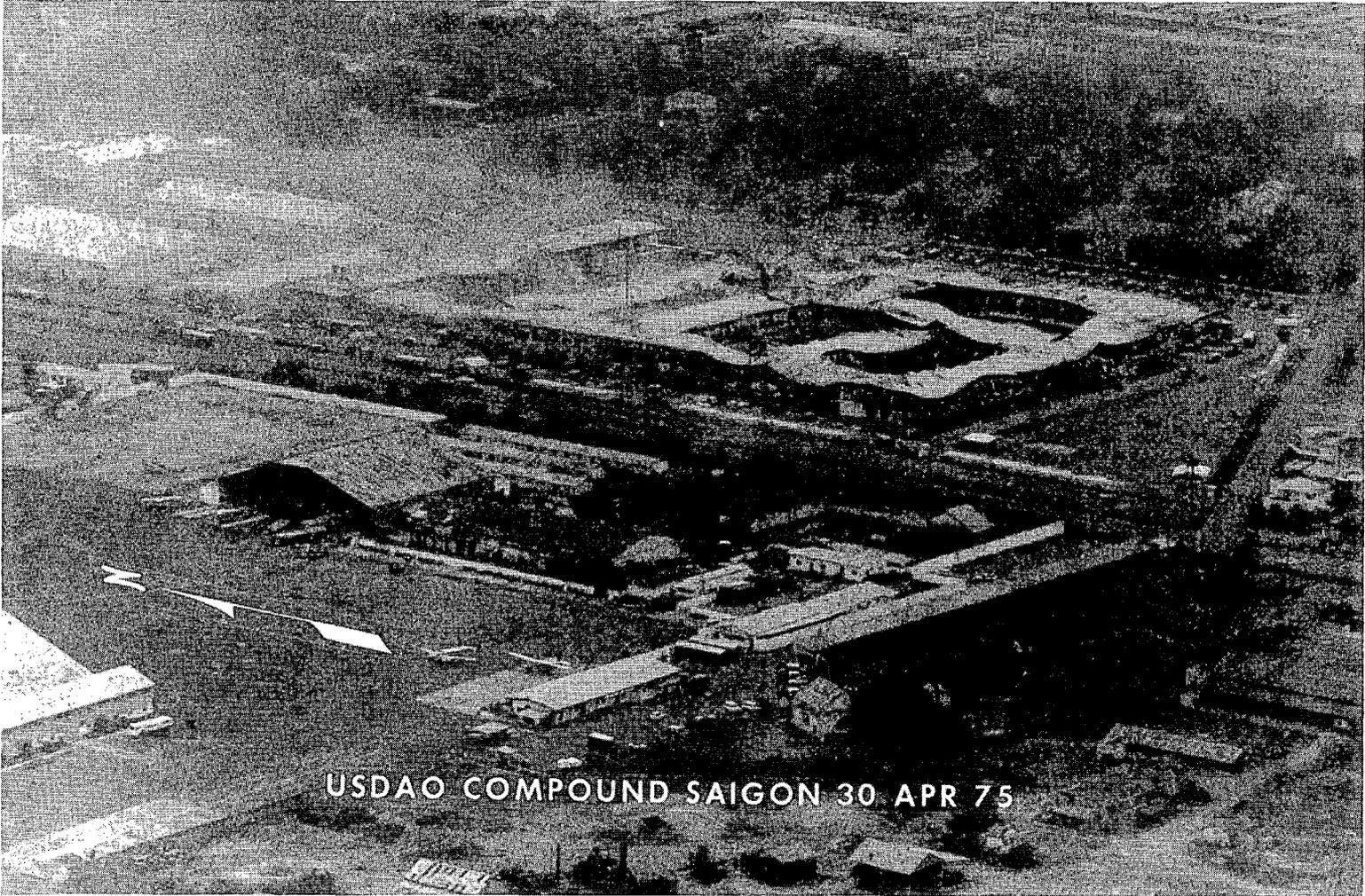
(U) Americans and Vietnamese rush for a waiting helicopter at the DAO compound, 29 April

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~~(C)~~ The remaining NSA contingent found itself marooned at their offices in the DAO compound at Tan Son Nhut. [] found that no provision had been made to get him and his people out. He contacted General Smith, the military attaché, who arranged for cars to take [] and his people to the embassy. There they boarded helicopters late on the 29th for the ride to the waiting ships.³⁵

HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY



(U) Midnight 29 April - Thernite charges bring down the roof of the DAO compound

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(C) At about midnight, Pineapple 6-1, a chopper pilot in the embassy compound, reported that he was in contact with the ambassador, who still refused to leave until the last Americans were out. Four hours later, intercept operators heard chopper pilot Lady Ace 9 tell Martin that the president had directed Martin to leave forthwith. The chopper hovered above the embassy rooftop as smoke from fires in the building made his landing temporarily impossible. Six minutes later an RC-135 operator heard the pilot broadcast: "Lady Ace 9 this is Tiger Tiger Tiger." This was the codeword indicating that the ambassador was on board.



(U) Vietnamese wait outside the gates of the American embassy as a helicopter approaches the compound.

HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY

(U) The choppers continued to pluck people off the roof of the burning embassy for another three hours. The last to leave was not the ambassador - it was the ground security force.³⁶

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~~(S-CCO)~~ It had been the largest helicopter evacuation in history. Seventy Marine helicopters had airlifted more than 7,000 Americans and Vietnamese from the embassy and the DAO compound. Among those who did not get out, however, were the DGTS operators. Saigon Center operated to the end [redacted]

[redacted] [redacted] The Dancers, DGTS linguists on duty in Thailand, were evacuated from Thailand to the United States. Their families in Saigon had already left South Vietnam and were waiting for them on Guam.³⁷

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(U) THE SUMMING UP

~~(S)~~ Not having time for an orderly departure, the Americans left behind vast stockpiles of military equipment. Along with the runways full of planes and parking lots full of trucks, there were large amounts of crypto gear. Deputy Director Benson Buffham estimated that it was the largest loss of COMSEC equipment ever. In practical terms, however, it was not as great a blow as the capture of the *Pueblo*. The crypto principles of most of the equipment had been compromised earlier, and very little actual key was known to be in Vietnamese hands. Spare parts would be almost unobtainable, and Buffham expected that the U.S. would intercept very few NVA transmissions.³⁸

~~(S-CCO)~~ The DGTS organization was captured virtually intact. At the time it consisted of more than 100 manual Morse positions, 2,700 people, and seventeen ARDF aircraft. Many of the South Vietnamese SIGINTers undoubtedly perished; others wound up in reeducation camps. In later years a few began trickling into the United States under the orderly departure program. Their story is yet untold.

~~(S-CCO)~~ Their leader, [redacted] made his way to Washington, D.C., and was hired as a linguist by NSA. He lived a quiet life in suburban Washington until his retirement in 1994. He now lives with his family in rural Virginia.

(U) THE MAYAGUEZ

(U) As if Southeast Asia had not caused America enough heartache, one last chapter remained to be written. The seizure of the *Mayaguez* had a murky beginning and to the end remained unsatisfying. It also had a cryptologic component which remains confused to this day.

~~(SC)~~ The Khmer Rouge regime which rolled into Phnom Penh in mid-March 1975 quickly turned vicious. By early May, the White House was receiving SIGINT reports of widespread executions, of forced exodus to grim countryside reeducation camps, of families separated and of retribution on an unbelievable scale. Secretary of State Henry Kissinger,

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commenting on one such [redacted] KC message, wrote to President Ford, "The magnitude of the KC liquidation effort has heretofore been unclear. It would appear that if similar efforts are being carried out in other parts of the country, this would involve a slaughter of immense proportions."³⁹

~~(S)~~ The Cambodian government of Pol Pot took a very aggressive approach to foreign relations, too. Among the territories which KC forces invaded were several small offshore islands which Vietnam and Cambodia both claimed. Among those islands was one named Poulo Wai. SIGINT intercepts of KC communications revealed a determination to hold Poulo Wai and to spread out farther into the offshore waters.



(U) U.S. destroyer off Koh Tang Island

~~(S)~~ Beginning on May 5, NSA began publishing reports of the KC seizure of Thai fishing vessels and attacks on Panamanian and Korean merchantmen plying the waters in the Gulf of Thailand. But the intelligence community focused not on these commercial depredations, but on communist attempts to intercept Vietnamese refugees escaping after the fall of Saigon. Moreover, the U.S. government organization charged with issuing notes to commercial shipping had no links to the intelligence community. No notes were issued.⁴⁰

(U) Into this nest of small-time raiders steamed an American flag container ship, the *Mayaguez*, plying a regular route between Hong Kong, Thailand, and Singapore. The first maydays from the vessel, on May 12, indicated that they were being boarded by Cambodians, and later that they were being towed to an unknown Cambodian port. An

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exploration company based in Jakarta received the broadcasts and notified the American embassy. The embassy issued the initial critic at 0503 EDT on May 12.

(U) The president was briefed on the seizure that morning. It was not a military challenge and was scarcely an impediment to commerce. But the *Mayaguez* seizure clearly represented a political challenge. The evacuation of Saigon had been a profound American defeat in Southeast Asia. Here was a chance to prevent the tiny Cambodian navy from tweaking America's nose. Coming only two weeks after the fall of Saigon, it was an event which found American military forces still in place in Southeast Asia. The president directed that a response force be assembled and the crew recovered. The discussions with the president harked back to the disastrous *Pueblo* seizure. Ford was determined to prevent that scenario at any cost.⁴¹

(U) Initial Navy aerial reconnaissance ordered by the Pentagon established that the *Mayaguez* itself was anchored a mile off Koh Tang Island, thirty miles off the coast of Cambodia. The central concern of the Ford administration became the location of the crew. If it remained on Koh Tang (where it was, presumably), one sort of rescue operation would be mounted. If the crew was transferred to the mainland, a very different operation would be called for.⁴²

~~(S-CCO)~~ Here was where good intelligence was required. NSA still had in place virtually all its intelligence assets from the war in Vietnam, and the Agency directed a total focus on Cambodian communications, [REDACTED] NSA declared a SIGINT alert. Meanwhile, aerial reconnaissance continued to blanket the area. In the early morning of May 14 (Cambodian time), an American patrol craft spotted a thirty-foot boat, accompanied by escort vessels, making a run for the mainland, with eight or nine Caucasians on the deck. Since the least desirable option was for a mainland rescue, a tactical air strike was called in, and the escort vessels were sunk. But the main vessel continued on, and the attacking A-7s held their fire.⁴³

~~(SC)~~ An early intercepted message indicated that the crew was to be taken to Koh Tang. This caused the administration to focus on the island. But that was it. There were no subsequent messages about the location of the crew, their destination or the intentions of the Cambodian government, until the very end.⁴⁴

~~(S-CCO)~~ The fragmentary SIGINT, and the lack of anything more definitive, caused the administration to focus on Koh Tang. A complex rescue operation was hastily arranged, and on the morning of May 14, only three days after the initial seizure, 200 Marines assaulted the island. They were met by heavy resistance. The 150 Cambodians on the island were armed with 75-mm recoilless rifles, claymore mines, and rockets, in addition to small arms. Marine helicopters were cut down on the beach, and eighteen Americans were killed. The Marines were pinned down on the island, and they themselves had to be rescued the next morning.⁴⁵

~~(SC)~~ Meanwhile, Navy F-4s struck Ream Airfield inside Cambodia, based on SIGINT intercepted by the USAFSS unit at Ramasun Station that the KC planned to move

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Cambodian combat aircraft there. They destroyed seventeen aircraft on the ground and put the airfield out of commission.⁴⁶

~~(S)~~ On May 14, as the Marine assault was going on, there was a flurry of messages from various KC entities referencing response to the American attacks. Early on the 15th (in Cambodia) a message (probably from Phnom Penh) ordered a KC operational authority to let the Americans "take the ship and leave" and to "let the Americans go." Soon thereafter a KC gunboat appeared near the north end of Koh Tang showing a white flag. Four minutes later the destroyer USS *Wilson* scooped up the entire crew, and *l'affaire Mayaguez* was over, except for the extraction of the Marines on the beach, which was difficult and dangerous to the end.⁴⁷

(U) The Ford administration claimed credit for a win. The crew was back safe and sound, although at the cost of eighteen Marines dead. President Ford went on television to explain the American response, and a Gallup poll taken shortly after showed the approval rating for the operation at 51 percent. To an administration which had been badly battered by its handling of the pardon of President Nixon, this was good news.

~~(S)~~ A month later the Vietnamese completed what the Americans had started. Intercepts revealed that the Vietnamese had wiped out the Cambodian garrison on Poulo Wai.⁴⁸

~~(S-CCO)~~ Although the crew was recovered and the vessel released, the *Mayaguez* incident has been counted as an intelligence failure. DIA and IPAC intelligence estimates of KC strength on Koh Tang were accurate but did not reach the deployed forces. Although this deficiency was cited in report after report, no one seemed to know why the information did not reach the users.⁴⁹ But since the only reliable information on Cambodia at the time was SIGINT, classification difficulties are readily suspect.

~~(S-CCO)~~ There were other problems relating to the affair. The response of intelligence agencies in Washington was slow, and the NOIWON system was not used. While SIGINT classification undoubtedly hampered the dissemination of critical intelligence, in the opposite direction tactical commanders refused to share details of the military operation with NSA - details which would have improved intelligence responsiveness.⁵⁰

~~(S)~~ Why didn't SIGINT reveal the location of the crew? Reviewing the action some weeks later, an NSA analyst came up with the answer. Simply put, the operation was carried out by a local commander, without checking with higher authority. Khmer Rouge local commanders had long exercised such authority, and it is reasonable to suppose that it did not halt simply because peace had broken out in Southeast Asia. The first high-level SIGINT came from Phnom Penh on the 15th and was passed to Ta Mok, the regional commander, directing that the crew be released. There was no prior direction from higher headquarters because headquarters had not directed the action in the first place, and it got involved only when the military consequences had become serious. In a radio broadcast the following September, Ieng Sary, the Cambodian deputy premier, admitted as much.⁵¹ So in the end SIGINT, the only good source on Cambodia, came up short.

Notes

1. (U) Interview with [redacted] 2 December 1992, by Charles Baker and Tom Johnson, OH 6-92, NSA.
2. (U) CCH Series VI.HH.26.1
3. (U) Ibid.
4. (U) George Herring, *America's Longest War: The United States and Vietnam, 1950-1975* (Philadelphia: Temple University Press, 1986), 231.
5. (U) [redacted] Reminiscences about DGTS, CCH Series XI.S. Robert J. Hanyok, "The Relevant Truths: SIGINT Issues of the Indochina War, 1950-75," Part 2, *Cryptologic Quarterly* (Fall 1997) 16:3, 1-50.
6. (U) Interview [redacted] 23 January 1986, by Robert D. Farley and Tom Johnson, OH 4-86, NSA; [redacted] "NSA in Vietnam: Proud and Bitter Memories," *Cryptolog* (October 1975), 3-6. Hanyok, "The Relevant Truths."
7. (U) Herring, *America's Longest War*.
8. (U) CCH, National Defense University collection on Vietnam, box 301.
9. (U) CCH Series VIII.30.
10. (U) [redacted] interview.
11. (U) Stanley Karnow, *Vietnam: A History* (New York: Penguin Books, 1983).
12. (U) CCH Series VI.HH.9.1; Hanyok, "Relevant Truths," 41.
13. (U) CCH Series VI.HH.26.2.
14. (U) Ibid.
15. (U) CCH Series VIII.30.
16. (U) Ibid.
17. (U) [redacted] et al., interview.
18. (U) CCH NDU collection, Box 320.
19. (U) CCH NDU collection, Box 323.
20. (U) CCH Series VI.HH.11.19.
21. (U) Ibid. [redacted] et al., interview; Hanyok, "Relevant Truths," 41.
22. (U) CCH Series VIII.30.
23. (U) [redacted] et al., interview; CCH Series VI.HH.26.10; NSA Archives, Accession Number 23500, Loc. CBOG 36.
24. (U) CCH Series VI.HH.27.10; 26.4.
25. (U) [redacted] interview; Karnow.
26. (U) [redacted] interview; CCH Series VI.HH.9.1.
27. (U) CCH Series VI.HH.9.1.
28. (U) [redacted] interview.

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29. (U) CCH Series VI.HH.9.1; Karnow.
30. (U) CCH Series VIII.30.
31. (U) CCH Series VI.HH.26.11.
32. (U) CCH Series VIII.30.
33. (U) CCH Series VIII.30; VI.HH.26.11; 26.9.
34. (U) CCH Series VIII.30.
35. (U) [] interview.
36. (U) CCH Series VIII.30.
37. (U) [] interview; B-WAR, 6-12 May 1975. Karnow.
38. (U) CCH Series VIII.30.
39. (U) National Security Files, Gerald R. Ford Presidential Library, Ann Arbor, Michigan; "Southeast Asia/Vietnam/Cambodia," CCH Series XVI.
40. (U) CCH Series VIII.25.
41. (U) CCH Series VIII.25; John F. Guilmartin, Jr., *A Very Short War: The Mayaguez and the Battle of Koh Tang* (College Station, Texas: Texas A and M Press, 1995), 36-37.
42. (U) CCH Series 25, "USAFSS Support to the Recovery of the SS Mayaguez."
43. (U) CCH Series VIII.25; Guilmartin, *A Very Short War*.
44. (U) Ibid.
45. (U) Guilmartin, *A Very Short War*.
46. (U) CCH Series VIII.25.
47. (U) Ibid.
48. (U) Ibid.
49. (U) Guilmartin, *A Very Short War*; CCH Series VIII.25, GAO report entitled "The Seizure of the Mayaguez - A Case Study in Crisis Management."
50. (U) CCH Series VIII.25, CIA postmortem.
51. (U) CCH Series VIII.25; Guilmartin, *A Very Short War*.

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(U) Chapter 15

Downsizing

~~(S)~~ Cryptology had waxed fat during the war years. It did not seem so to those who struggled for dollars and manpower to help fight the war in Vietnam, nor to those in other parts of the cryptologic system who desperately tried to maintain their hold on resources that seemed inexorably to slip into the pit of Vietnam. But in fact, the peak of the cryptologic system was reached in the late war years. After that, there came the reckoning.

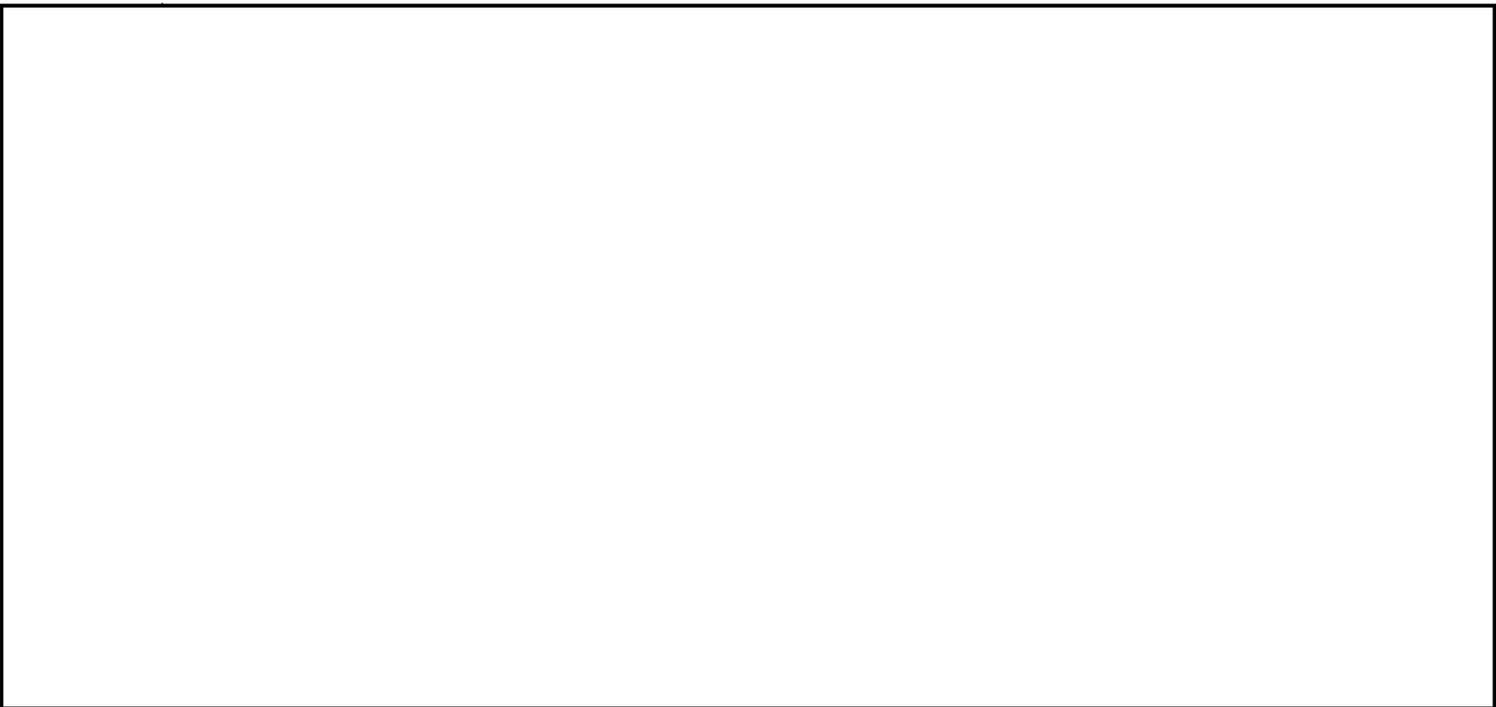
~~(S)~~ The peak years in overall field deployment came from 1967 to 1970. After that, it looked like the cryptologic system was going off a ski jump (see Table 1). The downslide lasted for a decade – field site deployment did not finally level out until 1981 – and the loss of field sites was matched by an overall decline in manpower. The cryptologic system began the 1970s at approximately 89,000 people; it ended at about 50,000, a drop of 44 percent. The funding profile, unlike that of personnel and field sites, remained fairly steady over the period and was actually higher in 1975 [redacted] than it had been in 1969 [redacted]. But the decade was one of runaway inflation, so a steady stream of dollars did not equate to the same level of resources as before.¹

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(U) THE GREAT RIF SCARE

~~(C)~~ At NSA, the work force shrank from 19,290 in fiscal year 1970 to 16,542 in fiscal year 1979, a reduction of 14 percent.² Looking back, this doesn't seem so drastic, but in 1971 no one knew how far the cutbacks would go, just that Congress had decreed a huge cutback in the federal work force, called the General Austerity in Government Expenditures Act, and that the Department of Defense would absorb the brunt. To maintain some sort of fairness, cuts would be across the board, and NSA would give up its "fair share" of manpower, regardless of mission or need.

~~(C)~~ Soon after Congress levied the cuts, in September of 1971 Admiral Gayler, the DIRNSA, issued a memorandum to the work force confronting the rumors swirling through the halls. Yes, a RIF (reduction in force) might be necessary, and it was certain that promotions would get scarce. But a RIF would be an absolute last-gasp measure. He hoped that retirements and attrition would turn the trick. This was suspect, however, because NSA's attrition was notoriously low – about one-third of the federal average. With a closed-loop personnel system and unique, nontransferrable skills, NSA employees could not go out and look for other federal jobs. (By the same token, employees of other agencies could not come looking for jobs at NSA.) What finally forestalled the RIF, however, was a device called "discontinued service retirements." NSA began offering these immediately, and they were hugely successful. In 1972 the retirement rate doubled that of the previous



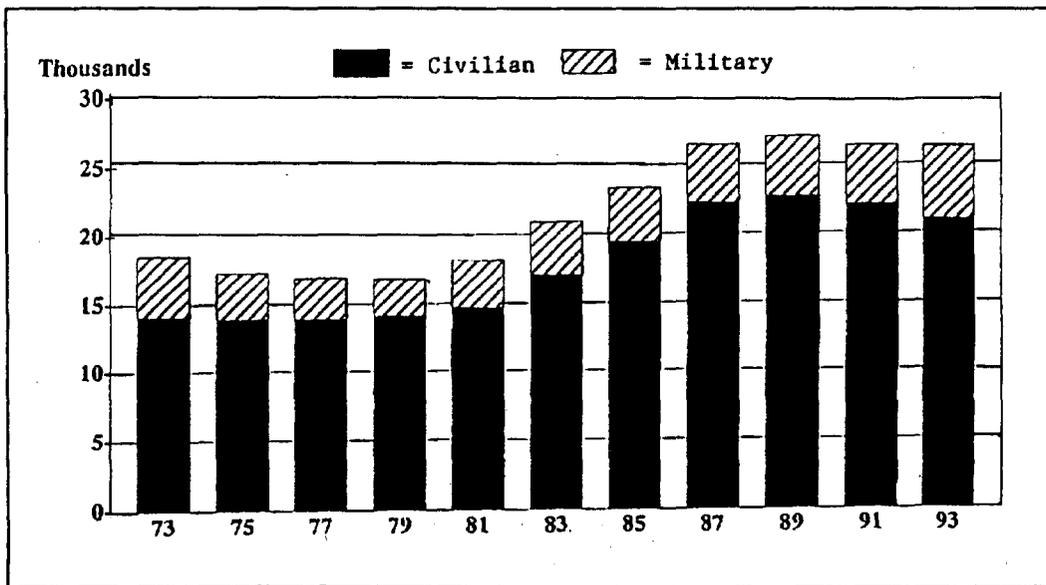
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year. In June of 1973, moreover, the Civil Service Commission authorized DoD to offer immediate annuities to individuals with twenty-five years of experience, regardless of age, or who were at least fifty years old with twenty years of service. In addition, a 6.1 percent cost-of-living increase was offered to those retiring before July 1. This did it - retirements in 1973 increased by 45 percent over the already-high level of the previous year. In the end, the RIF was never necessary.³

(C) NSA's manpower bottomed out in 1975, as Table 2 shows, and remained steady through the remainder of the decade, except for the military component, which continued to shrink slightly. It began its upward swoop in 1981 and topped out in 1989, the nominal end of the Cold War.

(C) Table 2⁴
NSA's Manpower History, 1973-1993



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(U) However, promotions were difficult to get throughout the decade. The problem was the grade structure. NSA's average grade had marched upward from 8.96 in 1965 to 10.2 in 1972 (see Table 3). NSA was advancing faster than the federal average. In 1965 its average tied it for ninth place, while in 1972 it was in fourth. The grade problem led to a promotion freeze. Though it lasted only a few months, it damaged work force morale almost as much as the talk of RIFs.

(C) While NSA experienced a modest downsizing, the Service Cryptologic Agencies (SCA) were devastated. Of the 39,000 cryptologic billets lost, almost 36,000 were military. Some [] military billets associated with direct support and training were transferred into non-CCP (Consolidated Cryptologic Program) areas, so the net loss to the cryptologic system was "only" []. The Army was hardest hit, losing [] billets from its CCP structure. Security Service lost [] percent of its billets, while NSG lost more than [] percent.⁵

(U) Table 3⁶
NSA's Average Grade, 1965-1972

Year	NSA's Average	All-Federal Average
1965	8.96	8.3
1966	8.67	8.3
1967	9.0	8.4
1968	9.2	8.5
1969	9.7	8.8
1970	9.9	8.9
1971	10.07	8.9
1972	10.2	8.9

(U) THE CLEMENTS CUTS

(C) NSA was in the middle of a desperate downsizing effort when, in 1973, it was hit with a round of budget cuts which became known as the "Clements cuts." The real author of the directive was one James Vance, who worked for Dr. Albert Hall, assistant secretary of defense for intelligence and DIRNSA's immediate boss. Vance contended that cryptology was overfed and underworked, and he embarked on a detailed study of the cryptologic system. The upshot was a recommendation to Hall that cryptology be hit with an additional three percent cut. The Vance recommendation wound up in the office of Assistant Secretary of Defense William P. Clements. Clements imposed a total CCP billet reduction of 12,999 to be completed by fiscal year 1978.⁷ (Since the cryptologic budget already showed a large reduction during that period, the real additional manpower cut was "only" 5,110 jobs.)

(C) Clements specified that reductions were to come from

1. Management efficiencies. The crux of the problem, as viewed from the DoD level, was a bloated management system with overlapping authorities - basically, "too many bureaucrats." The answer would be to squeeze out the fat, without cutting into bone.
2. Technological efficiencies. As will be seen later, NSA was looking at a raft of modernization proposals, chief of which was remoting (see p. 38), that would reduce manpower without substantial mission reductions.

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3. Mission reductions. This was a last option. At Clements's level, people felt that NSA could cut without reducing the mission.

~~(C)~~ Lieutenant General Sam Phillips, who would soon be leaving NSA, answered that NSA recognized the "bureaucracy problem" and had just completed an internal reorganization that cut 649 spaces. Phillips felt that further efficiencies could be accomplished, especially through technology, but he cautioned Clements not to be too hopeful that NSA could do it without any mission cuts. He convened a panel to work through the reductions and come up with a plan.⁸

(U) The study group had tough sledding. The first reaction was a decree from the production side of NSA that it would not take a reduction until all support billets worldwide had been cut, whereupon the support organizations replied that they could not cut support until they saw the operational reductions. The SCA representatives were similarly obdurate.⁹ It was enough to make a budgeteer tear his hair out.

~~(S-CCO)~~ They slugged away during the summer and fall of 1973. When, in October, the results were due to Clements, Lieutenant General Lew Allen had become director. By this time the committee had forged some numbers which sounded a little like a congressional budget-cutting exercise, but which were plausible on paper. Allen told Clements that

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1. Managerial efficiencies could absorb some of the needed reductions. The committee recommended cutting all deputy jobs below division level, consolidating some organizations that were split (such as A7 and A8), restricting hiring to one third of projections, virtually eliminating the analytic effort on Southeast Asia, reducing staff functions, and slimming down NSA overseas liaison offices. Overseas, support and managerial billets could be deleted by forcing closer integration of collocated SIGINT sites under the Single Service Executive Agent concept. A new concept in position tasking called COPEs (Collection Operations Position Evaluation Standard) could theoretically reduce manual Morse positions by 25 percent. Since there were more than [] Morse positions worldwide, this would have amounted to a significant savings. The SIGINT system would have to rely more on Second and Third Parties. Worldwide logistics would be shaped into a more efficient mechanism, and some logistics operations would be contracted out. Some sites, [] could be staffed by contractors. Army Security Agency and USAFSS had both built up theater-level administrative headquarters that could be eliminated without effect on the mission.

2. Technological innovations represented a higher risk option. The remoting program, [] was still unproven, but Allen banked heavily on its success to save cryptology from the worst of the Clements cuts. Only the first site [] was far enough along to count on. Other new programs with interesting and obfuscatory names like [] offered potential savings, but their contributions remained to be seen.

3. Despite opposition from Vance, Hall, and Clements, Allen relied on mission reductions to make the mythical Clements's manpower ceilings. Some stations, like the Navy site at [redacted] would be closed outright. The ASA trio of [redacted] [redacted] would be closed and the mission transferred [redacted] [redacted] The Air Force site at [redacted] would be cut, the operators moved to [redacted] and Single Service Executive Agent management would be applied to the new triservice station. [redacted] [redacted] Back at Fort Meade, NSA would stop doing [redacted]

(U) Some economies were logical yet unattainable. The creation of Central Security Service (CSS) the year before had created duplicate staffs at the NSA level. General Phillips had quietly scotched the operational effect of CSS, and the vestigial staffs had quietly taken on dual functions for the sake of economy, but the whole CSS exercise had made it more difficult to slim down because of the perceived need to keep up the appearance of a functioning CSS. The most far-reaching CSS proposal had been to bring the SCA headquarters to Fort Meade and collocate them with NSA, where, it was assumed, economies in the billet structure would be easier to effect. It had not happened and was not likely to happen in the future. The SCAs had successfully fended off collocation with "Mother NSA."¹¹

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~~(S-CCO)~~ Lew Allen had replied with some well-thought-out planning options. Some, such as the [redacted] Single Service Executive Agency, and heavier reliance on Third Parties, came to pass. The elaborate and expensive remoting option was implemented in later years, although not quite the way Allen envisioned it. But other options like major reductions in the Air Force's Rivet Joint airborne collection program fell to operational reality (and determined opposition within the parent services). Still others, like contractorization, simply transferred the cost to another budget category while yielding only minor savings.

~~(S-CCO)~~ While NSA struggled to protect its resources from the budget axe, its mission emphasis changed dramatically. [redacted] The real cuts had come at the expense of other production elements. [redacted] while G Group positions were down from 15 percent to only 8 percent.¹²

(U) THE FIELD SITES

~~(S)~~ In 1970 the collection site system stood at its highest level ever. [redacted] [redacted] But the impending withdrawal from Southeast Asia, and the budgetary pressures that were moving DoD toward contraction, were about to hit.

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~~(C)~~ The collection site posture went into sudden freefall, and by the end of the decade only [redacted] sites remained. ASA was particularly hard hit, contracting from [redacted] [redacted]. The Air Force lost [redacted] while the Navy, with a small-site posture and emphasis on worldwide DF, lost [redacted].

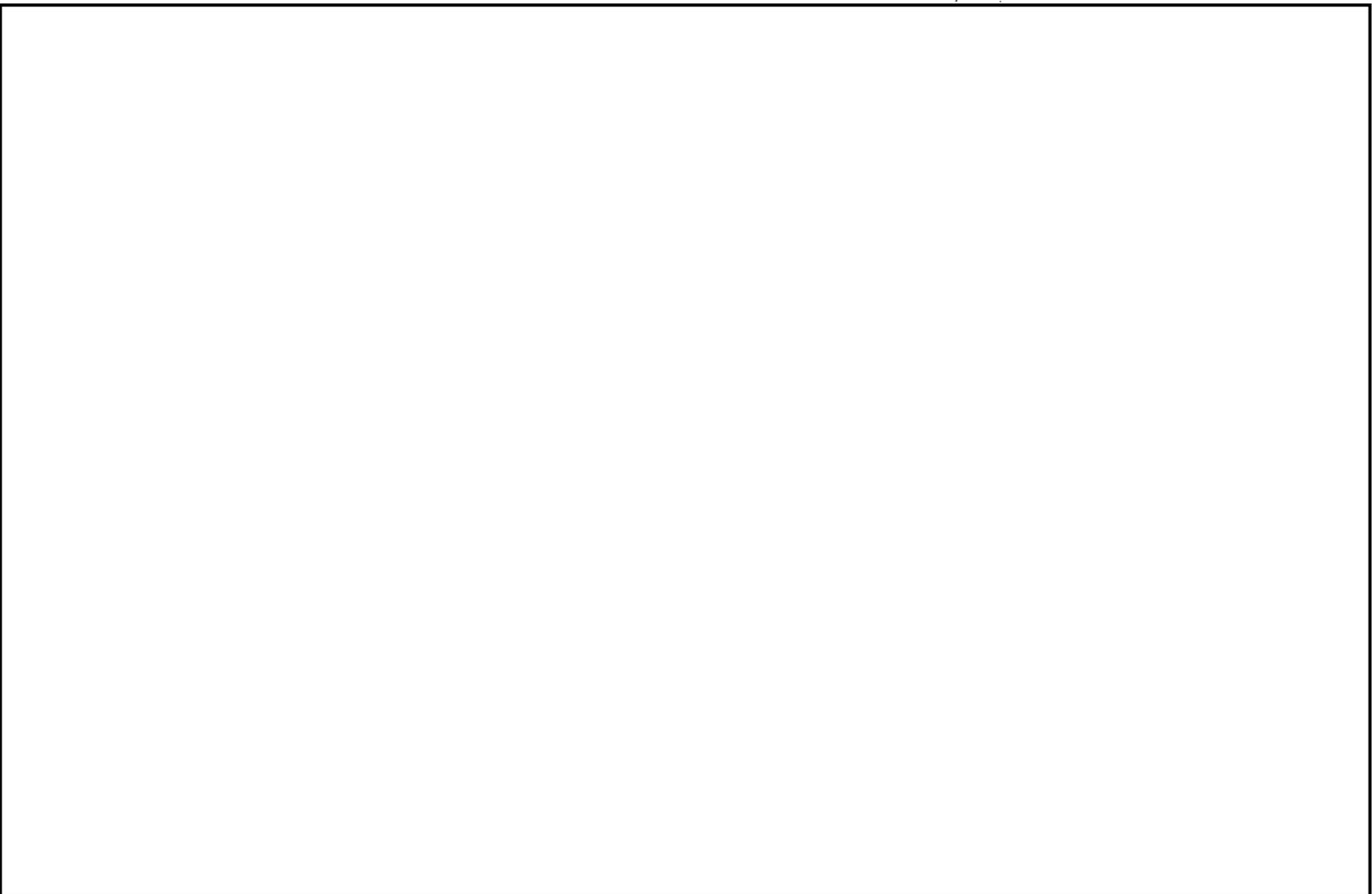
~~(S-CCO)~~ [redacted] each service lost sites to a base consolidation movement. By 1975 all Southeast Asia sites were closed except for Clark Air Base in the Philippines. In Thailand, the closure of Ramasun Station resulted from a political forceout by the nervous Thai government. [redacted]

[redacted] a massive base consolidation movement, which hit cryptologic and noncryptologic units with equal fervor, resulted in the closure of [redacted] [redacted]

~~(C)~~ The closures resulted from a complex of budgetary pressures from Congress and difficulties with the host countries. The period after the Vietnam War was one of exceptional instability in the Third World, and cryptologic sites, long held hostage to foreign aid by host governments, were battered about quite unmercifully. If they survived at all, it was usually in an altered, and less favorable, condition.

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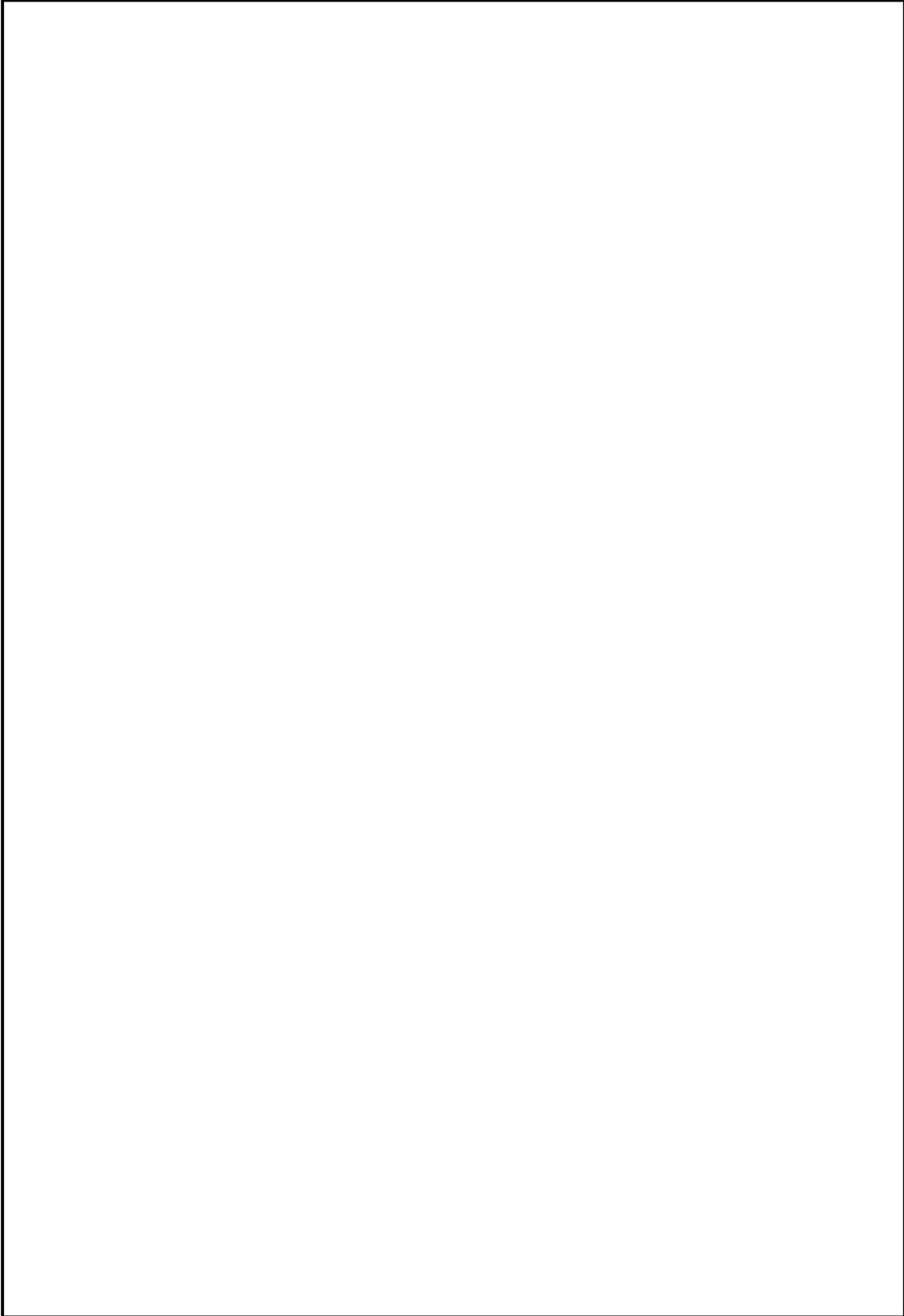


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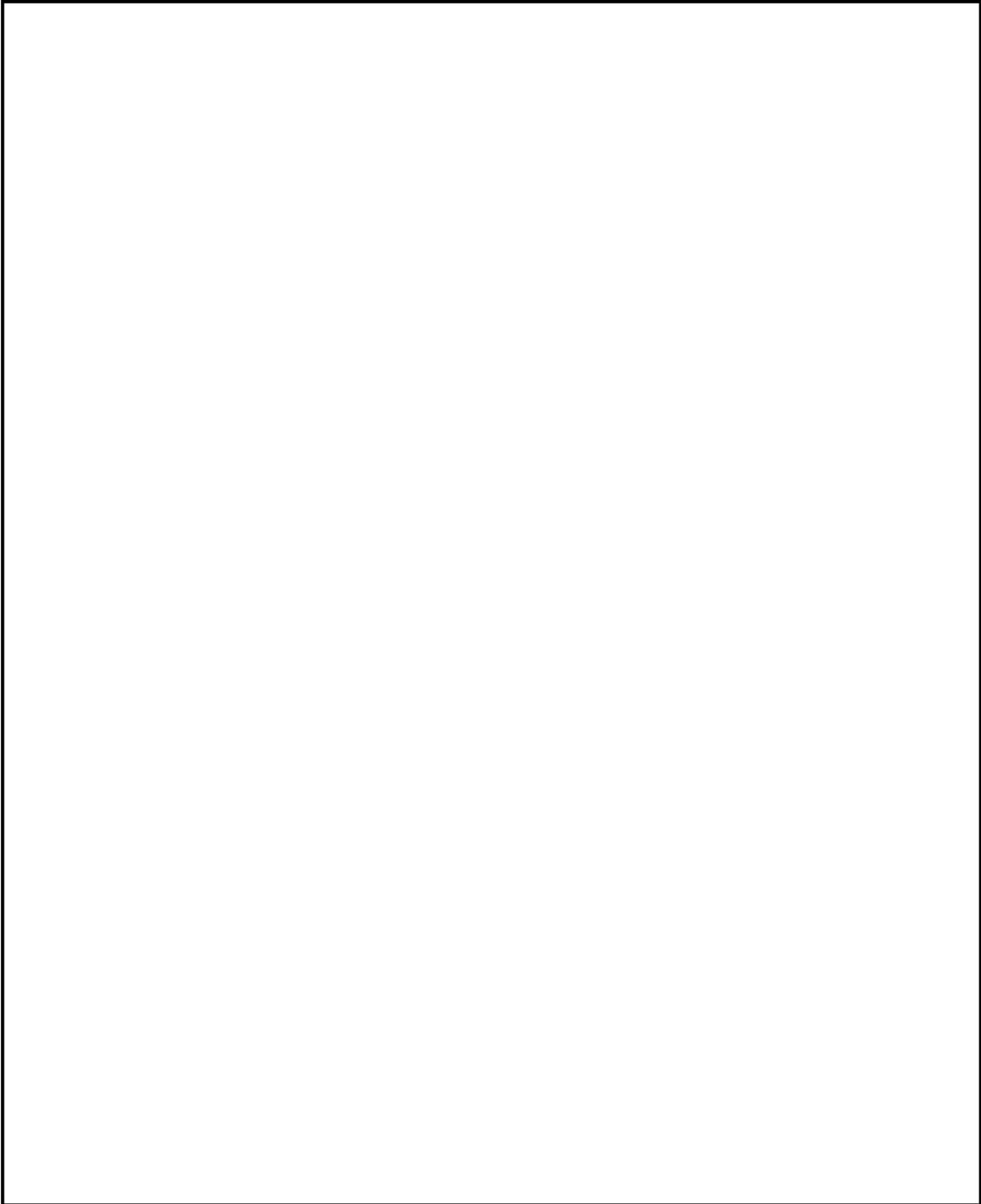


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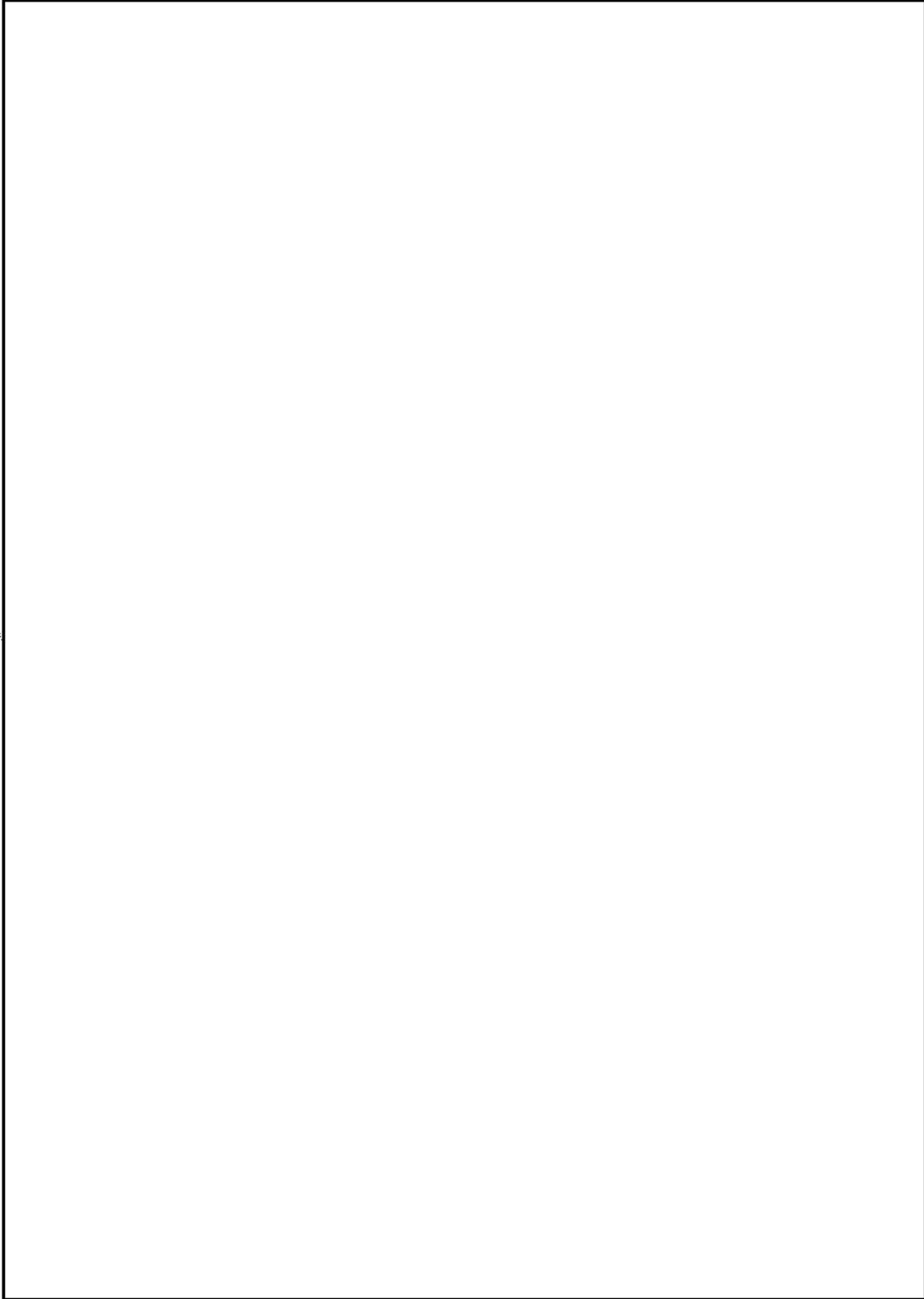
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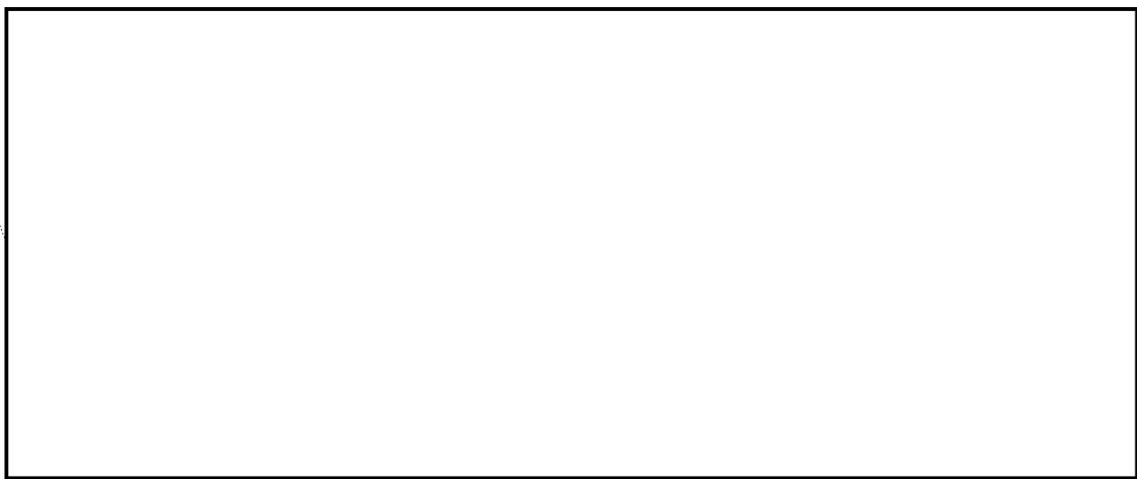
(U) Thailand

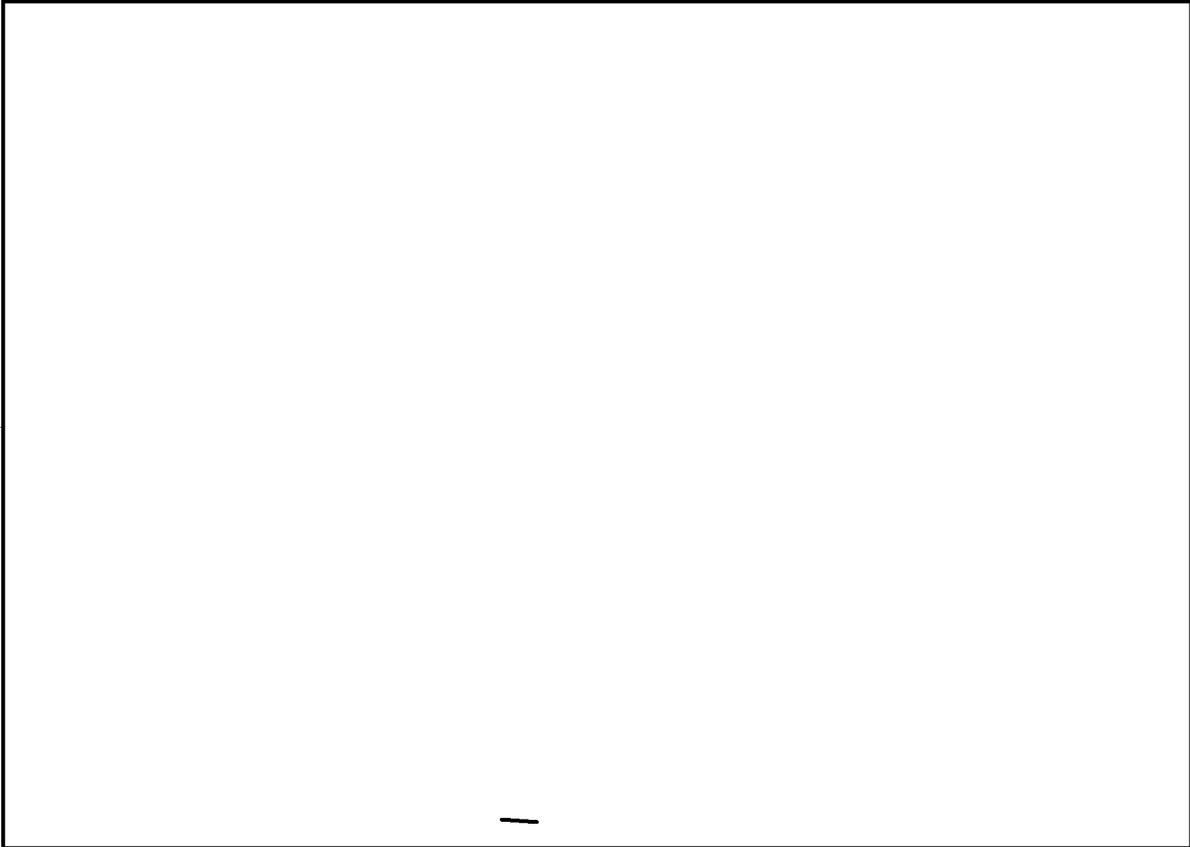
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(U) During the years of war in Southeast Asia, NSA had used Thailand as a principal base of cryptologic operations. The original ceiling of 1,000 cryptologists, while being a nice round number, soon ceased having any relationship to reality, and over the years NSA had brought more SIGINTers into Thailand, taking care of the increases with post-facto authorizations by the Thai government. After the 1973 Vietnam cease-fire, a large slug of displaced SIGINTers entered the country



(U) With the fall of Saigon in April of 1975, the end of the American presence in Southeast Asia was only a matter of time. U.S. forces began leaving the country soon after, and the formidable base structure that had come into being during wartime quickly imploded. So where did that leave the cryptologists?





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(U) Negotiations with the Thais consumed the whole of 1975, but with no resolution. The Royal Thai Government would clearly have been relieved to see the last of American forces, which by late in the year was made up of the cryptologists and virtually no one else. The American embassy was on the side of the Thais, since the loss of the last American military forces would remove a thorn in the side of American-Thai relations.



(U) But in the end it wasn't enough. The Thai government was getting fierce diplomatic pressure from the PRC, with whom they were negotiating an improved relationship. Moreover, the Thai military-run government was being squeezed by an internal communist insurgency in the bush and an urban leftist student movement emanating from the universities. With the communists victorious all across Southeast

~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

Asia, everyone, it seemed, wanted to be on the winning side. America did not appear to be the winning side.

(U) Udorn, the nearest large town to Ramasun Station, had a university, and it was full of restive students. In 1975 they got a cause, the infamous Leuchai incident. Leuchai, who managed the officer's club accounts, got into trouble with the base commander over the disposition of some monies and was summarily fired. But Leuchai had friends, and they brought out the students from the university. The base commander at Ramasun was confronted with daily demonstrations at the main gate. One day the military police, apparently thinking that the base area was sovereign American territory, arrested Leuchai, and the demonstrations got larger. In the end, Leuchai was released, the American ambassador was upset, and the Thai government, with newly stiffened spine, was ready to order the Americans out of Ramasun.²⁸

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(U) Closures and Consolidations

~~(S-CCO)~~ In [redacted] base closures all resulted from budget cuts. The [redacted] consolidation plan had actually originated from a study in 1967 which showed the economies that could be achieved by closing [redacted] and moving the people and mission to a single location. ASA organized the original [redacted] cadre in 1968, and the station was officially up and running in January 1972. Two years later the Security Service site [redacted] was closed, and the people and mission joined the triservice operation [redacted]

[redacted]

[redacted]

[redacted]

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(U) The Airborne Communications Reconnaissance Program (ACRP) also slimmed down. In the 1960s it had consisted of a welter of strategic and tactical programs under various jurisdictions and controls. An Air Staff study in 1971 showed clearly that the program could be more economically managed if it were consolidated as a single program under a single manager. The outcome of the study was the RIVET JOINT program. Under it, the worldwide ACRP programs were consolidated into a single airframe, the RC-135. Twelve airframes were modified for both COMINT and ELINT collection by E-Systems in Greenville, Texas. The Air Staff recommended that the new Airborne SIGINT Collection Program – ASRP – be jointly managed by SAC and USAFSS. Moreover, the new program operated under the Air Force’s MOB-FOB concept. That is, there would be a main operating base – in this case Offutt in Omaha, SAC headquarters – and forward operating bases in each theater. The crews and airframes would be based at Offutt and would deploy to the forward bases on TDY for missions. The new RIVET JOINT marked the first successful attempt to rationalize and centralize a large number of programs that had grown like weeds during the Cold War.³⁴

(U) Tactical Systems

(U) The war in Vietnam had displayed the inadequacies of the tactical SIGINT systems that had rusted away during the era of nuclear dominance. Vietnam produced a spate of development programs to fix the problem.

(C) The Army came up with several entries. [redacted] was an airborne communications intercept, DF, and jamming system aboard RU-21 dual-engine aircraft that had proved so useful to the ARDF program. [redacted] supported tactical commanders at brigade, division, and corps levels. A second program, [redacted] was a modernized version of the ARDF program. [redacted] The Army, being decentralized, fragmented its SIGINT effort.³⁵

(C) The Air Force, being farthest behind the curve, had to develop a system from scratch. Their entry was [redacted] a complete tactical SIGINT support system based in mobile shelters. The collection system, [redacted] was mostly airborne - two mobile shelters stuffed into a slightly modified C-130. Processing and reporting were done in tents and shelters located well back of the combat zone. As with Air Force doctrine generally, this system was highly centralized. [redacted]

(C) The Navy was least affected by the commotion in Vietnam. What was needed was simply an updating of shipboard SIGINT support that had existed since World War II. The new program was called [redacted] an automated system designed to work against mobile naval emitters, [redacted]

(C) Even NSA came up with a "tactical" system. The [redacted] program, an ELINT innovation, permitted NSA to deploy ELINT intercept equipment [redacted]

[redacted]

(U) REMOTING

[redacted]

(S-CCO) The origins of cryptologic remoting were in 1962 and stemmed from an idea attributed to [redacted] an NSA engineer. The first communications satellite, Telstar, had just been launched and, with it, a new era in communications. [redacted] in a paper entitled "A Proposal for Utilization of Satellite Relays to Provide an Early Warning and Extended SIGINT Capability within the ZI," proposed that NSA look into the possibility of remoting signals intercepted in one location to another. The technology, he felt, could be developed to send large chunks of the RF spectrum from an overseas location to a location in the United States. [redacted] justified the effort that would be required on the basis of improved timeliness, reduction of SIGINT people overseas, and cost-cutting.³⁹

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(S) The proposal generated interest, and in 1964 NSA conducted experiments to see if what [redacted] proposed was really possible. [redacted]

It worked, and everyone was ecstatic. But for several years, that was it. The idea languished, awaiting sponsorship.⁴⁰

(S-CCO) [redacted] idea was revived in 1967 when K Group (which at that time dealt with collection and signals analysis) established a study group headed by [redacted]

Within a year [redacted] had produced a preliminary concept for remoting [redacted] back to a location at NSA.

[redacted] sites were small, and the [redacted] group simply discarded them from the study because the expense of installing the operational and communications equipment for such a small site would not be feasible. The group took it as a given that the technology was there - what was needed was practical application.⁴¹

(S) The [redacted] idea did not have many sponsors in the early days. In particular, Dr. Albert Hall, assistant secretary of defense for intelligence, was known to oppose it as too expensive and technologically risky. But within NSA Dr. Robert Hermann adopted it as his own, and he set out to get sponsors. He created an "Industrial Advisory Board" to study the issue and enlisted important people from private industry to help him. His first ally outside of NSA was William Perry of ESD, who would later become secretary of defense. Within NSA, he had the support of Oliver Kirby, the assistant director for production. With this level of support, Hermann embarked on a major feasibility study.⁴²

(S-CCO) The original [redacted] study, published in 1969, proposed to remote [redacted] to collection centers in the United States. Candidate locations were [redacted]

[redacted] The follow-on system development plan produced the following year planned for an initial system, called [redacted] in which [redacted] in the U.S. The presumed success of the pilot would result in a wave of support, and by 1975 [redacted]

[redacted] The savings would be staggering. Overall CCP [redacted]



(U) [redacted]

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economies would range [redacted] could be eliminated. Some [redacted] cryptologists overseas would come back. But the up-front costs were equally huge [redacted] for the system through 1978 and [redacted] to acquire dedicated communications satellites that were presumed to be required.⁴³

(S) [redacted] produced arguments galore. The biggest dispute was over the [redacted] approaches. [redacted] had originally envisioned remoting large portions of [redacted] to the States,

[redacted]

(C) The competing technology came to be called the long screwdriver approach. In this method, the operator sitting in the U.S. would remotely tune a receiver in an overseas location.

[redacted]

(S-CCO) [redacted] also produced arguments over management. Theoretically, every intercepted signal in the world could be collected into a single facility, if not a single room. Where would such a facility be? Was there enough room at Fort Meade? How would it be managed? What would the relationship be between collection and processing? Would operators accept being jerked out of their overseas bases and dumped in the high-cost Washington area? What kind of morale problems would result? Many elements of the Production organization lobbied for a [redacted] simulation facility to test out all these problems - a fly-before-buy approach. The engineering side naturally focused on the technical hurdles and ignored the management implications. A [redacted] simulation center was planned, but was never implemented. NSA bought the technology without testing the management problems first.⁴⁴

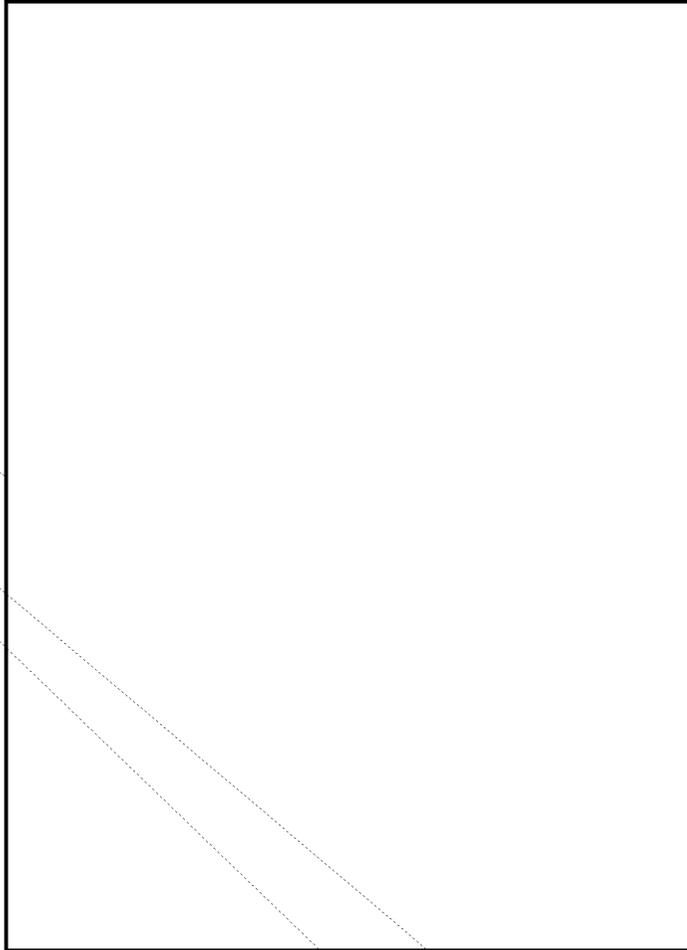
(C) Ultimately, NSA succumbed to cost considerations and went for the long screwdriver technology. Even under the [redacted] program, however, communications requirements were stupendous. For instance, remoting the [redacted] [redacted] This was why NSA became the largest single user of DoD communications satellite capacity.⁴⁵

(S-CCO) Dr. Hall continued to hold onto monies that NSA wanted [redacted] Hermann's approach was radical - rather than scale back on the program to reduce the threat, he sent Hall a new proposal [redacted] virtually wiping out the SCE component of the cryptologic system. All CONUS operator billets could be civilianized, less a 25 percent residual for tactical support. Financial

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savings from pulling people out of overseas locations and putting them in a single collection facility would be huge, both in direct operational costs and in logistics and overhead. Hermann's forceful approach finally got a tentative go-ahead from Hall.⁴⁶



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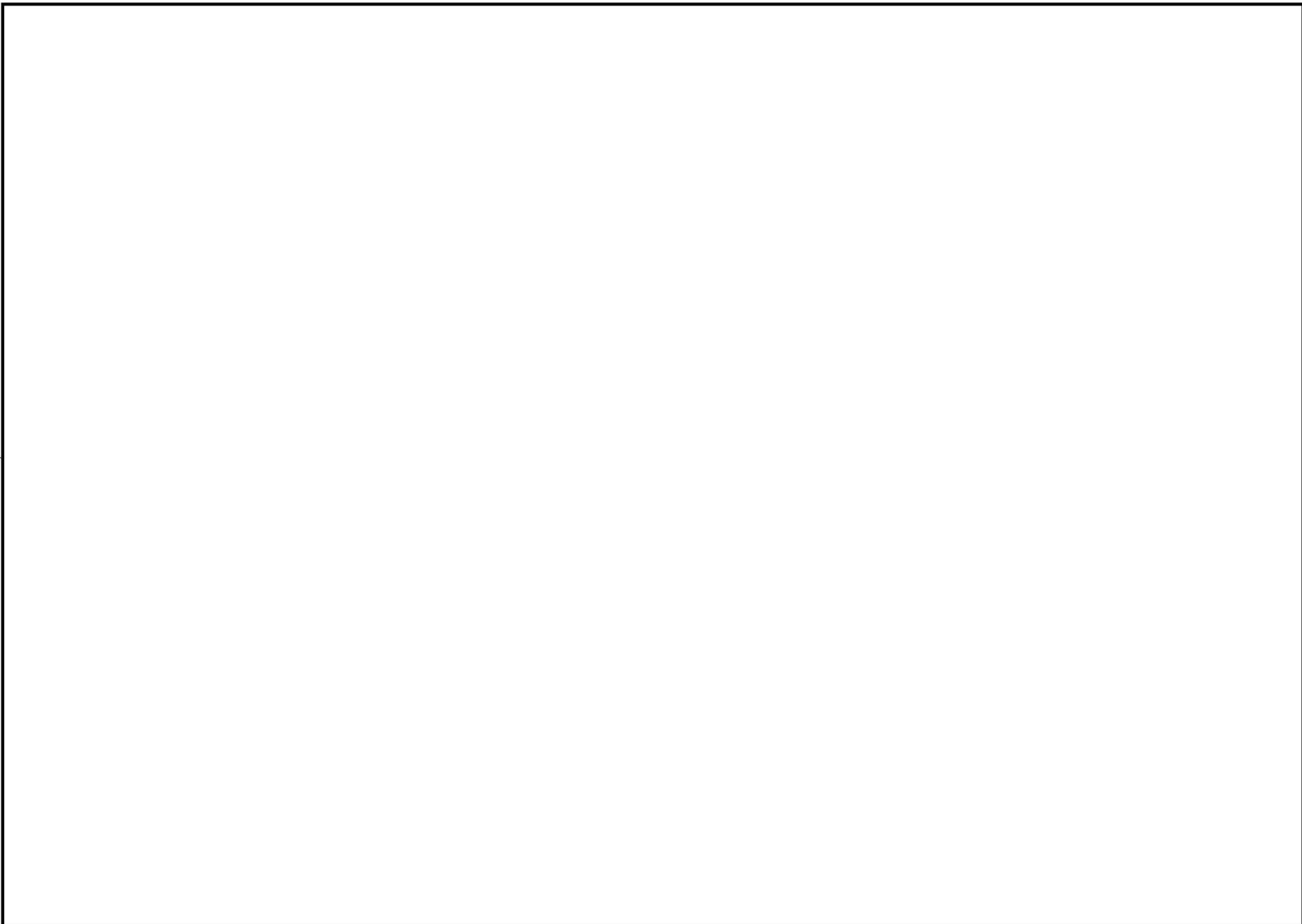
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(U) [redacted]

(U) When the Clements cuts hit NSA in 1973, the [redacted] concept seemed a heaven-sent solution to the budget crisis. Lew Allen became the director in August 1973, and he barely had time to put his hat down before confronting the issue. Remoting seemed to be the answer, and he promptly convened a panel to consider it. He called it the [redacted] Task Force.

(U) Allen came from the high-tech side of the Air Force, and he was well connected with private industry, which he considered an essential partner in solving big problems. The task force was composed of only four NSA people, plus representatives from fourteen companies, including such industry giants as Lockheed, Hughes, and IBM. Lew Allen



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understood that the cryptologic community could not work its way out of this jam without help.⁴⁸

~~(S-CCO)~~ He instructed the group to consider only [redacted] They had two options: modernize [redacted] or use remoting. (Standing pat was not an option.) The objective was clear – they were to devise a SIGINT system that was much less costly than the one that existed.

~~(S-CCO)~~ The task force cast aside casual tinkering and recommended radical surgery. Although they did consider modernizing the overseas sites, they ended up recommending that the whole lot be remoted. [redacted] Task Force recommended that every site remaining [redacted] be remoted to Fort Meade [redacted]

~~(C)~~ Savings under the modernization option would be significant, but using the remoting concept they would far exceed the 3 percent cut mandated by Clements (see Table 5). Of course, DoD would have to wait a few years for the return. The entire remoting scheme would cost [redacted] to be spread over a period of years from fiscal year 1976 to fiscal year 1981. Although each year's personnel savings would be significant, the procurement costs would not be completely amortized until fiscal year 1983 – fully ten years down the road.

~~(C)~~ Full remoting would require that [redacted] data would pass [redacted] back to Fort Meade; [redacted] [redacted] To remote such huge volumes of data, the panel recommended that NSA purchase its own satellites rather than rent from the Defense Communications Satellite System (DCSS). Purchase would be more expensive, of course, but the amortization difference would only amount to less than a year.⁵⁰

~~(S-CCO)~~ Table 5⁵¹
The [redacted] Plan Costs

	Current	Remoting	[redacted] modernization
Number of positions [redacted]	[redacted]		
Personnel			
Annual CCP cost			
Estimated cost of remoting			

~~(S-CCO)~~ The organization at Fort Meade would be a nightmare. Here, the panel only hinted at solutions, but did originate the concept of the "problem center," which was to

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have a long life. At the Fort, signals would be shunted to areas that worked certain problems - for instance, all [redacted] would go to one area. This would permit customized processing operations and would reduce duplication. For instance, the problem center [redacted] would not require a timely reporting mechanism, while the problem center (or "PC") [redacted] would not need equipment [redacted] for transfer to the computer complex in the basement.⁵²

~~(C)~~ Consolidation at NSA would permit the introduction of many efficiencies that might be unaffordable in a dispersed system. The panel foresaw the automation of search through the employment of automated scan systems [redacted]

[redacted]

[redacted]

(U) [redacted]

~~(C)~~ What emerged from the private sector's blue-sky planning was an implementation plan, [redacted] It represented what the cryptologic community could get cranked into the CCP, and it was much different from the [redacted] system. Under it, NSA scaled the system back to [redacted] a far more realistic plan, more in line with the original [redacted] planning (see Table 6).

[redacted]

~~(S)~~ Out of the [redacted] billets at the [redacted] affected sites, [redacted] would remain overseas to do tactical support, Peacetime Aerial Reconnaissance Program, and other operations that would be difficult (if not impossible) to perform from Fort Meade. Some [redacted] people would

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be moved back to the collection operation center at NSA, and the billet savings would be only [redacted]. The plan allowed for some modernization at the residual overseas sites, but offered specifics in only one case - the Navy site [redacted] which would stay largely untouched by remoting [redacted]. At Fort Meade, the "problem center" organizational scheme was adopted from the [redacted] plan.

~~(C)~~ While the [redacted] plan remained through the end of the decade, harsh realities soon intruded. Remoting would incur very high initial costs, and the ever-present Dr. Hall was willing to proceed initially with only one site. [redacted]

[redacted]

(U) Not even [redacted] survived intact. Pieces of it were eventually implemented, but they resulted from pressures and events not even anticipated when the plan was written. The name survived, but the eventual system could not have been recognized by the original planners.

(U) [redacted]

~~(S)~~ The first remoted site had nothing to do with the grandiose plans originating from the [redacted] planning efforts [redacted]. Instead, [redacted] became the guinea pig for the whole system.

[redacted]

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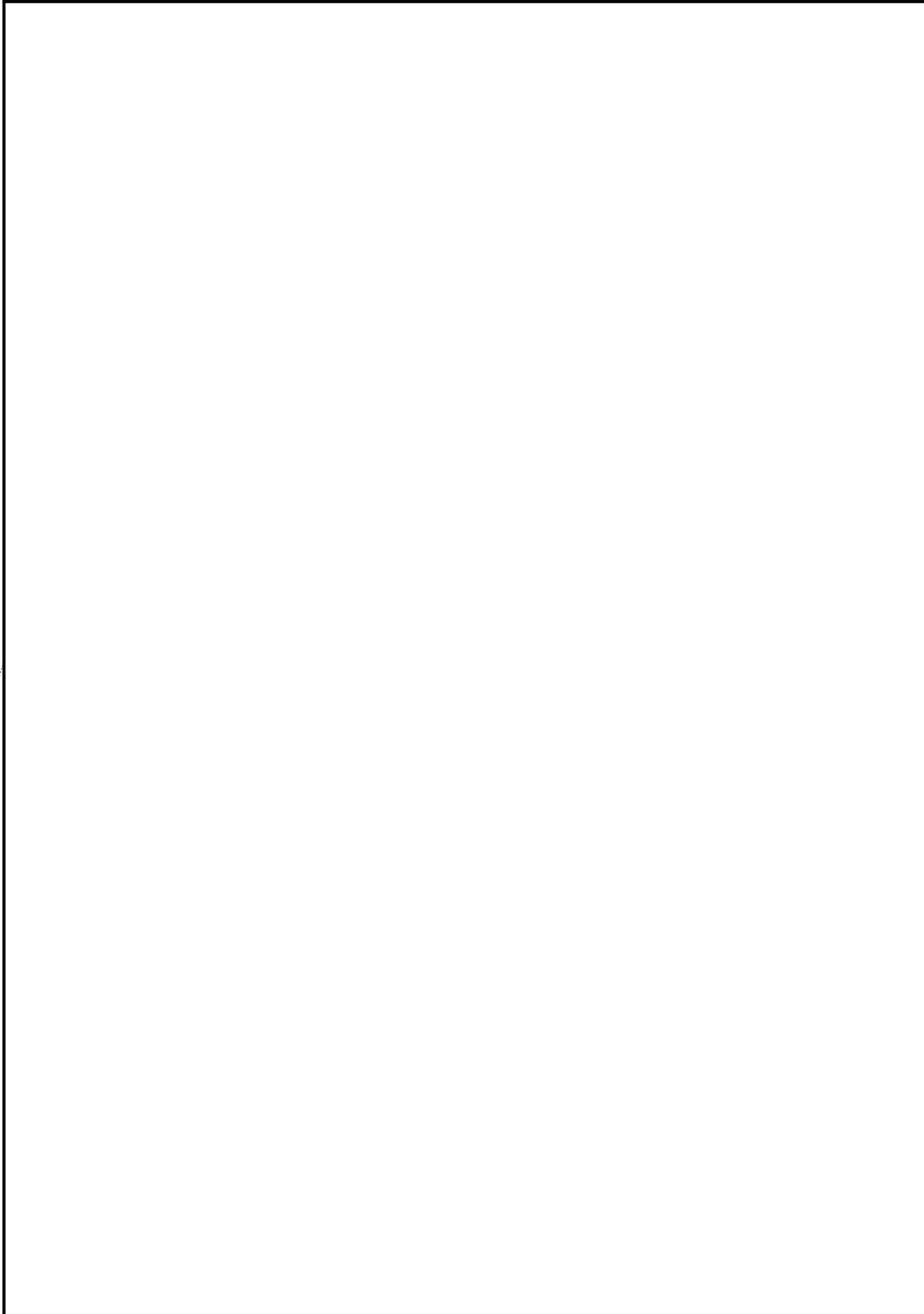


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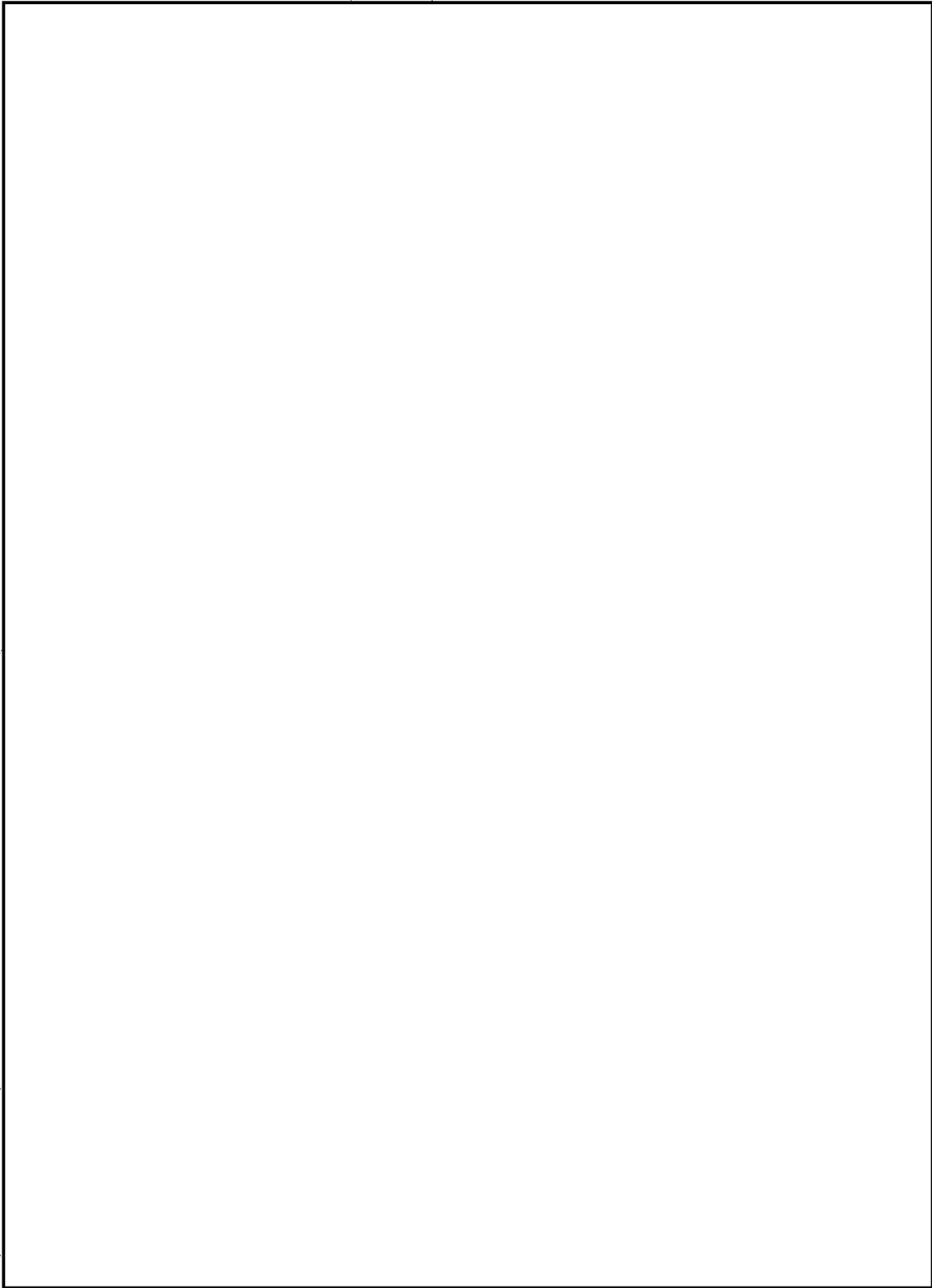
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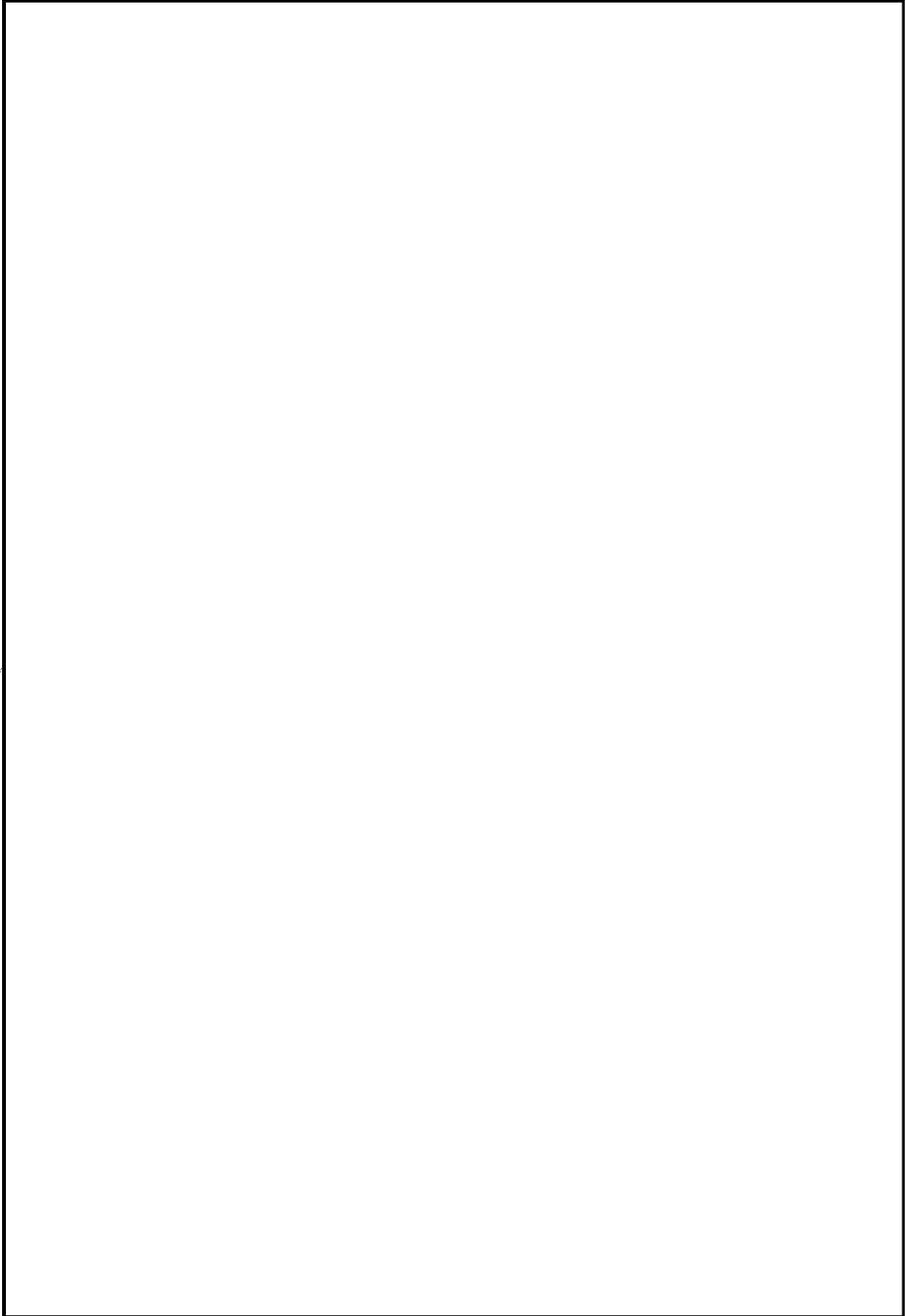
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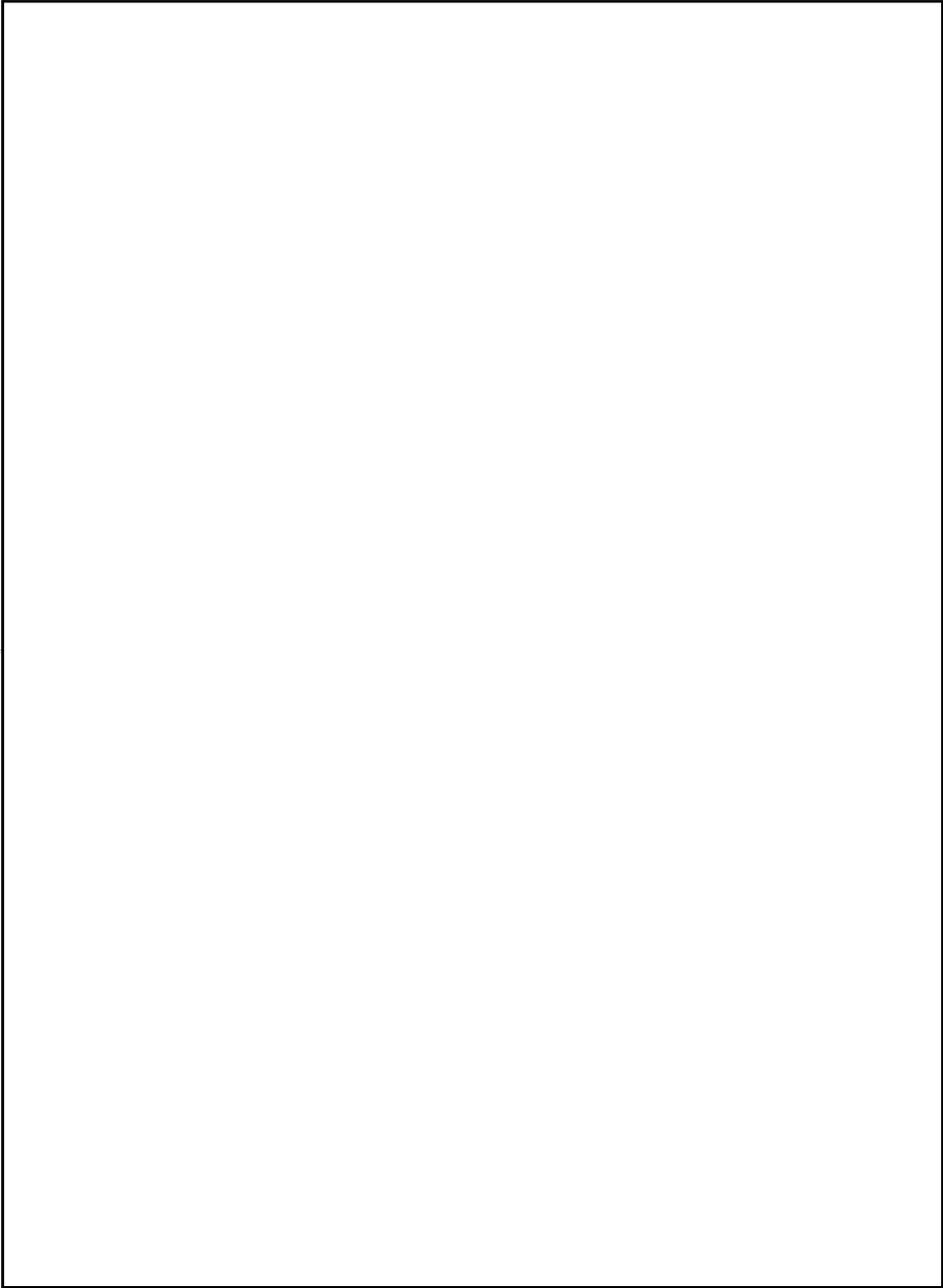
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(U) Remoting the Small Sites

~~(C)~~ [redacted] was never intended for the small sites [redacted]. It had become a truism early in the project that the cost of earth terminals and ancillary equipment would make such a proposition uneconomical. [redacted] [redacted] all presupposed that [redacted] would become candidates for remoting.

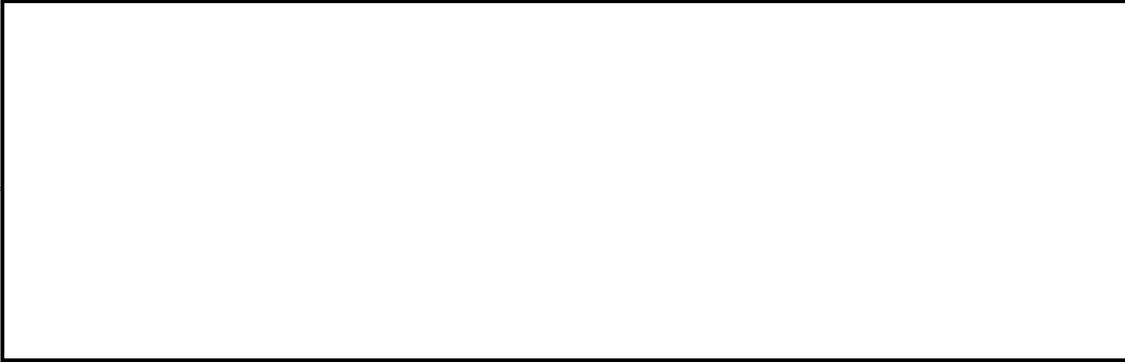
~~(C-CCO)~~ The implementation of remoting stood this assumption on its head. As it turned out, the big payoff was in small-site remoting. Part of this resulted from the decline in earth terminal costs, but mostly it related to the importance of the mission. The small sites, with their [redacted] highly selective focus [redacted] became the high value items in the system.

~~(TS-CCO-TK)~~ The first step was data linking, in which operators at overseas sites intercepted signals and plugged the receiver outputs into communications channels.



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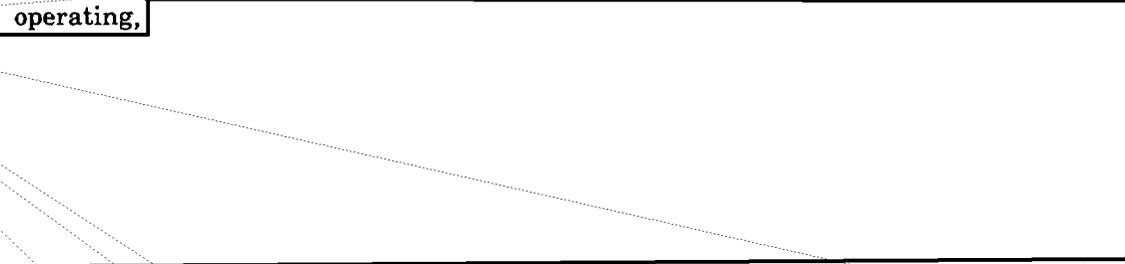


~~(TS-CCO)~~ The advantage of data linking was speed - critical signals could be intercepted, forwarded and processed in something approaching near real time. It did not remove the operator at the distant end, nor did it reduce the number of people in the system. The operational payoff could be significant [redacted] but these operations did not help with overseas visibility, international balance of payments, or CCP reductions.

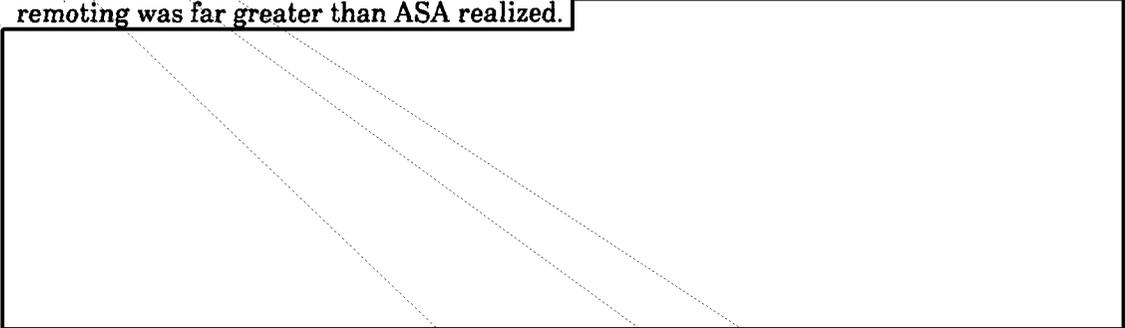
~~(C)~~ The next system was a true remoting operation. [redacted] an Army-sponsored project, sprang from the dismal budget-cutting days of the late 1960s, when ASA was strapped for cash and looking for a way to reduce expenses. The [redacted] sites, although top producers, had been a financial drain for years. They were expensive to keep operating, [redacted]

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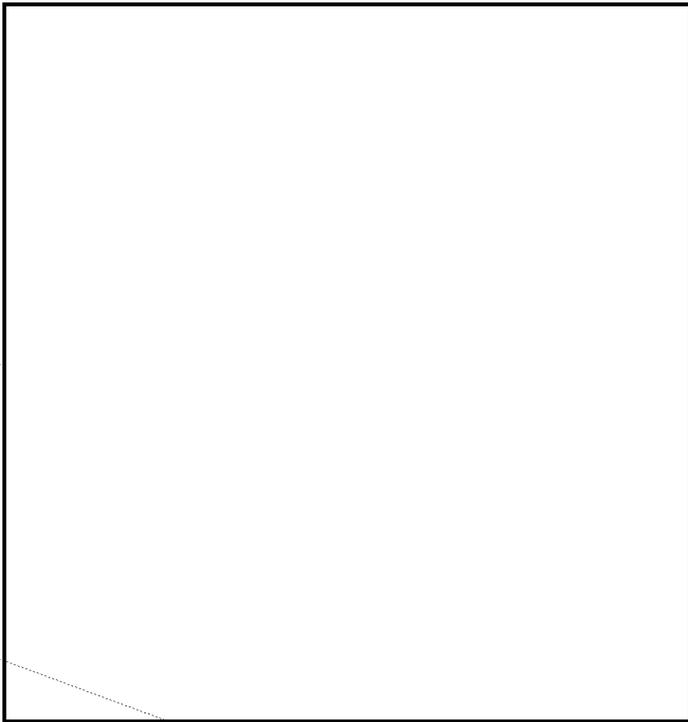
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~~(TS-CCO)~~ NSA recognized immediately that the potential payoff for [redacted] remoting was far greater than ASA realized. [redacted]



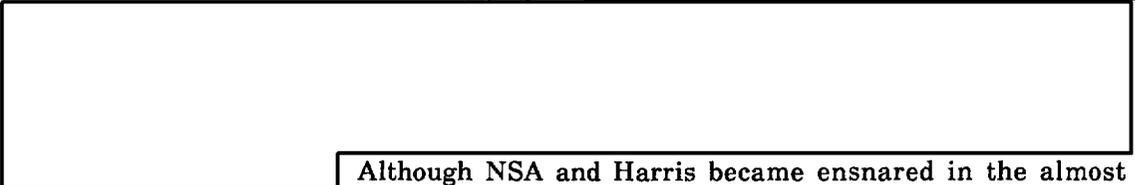
~~(TS-CCO)~~ In a lengthy memo in late 1971, Major General John Morrison, NSA's ADP (assistant director for production, i.e., DDO), laid out the prospects. [redacted] collection had to be data linked back to NSA. ASA's [redacted] was a good idea, but it got the material only part of the way home. NSA needed a data link to get [redacted] to Fort Meade.⁷⁹



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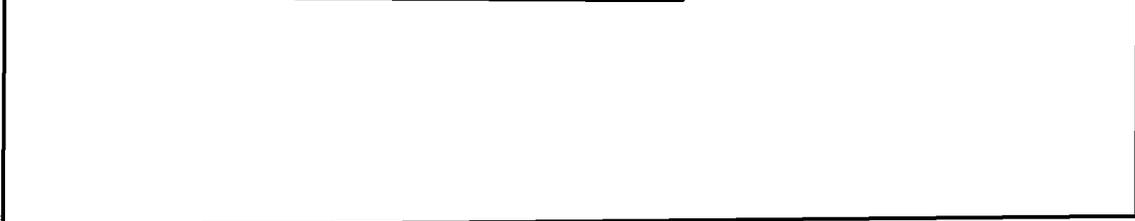
(S) NSA's engineers became involved [redacted] from its inception, and in October of 1970 the ASA project manager, Colonel Vernon Robbins, formally invited NSA into the development process. ASA resources were strapped, and only NSA could provide the expertise to steer such a large project. NSA's Richard Bernard was named the deputy project manager.⁸⁰

(S-CCO) The combined ASA/NSA project planning committee selected Radiation (later called Harris) Corporation as the prime contractor and let a contract for \$25 million. The committee had to scale back an early proposal [redacted]



Although NSA and Harris became ensnared in the almost inevitable cost overrun disputes, the system succeeded technically and operationally.⁸¹

(TS-CCO) For NSA, the payoff was the data link. [redacted]



(U) Guardrail

~~(S)~~ Once remoting was available, everybody wanted it. The earliest field applications were in Southeast Asia, where NSA began remoting signals from isolated mountaintops during the later stages of the war in Vietnam. Called EXPLORER, this program got people out of danger zones and back into defensible base areas, while leaving the equipment (antennas, receivers, and communications) in exposed locations. The aptly named Black Widow Mountain along the Cambodian border was the most famous of the remoting operations.

~~(S)~~ Remoting was next employed to fix serious SIGINT support problems [redacted]. The problems [redacted] arose from the disparity between tactical systems available to field commanders and strategic systems tailored for national-level support. By the early 1970s, strategic SIGINT had far outrun what was available tactically. In September of 1970, [redacted] complained to Admiral Gayler (then DIRNSA) that his SIGINT support assets were not what they should be. [redacted] His mobile collection equipment was antiquated [redacted]. Moreover, the intercept vans, [redacted] were too slow to get out of the way in case of attack [redacted]. Communications were clearly inadequate [redacted].

~~(C)~~ [redacted] knew about the systems that had been devised for Southeast Asia, and he wanted them [redacted]. He wanted airborne systems that did not have to retreat over roads that were vulnerable to interdiction. He wanted communications to get the intercept back to safe areas where they could be processed. And most of all, he wanted ARDF.⁸³

~~(S)~~ At NSA, Gayler instigated a planning whirlwind. He sent an NSA team [redacted] to look at the situation. The team devised a radical solution - an airborne remoting operation similar in concept to the [redacted] in Southeast Asia. When the matter came to a head in a JCS meeting in January of the following year, NSA was ready with the solution. The Agency called it GUARDRAIL.⁸⁴

~~(C)~~ GUARDRAIL would [redacted] NSA, ASA, and USAFSS jointly put up the money to run the GUARDRAIL I test.

~~(S-CCO)~~ The first test was only partly successful. [redacted]

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(U) Guardrail aircraft

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[Redacted]

~~(S-CCO)~~ GUARDRAIL II was a spectacular success.

[Redacted]

~~(S)~~ Early GUARDRAIL was an Army-specific asset. Despite the fact that air-related intelligence dominated the collection "take," the Air Force participated reluctantly, and then only after considerable prodding at the JCS level. One Air Force problem was survivability. The U-21 was a propeller-driven utility aircraft [Redacted]

[Redacted] The U-2 would be a far better platform.⁸⁸ It may also have been

that the Air Force feared Army dominance and wanted to use Air Force money to fund its own systems.

(C) GUARDRAIL II became the final system. Even prior to its deployment, the Army, [redacted] and NSA had all agreed that it would be left behind to provide tactical support. There were no plans to fund a production system.⁸⁹

(S-CCO) While GUARDRAIL I was being tested [redacted] a separate SIGINT operation was being deployed [redacted]

[redacted]

(C) This changed radically in 1972. Major General John Morrison proposed an [redacted] to do the same work [redacted] that GUARDRAIL was doing [redacted]. At a stroke, NSA would be satisfying the constant demands of American commanders [redacted] to improve SIGINT support and add a DF capability.⁹¹

(S-CCO) The final system, called GUARDRAIL IV, looked a lot like GUARDRAIL [redacted] but it did not solve the strategic-tactical interface problem. It used U-21s, [redacted]

[redacted] It remained an integral part of the strategic SIGINT system. Once again, the Air Force entered the system reluctantly. Its concerns probably related to a fear that GUARDRAIL IV threatened the continued viability of the RIVET JOINT fleet, rather than to any criticism of the way the program operated technically or conceptually.⁹²

(U) REORGANIZATION

(U) The war in Vietnam produced wide dissatisfaction with the performance of intelligence. This was in some ways unwarranted. It had performed better than in Korea, and the problems that beset intelligence early in the war were on the way toward solution by the time Richard Nixon became president in 1969. But the perceptions persisted and led to demands for change.

(U) The Fitzhugh Panel

(U) When Nixon assumed office, he called for a reexamination of the total Defense effort, appointing a blue ribbon defense panel to recommend changes. The panel conducted the broadest review of the Defense Department since the Hoover Commission of the mid-1950s. Part of that effort was a Panel on Command Control and Defense Intelligence

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chaired by Gilbert W. Fitzhugh. This committee consisted primarily of industry figures and lawyers and was clearly intended to represent a totally dispassionate view of Defense intelligence.⁹³

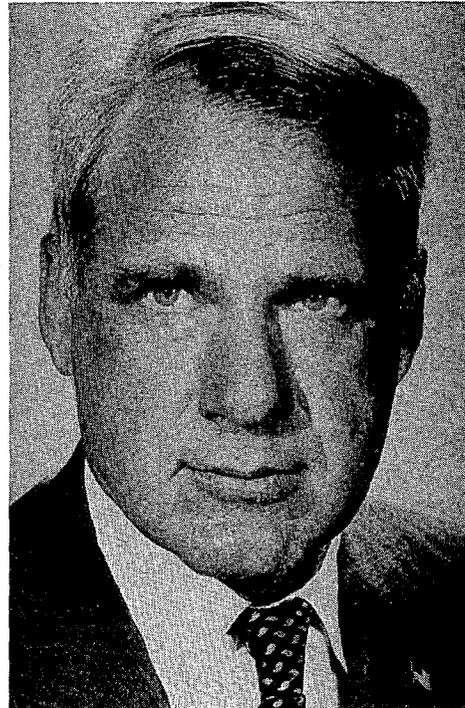
(U) The committee discovered that management was fragmented (not the first time someone had discovered that salient fact), uncoordinated, and not well focused. There appeared to be no effective control of intelligence requirements, a great deal more information was collected than was required, and consumers were overwhelmed by a welter of disjointed reports from all corners of the intelligence structure. DoD had never developed a substantial corps of intelligence professionals. (The only exception appeared to be NSA, which had obtained special legislation.)

(U) Fitzhugh recommended that the Office of the Secretary of Defense focus intelligence management under a single deputy, called the assistant secretary of defense for intelligence. (At the time, intelligence was loaded onto the assistant secretary of defense for administration as an additional duty.) Under him there would be a Defense Security Command (consciously modeled after the NSA structure), which would enjoy broad authority to supervise DIA, NSA, and all other Defense intelligence.⁹⁴ Such changes might have been logical but politically fell very wide of the mark. The Fitzhugh Panel had little ultimate influence over the course of actual events.

(U) The Schlesinger Study

(U) The Fitzhugh Panel had no sooner submitted its report than the president commissioned another study. But there were differences. This new study, chaired by James Schlesinger, head of OMB, dealt exclusively with intelligence, while Fitzhugh had also looked at command and control. More important, Schlesinger examined all of intelligence, while Fitzhugh had looked only at the Defense Department.⁹⁵

(U) Not surprisingly (considering what job he held), Schlesinger concluded that intelligence centralization could best be effected by giving the DCI broader budget authority. Nixon invested then-DCI Richard Helms with a broad grant of authority to review all governmental intelligence activities in order to rationalize programs and priorities within



(U) James Schlesinger

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the budgetary structure. But Nixon and Helms did not get on, and the president never followed this up with specific authorities for his DCI. Helms was left to study, to coordinate, to cajole, but he was no closer to reigning in the disparate parts of intelligence, particularly those in Defense. He never did get what the Schlesinger study promised him.⁹⁶

(U) Helms did accomplish one thing, however, that had long-range effects. He created a small staff, composed of a cross-section of the intelligence community, to look at the budgets of the respective (and disrespectful) agencies. This staff still existed at Langley in 1973 when Schlesinger became DCI. The new intelligence chief's intentions went awry as he struggled to contain the damage from Watergate by reorganizing CIA, but he definitely intended to grant that staff more power. William Colby, his successor in the job, pushed the status and authority of Schlesinger's small staff, which had become known as the IC (Intelligence Community) Staff. At the time, President Ford issued a new executive order putting teeth in the IC Staff's authority to control the budgets of the warring intelligence agencies, and in 1978 President Carter issued the executive order which gave the DCI "full and exclusive authority for approval of the National Foreign Intelligence Program budget." By then the IC Staff had moved into its own quarters in downtown Washington, and thus attained its own facility, with its own identity.⁹⁷

(U) CSS

(U) The cryptologic reorganization that occurred in the early 1970s was the culmination of two decades of conflict between NSA and the JCS over control of cryptologic assets and operations. As NSA gained more authority and as the cryptologic system became more centralized, Pentagon officials became less and less pleased. A decade of war in Vietnam had produced, among other things, an internal war over cryptology. NSA's attempts in the 1960s to further centralize the business were bitterly opposed within the JCS, which had embarked on efforts to fragment SIGINT by shaving off small areas that they could call by different names (electronic warfare - EW, electronic support measures - ESM, etc.) and rid itself of the codewords that controlled dissemination. By the time James Schlesinger looked at the organization of intelligence, the deep fissures between NSA and the armed services had become almost unbridgeable.

(U) Schlesinger intended to solve the problem for all time, in NSA's favor. Clearly driven by budgetary concerns, he proposed to stamp out any JCS control over, and even involvement in, the SIGINT business. The dispute over the control of cryptology that had continued since the end of World War II would come to an abrupt end.

(U) The "end of the war" came on November 5, 1971, when Richard Nixon announced the conclusions of the Schlesinger Study. Buried in the text of this "Nixon letter" was the announcement that, by the first day of the following year, there would be a "unified National Cryptologic Command" under the director, NSA, for the conduct of United States government communications intelligence and electronic intelligence activities.⁹⁸

(U) And then controversy erupted. What was a National Cryptologic Command (NCC)? What did the president intend it to do, and what were its authorities? Was this really the end of SCA independence? What would the new organization control? What was meant by "command"?

(U) Many, both within NSA and without, felt that it meant the death of the SCAs, and a new organization chart was even prepared showing all service collection activities directly under DIRNSA. One view was that the chief of the NCC would also serve as DIRNSA. In one role he would control the national cryptologic system as before; in the other, he would command the SCAs through the JCS chain of command. Most agreed that the SCA theater headquarters would expire and that their functions would be effectively assumed by existing NSA theater organizations. The opinion of Admiral Gayler counted the most, and Gayler viewed his role as akin to that of a Unified & Specified (U&S) commander, with total control over assets within his purview.

~~(S-CCO)~~ In the Pentagon, near panic ensued. Theoretically, the NCC would control all SIGINT collection. This could include the Navy's VQ squadrons, the Air Force's EC-47, and the Army's U-21 ARDF capability, [redacted] the overhead mission ground stations, tactical ELINT (including the Third Party programs that the Air Force had guarded for so many years) [redacted] Under its NCC hat, NSA might begin managing Army and Air Force tactical SIGINT programs rendering support to field commanders. At the very least, the struggle to control EW and ESM programs would be resolved in NSA's favor.

(U) DIA predicted that NSA would swing hard toward satisfying national requirements and would cease paying any attention to the satisfaction of the SIGINT requirements of tactical commanders. The independence of the SCAs would end, and, worst of all, tactical ELINT units would find themselves answering to NSA through the NCC.⁹⁹

~~(S)~~ Within NSA a certain smugness settled in. The war was over, the battle was won, and to the victor belonged the spoils. The spoils consisted of those SIGINT assets that had formerly been controlled by rival factions: primarily the armed services and CIA. As November faded into December, plans were being laid to assume control of the outlying assets that NSA had never owned. This was a big win - a major revolution in the way cryptology was handled.

(U) But things began to go awry even before the end of the year. On December 23, Secretary of Defense Melvin Laird informed Gayler that the new organization would not be a command - it would be called the Central Security Service. Implicit in the new name was a diminished world view. "Services," after all, could not exactly "command." Laird instructed Gayler to come up with an organizational plan and to create the new organization by February 1, 1972, a slippage of one month from Nixon's original deadline.¹⁰⁰

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(U) Concurrently, a new NSCID 6 was being written. Issued in February of 1972, it gave NSA significant new powers – and failed to give it others that, in the heady days of November 1971, folks at Fort Meade assumed they would get.

(C) The directive officially established CSS, which would be collection oriented, and would “include SIGINT functions previously performed by various Military Departments and other United States governmental elements engaged in SIGINT activities.” It did not define these functions, nor did it refer to CIA, which by omission managed to hang onto its SIGINT system. The mobile SIGINT system remained under military control, thus answering one of the biggest questions which had arisen from the Nixon Letter. But in NSA’s favor, NSCID 6 resolved the EW issue by placing it under NSA control. And on the administrative front, NSCID 6 gave the director authority over tasking, logistics, research and development, security, and career management of personnel.¹⁰¹

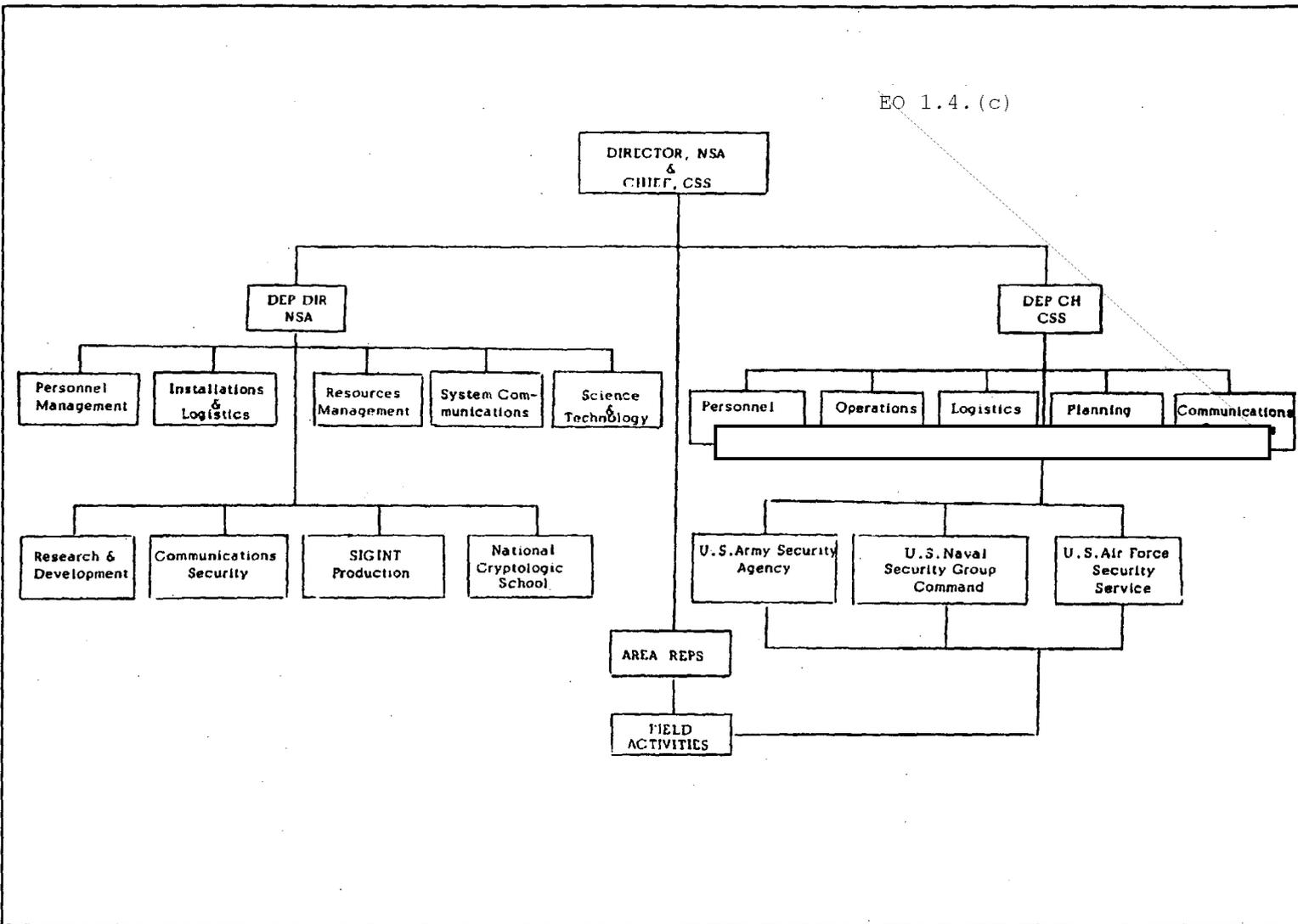
(U) Following Laird’s decision on December 23, Gayler created a series of internal panels to flesh out the CSS plan. Progress was uneven because no one seemed to agree what it should be or how it should function. Gayler gave the task of managing the disputatious committees to Paul Neff, a World War II cryptologic veteran who had held key positions in NSA’s policy councils for many years. Neff’s most vital assistants were Major General John Morrison for operations and Frank Austin for training. Much of the action fell into their bailiwicks.¹⁰²

(U) Under severe time constraints (the plan was due to Laird by February 1), the committees solved the easy problems and left the tough ones for later. The new cryptologic system would be unitary, with centralized control and decentralized execution (hardly a new or controversial concept). It would be composed of NSA and the SCAs as they then existed, thus putting off the question of the system acquiring assets then controlled by the JCS and CIA. The SCAs would provide men, equipment, and facilities – CSS would operate the system.

(U) CSS would be headed by DIRNSA in a dual-hat role, and it would be assisted by a staff of its own. Composed of some 205 billets (75 from operations), it looked just like the NSA staff (see Table 7). All the staff heads were dual-hatted with their respective NSA jobs – thus John Morrison was both head of NSA production and chief of CSS operations, while Frank Austin headed NSA’s training school and CSS’s training organization.¹⁰³

(U) The CSS plan produced serious fissures between Gayler and the SCA commanders, who viewed the new organization as the the death knell of the independent SCAs. So they fought back, and the struggle spilled over into almost every aspect of cryptologic organization. They fought the training plan because the role of training and equipping servicemen for cryptologic duty had always been central to their being. They fought NSA’s encroachment into R&D and logistics in direct proportion to the size of their respective staffs in those functions.¹⁰⁴

NSA/CSS Organizational Structure
(U) Table 7



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~~(FOUO)~~ A struggle ensued over cryptologic organization in the theaters. Gayler wanted SCA theater offices to collocate with the senior NSA/CSS headquarters, but eventually agreed that they could collocate instead with the component command headquarters. The senior SCA commander would be responsible for the SCA and CSS functions, and most of his people would do the same. Gayler also wanted component command level CSGs to be NSA elements, and went toe to toe with Major General Carl Stapleton of USAFSS over this issue. Stapleton won, and all component command CSGs became part of their parent SCA. The chief was the senior SCA representative in the theater.¹⁰⁵



(U) Major General Carl Stapleton

(U) They enlisted U&S commanders to defend their interests. Admiral McCain, CINCPAC (which would soon become Admiral Gayler's own command), predicted the beginning of the end of responsive SIGINT support:

In summary, the proposed plan is viewed as placing in concrete the sterile, inherently unresponsive centralization philosophy to which field commanders have so long been opposed. The centralization of SIGINT has not been tested in a major conflict. The concentration of analytical functions at the national level will soon cause a decline in the ability of the uniformed cryptologic activities to function responsibly in a support role in combat operations especially when access to a national database is denied and integration with other intelligence data is vital. The proposal is a long step backward in the Armed Services quest for more responsive intelligence...¹⁰⁶

~~(C)~~ The most contentious issues related to resources, and it was here that NSA had eyes bigger than its stomach. In the first heady days of CSS planning, many in the Agency envisioned swallowing every SIGINT collection asset worldwide, the theater ELINT centers, and even scientific and technical centers like the Air Force's Foreign Technology Division.

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~~(S)~~ In April of 1972, Admiral Gayler convened a panel (which he himself chaired) to survey the field. The most cursory study revealed a very wide field indeed. For instance, NSA discovered that [redacted] had ELINT collection gear, [redacted] and the theater ELINT centers were very well-entrenched tactical assets.

OGA

~~(C)~~ When the smoke cleared from the battlefield, NSA had won operational control over some of the assets under contention, most notably Air Force SIGINT platforms doing national jobs. But theater ELINT centers remained under theater control; programs designed for purely tactical jobs stayed with their parent services; the Navy held onto its

entire fleet of airborne SIGINT reconnaissance aircraft; and the Army kept its electronic warfare companies. CIA assets were not even filtered into the mix, and NSA's relationship with Langley remained on hold.¹⁰⁷ When confronted with determined service opposition, Gayler had elected to smooth the waters.

(U) One of the key aspects of the CSS reorganization was to collocate the headquarters at Fort Meade, and a new DIRNSA, General Samuel Phillips, began looking at this in the fall of 1972. The move was superficially attractive because of the money that could be saved, and it would certainly permit further dual-hatting of SCA and NSA staffs. The idea did not begin to burn itself out until a study group quantified the amount of space needed: 550,000 square feet, to be exact, at a cost of \$30 million. NSA, chronically short of space, was busy expanding into the Baltimore suburbs and could offer no space to the SCEs. It might be possible to get some office space on Fort Meade from 1st Army, but it was still inadequate, even if it could have been converted into cryptologic work space (a very doubtful proposition indeed). So the idea was virtually dead anyway when Major General Stapleton confronted Phillips with the most determined opposition that any aspect of CSS had faced. It was obvious that the Air Force would never agree, and the plan was dropped.¹⁰⁸ As Phillips later said, rather laconically, in a message to the theater cryptologic chiefs, "... there is specific and determined opposition by the SCA chiefs to such collocation. It is the expressed view of the SCA chiefs that proximity to their service headquarters is more important than collocation with NSA/CSS."¹⁰⁹ It was the understatement of the year.

(U) At the Defense Department, Dr. Albert Hall told his chief of resources management, Lieutenant General Phillip Davidson, to keep watch over the implementation of CSS. By January of 1973, Davidson's watchdog, Robert E. "Red" Morrison, was ready to throw in the towel. Morrison wrote to Hall that the CSS staff concept had not worked. Agency employees had not accepted the dual-hat idea and were not ready to relinquish their carefully garnered authority. According to Morrison, "... the 'dual-hat' concept has served mainly as a way to keep the status quo." NSA had never transferred authority over tactical SIGINT assets to CSS, and field commanders had reciprocated with suspicion and mistrust of the CSS mechanism. CSS had cost NSA over 200 billets and had produced nothing in return.

(U) At NSA, Sam Phillips had seen enough. Lacking any semblance of DoD support, and unwilling to make the drastic changes in CSS authority that would be necessary to keep the concept functioning, Phillips killed it. The date of death was listed as April 16, 1973. On that date, Phillips eliminated the CSS staff, transferring authority instead to a new deputy director for field management and evaluation (DDF), who also became deputy chief, CSS. He dropped the idea of dual-hatting and instead transferred authority for CSS activities to existing NSA positions, elevating them at the same time to deputy director status. Thus assistant director for production became deputy director for operations, communications security became ruled by a deputy director, and Phillips created the post of deputy director for research and engineering, with authority over both NSA and SCA

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research efforts. Other staff chiefs were elevated to assistant directors; all had additional responsibilities for CSS management.¹¹⁰

(U) In 1976, when a new director, Lew Allen, went looking for CSS, he found only a paper organization. Associated with CSS, his resource people could find only General Allen himself (he was named on paper as chief of CSS); the DDF incumbent, who served as the deputy CSS; and a military staff of fewer than ten people.¹¹¹

(U) The CSS exercise benefited the cryptologic system by further centralizing such functions as research and development, personnel administration, and certain aspects of logistics. In these areas, NSA's staff authority expanded into areas that were of common concern to NSA and the services. The biggest changes were in training, where Frank Austin, the dynamic leader of the National Cryptologic School, presided over a long-term centralization of training functions, and a rationalization of the system to the point where the individual SCAs served as executive agents to separate aspects of a now-joint training system. And, though the meetings were often stormy, the SCA chiefs were brought into closer contact with Gayler and his staff. Gayler institutionalized this into Wednesday morning breakfasts with his SCA chiefs, and thus brought a more direct and personal atmosphere into what had been a remote and long-distance relationship.¹¹²

(U) So in certain respects, the addition of "CSS" to the NSA logo marked a permanent change in the way business was done. But the larger changes that had been so keenly anticipated in the fall of 1971 would have required steamroller tactics worthy of Brownell at his best. The JCS had been bested by Brownell in 1952 because he had the backing of the president. Twenty years later the president was not engaged, and the JCS won.¹¹³

(U) The Murphy Commission

(U) The period following the Vietnam War was extraordinarily fruitful with reorganization studies. Those which touched cryptology bent the process in a new direction. One such was the Murphy Commission.

(U) The Murphy Commission was set up by Congress rather than by the president. Its main purpose was to examine the process by which American foreign policy was set. The chairman, former ambassador Robert D. Murphy (then chairman of Corning Glass), was to report back to Congress by June 1975. Murphy was looking at foreign policy at a time when Henry Kissinger occupied positions as both secretary of state and national security advisor, and perhaps this was the reason that Murphy concentrated on national security and intelligence issues. Of the four subcommittees, the one on national security and intelligence, chaired by Murphy himself, dealt with NSA.

(U) It was hardly surprising that Murphy should echo the climate of the times. Following Schlesinger (and a host of others before him), he recommended splitting the job of DCI into two people – the political advisor to the president should work downtown, while the administrator of CIA, who would be his deputy, would manage the agency itself. He advocated giving the DCI further control over the intelligence budget (meaning, in

essence, authority over the Defense component thereof). And he predictably proclaimed that the secretary of state and national security advisor roles should never again reside in the same person.

(U) As for NSA, Murphy remarked rather quizzically that NSA was the only national cryptologic agency in the West that reported through the defense rather than the foreign affairs institution. This tended to bias the satisfaction of requirements in favor of military needs. But, having examined the pros and cons of that arrangement, Murphy opted to leave cryptology within Defense. He recommended, however, that the Agency report to an executive committee composed of the DCI and the assistant secretary of defense for intelligence, to broaden its responsiveness. Moreover, he favored changing the rule by which the director be strictly a military officer. The rule, he felt, should be the same as at CIA – civilian or military did not matter as long as the director and his or her deputy were not both military officers.

(U) The key thrust of the Murphy report, however, was in the direction of further centralization of the process. The SCAs should be abolished, and NSA should take on the job of cryptology unhindered and unassisted. This would at once simplify the process and eliminate the bickering that had characterized NSA-SCA relationships since the day NSA was established.¹¹⁴

(U) The Hermann Study

(U) In the long run, the most influential study was one that was not even completed, let alone published and promulgated. In 1975 Dr. Robert Hermann asked Lew Allen for the opportunity to study SIGINT support to military commanders. Hermann formed a committee of just three people: himself, [redacted] and William Black. Together, they formulated an elegant and timeless statement of the problem that confronted cryptologic organization.

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(U) To Hermann, the central dilemma emanated from the abortive establishment of CSS. NSA had been given theoretical control of the complete cryptologic process by which military commanders obtained cryptologic support, but the enforcement mechanism had never been implemented.

The most recent NSCID-6 . . . provided for very broad NSA responsibilities and authorities well beyond present practices. . . . the 1971 Presidential Memorandum from which the directive was written specifically includes 'tactical intelligence' within the scope of the national level responsibility. However, *the Presidential memorandum and NSCID-6 are not being enforced and are probably not enforceable.* . . . The political forces which generated NSCID-6 did not develop the near term enforcement means necessary to persuade an unwilling management structure. . . . This has been a major cause of stagnation in the development of adequate SIGINT support to military operations as well as inhibiting the general development of SIGINT support for other purposes. . . . [Emphasis added]¹¹⁵

~~(FOUO)~~ Hermann pointed to a cascade of changes to the SIGINT system which had irreversibly altered the way business was done. He referred to an "electronic explosion" in

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the signals environment which tactical commanders were increasingly occupied with and were exploiting to their own advantage. Electronic warfare, electronic support measures, and other terms were being applied to signals in order to get them out from behind the codewords that restrained their dissemination and exploitation. According to Hermann, "The notion that all 'SIGINT' activity is naturally a part of a coherent SIGINT system organized separately to support all national interests and organizations at every echelon is probably unsound. SIGINT is clearly not the most natural primary management dimension for an increasing number of activities." While NSA held to the rigid codeword protection mechanisms that had been built up since 1952, these barriers were becoming increasingly anachronistic. The SCAs, confronted with a two-way tug on their loyalties, increasingly opted for allegiance to their own services. They no longer hungered to expand the large field site system, no longer viewed their future as lying within a national cryptologic structure. According to the study, "... the traditional role of the SCA as the field collection arm of the national SIGINT system is eroding and is even now, not a viable mission."

~~(FOUO)~~ To solve the dilemma, Hermann recommended a revolutionary strategy. The SCAs should cease being cryptologic agencies and should become what he called Service Signal Warfare Agencies (SSWAs). They should be integrated with the commands they supported, and their main job would be to provide signal warfare functions such as ECM, ECCM, tactical SIGINT/electronic support measures, MIJI (meaconing, intrusion, jamming, or interference), and radar surveillance. Except in unusual cases, they would no longer staff large fixed sites.

~~(S)~~ The existing classification system should be completely scrapped. According to Hermann, "... we now provide SI, TK, or EARPOP protection for sources that we no longer hold to be sufficiently sensitive to require these caveats. The reason for protection is historical not deliberate." Cryptologists had cast aside the fine gradations which had evolved during World War II to permit wider dissemination of less-sensitive SIGINT and more restrictive handling of the products of cryptanalysis. In effect, everything was handled at a minimum Category II level, and the advantages of the World War II Y Service system had been lost. He pointed to the handling of clear text speech intercept (then normally protected as Category II material) as an example of how not to protect information. Other sources [redacted] were scarcely more sensitive. Signals externals should not be held in COMINT channels unless clear justification was provided.

~~(S)~~ Even more radical was his proposal for the handling of TK information. According to the study, "There is very little justification today for providing SI access without TK. There is no justification for providing TK SIGINT access without Byeman access." (The Byeman compartment was created to protect technical and contractual details of overhead systems.) The study proposed that overhead SIGINT should be completely removed from the TK compartment and should be handled as ordinary SIGINT information and that Byeman should be eliminated except as it related to the relationship with contractors.

~~(S-CCO)~~ Hermann recommended new initiatives for SIGINT support to NATO, long a cryptologic planning backwater: [redacted]



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1.4.(c) ~~(S-CCO)~~ The planning group was keenly aware of the developing gulf between SIGINT available in the field and that available at NSA/ [redacted]

[redacted] Because of processing mechanisms and dissemination restrictions, information of vital concern to the field commander piled up at NSA. This was being compounded by the accelerating dominance of overhead SIGINT. Even large field sites were becoming increasingly irrelevant unless the information they produced was combined (at NSA) with overhead [redacted] In most cases the tactical commander was not even aware of the existence of this information.

~~(S)~~ Though he had no solutions, Hermann did articulate the dilemma and recommended that a mechanism be established to provide field commanders with support from national systems. That mechanism would necessarily involve more direct NSA control of overhead SIGINT resources, and Hermann recommended that the director take full control of SIGINT satellites in order to facilitate support to field commanders. This was an issue of hot dispute, and Hermann himself opposed this proposal when NSA placed it on his desk in the 1980s, when he was then director of the National Reconnaissance Office.

(U) According to Hermann, NSA should develop a strong planning office for support to military operations. Not only should it be centralized, but it should begin directing the entire process, rather than simply reviewing work already done by the SCAs.

~~(S)~~ Following the study, Hermann himself went off to NATO to serve as a special assistant to SACEUR for intelligence support planning. The rudiments of the existing system of SIGINT support to NATO owe much to his planning. Although he never returned to NSA, his ideas lived on, and most were eventually implemented. NSA soon had an office that did support military operations, as Hermann had recommended. The idea of establishing a planning function to improve national support to tactical commanders got off the ground the next year, officially initiated by a memo from George Bush (then the DCI) to the secretary of defense. It became known as TENCAP. The SCAs eventually evolved into organizations more akin to what Hermann had recommended – more attuned to tactical support in all modes of the signals spectrum, less inclined to staff large fieldsites at NSA's bidding. The boundaries between SI and TK crumbled, and eventually, though the TK compartment held up, everyone involved in national-level cryptology had the clearance. The SIGINT compartment system was not changed significantly. Though proposal followed proposal, especially relating to eliminating the codeword protection for reports based on plaintext voice intercept, the Cold War ended with the restrictions still in place.¹¹⁶

(U) The Ursano Study

(U) Robert Hermann's thinking dovetailed nicely with the direction that the Army was moving. That direction came out in very stark terms in 1975 as a result of the Intelligence Organization and Stationing Study (IOSS).

(U) IOSS resulted from a memo from the secretary of the army, Howard Callaway, to Army chief of staff Frederick Weyand in late 1974. Commenting about Army intelligence, Callaway said, "We maintain considerable information which is of questionable value and seldom used," a fact that "really makes me wonder about how much money we are wasting and raises serious questions as to the cost-effectiveness of our intelligence system." What was on Callaway's mind was apparently money. The Army was continuing to take monstrous post-Vietnam cuts, and Callaway was looking at intelligence as a place to save money.¹¹⁷

(U) The man Weyand appointed to study the issue, Major General James J. Ursano, was unencumbered by any experience with, or knowledge of, the intelligence function. At the time, he was Weyand's director for management. His study group was not very high powered, nor did it contain much expertise in the discipline.¹¹⁸ It was a completely outsider's look.



(U) Major General James J. Ursano

(U) It did not take long for the Ursano group to find out how fragmented and overlapping Army intelligence really was. Intelligence production was being carried out by a vast welter of rival organizations with competing agendas. The Army expended much effort toward HUMINT and comparatively little on SIGINT, which was found to be isolated and neglected. ASA came under severe criticism. Since the creation of CSS, ASA amounted only to another bureaucratic layer. The elimination of its field headquarters in both the Pacific and Europe gave it an unmanageable span of control. It devoted too much of its effort to field station operations, too little to tactical support. It had monopolized electronic warfare and held everything under a cloak of secrecy which inhibited real tactical support. In the field, the Army G2 had to manage two separate intelligence systems, SIGINT and everything else, and staff to integrate the two sides was in short supply.¹¹⁹

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(U) Ursano looked at the vertical cryptologic command line which had been instituted following World War II and which had been reinforced with every subsequent study of Army intelligence. For once, someone took the opposite tack. Verticality must end, and ASA must rejoin the Army.¹²⁰

(U) Ursano's central and most important recommendation was to dismantle ASA. A new organization would be created, called INSCOM (Intelligence and Security Command), which would integrate all Army intelligence functions. Combining SIGINT and HUMINT, Ursano recommended the amalgamation of USAINTA (U.S. Army Intelligence Agency) with strategic SIGINT. INSCOM would continue to manage [redacted] field stations, to supply billets to NSA and other centralized cryptologic activities, and to provide SIGINT support to echelons above corps. Tactical assets (corps and below) would join the supported command echelon.

~~(S-CCO)~~ INSCOM would be an interesting mix of SIGINT, HUMINT, and counterintelligence organizations. Joining the new command would be the military intelligence groups [redacted] and to this were added groups in CONUS (CONUS MI Group) [redacted] TAREX, which had existed as a SIGINT-related effort since the waning days of World War II, would join the intelligence groups. There would be a unified Intelligence and Threat Analysis Center (ITAC) for all-source analysis. But, in sum, the new organization would be considerably smaller than ASA had been, primarily because of the loss of the tactical units. Training functions would be absorbed by other commands, and the training school at Fort Devens would belong to the Army Intelligence Center and School at Fort Huachuca, Arizona.¹²¹

(U) To virtually no one's surprise, Major General George Godding, the incumbent ASA commander, opposed the dissolution of his agency. Godding's reasoning, however, should have sounded bells somewhere in the Army staff. ASA should be retained because of the unique cryptologic expertise which had been developed and nurtured over a period of many years. Ursano's solution ignored that aspect of the problem.¹²²

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(U) Major General George Godding

(U) The proposals caught NSA seemingly by surprise. When routed for comments, the Ursano proposals elicited little reaction. Each staff element viewed the problem from its own very narrow perspective, and each concluded that the matter was an Army problem, not one which should interest NSA. At the Directorate level, Norman Boardman of the director's policy staff understood the implications: "It is our general feeling that the loading of all army intelligence, security, and EW functions onto ASA, with a new name, and the stripping of specialized support functions . . . can do nothing but downgrade the quality and timeliness of SIGINT support to the army and army tactical commanders. . . ." ¹²³ But NSA did not take a hard line, and its response to the Ursano proposals was less than warlike. And so INSCOM officially came into existence on January 1, 1977, without NSA having taken a strong stand one way or the other.

~~(S-CCQ)~~ When Vice Admiral Bobby Inman became director in July of 1977, he hit the roof. Noting that the CSS concept assumed central control of cryptologic assets, and that ASA was the organization that was to control the Army's component to that structure, he pointed out acerbically that divestiture of cryptologic assets at corps and below abrogated that agreement and fragmented the system. Moreover, cryptologic training, considered an

essential aspect of maintaining a skilled cryptologic work force, had been removed from INSCOM's authority. TAREX, formerly an exclusive cryptologic preserve, now appeared to be a SIGINT-HUMINT amalgam. "Throughout the plan SIGINT operational relationships and functions are described that impact directly on NSA/CSS. These relationships and functions have not been coordinated with this Agency." ¹²⁴ In fact, they had been coordinated - but with Lew Allen, not with Inman. And that train was much too far down the track for one angry admiral to turn it around.

(U) The central problem of the INSCOM decision was one of expertise. The Army no longer had a unique cryptologic organization. It had been diluted by other disciplines and other interests. The cryptologic focus was lost and was replaced by a picture gone all dim and mushy. To participate in cryptology, the Army would have had to increase its emphasis on technical specialization. It chose to go the other direction.

(U) The Creation of ESC

~~(C)~~ In its own way, the Air Force chose the same path, but at a slower rate. The Air Force Security Service had begun to lose its SIGINT focus in the late 1960s. When the Air Force Special Communications Center (AFSCC) SIGINT mission was moved to NSA in 1968, the organization survived by acquiring a new role. The mission, straight out of Vietnam, was to do electronic warfare analysis of tactical combat. Such analysis involved a variety of analytic skills, of which SIGINT was the largest component and was thus a natural for USAFSS. AFSCC could employ all the SIGINT and COMSEC skills of a seasoned work force in a new role of direct concern to Air Force commanders.

(U) As the command shrank in size during the 1970s, the electronic warfare analysis being done in AFSCC grew proportionately larger. Like ASA, USAFSS slowly eased out of the business of providing manpower to large fixed sites. Security Service sites which survived became smaller, and the command began shedding its management of air bases around the world. In 1978, USAFSS gave away its last remaining bases to other Air Force commands: Goodfellow AFB went to Air Training Command, [redacted] [redacted] were turned over to USAFE, and PACAF began managing [redacted]. With its intermediate headquarters in Germany and Hawaii closed, the command ended the decade with just under 12,000 people, down from a peak size of over 28,000. ¹²⁵

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~~(C)~~ General Lew Allen, who had become Air Force chief of staff, was intensely unhappy with the Air Force approach to, and use of, electronic warfare. His experience as DIRNSA had taught him how SIGINT could affect the modern battlefield. He had an especially keen appreciation for TEABALL, the command and control facility that had operated so effectively in Southeast Asia based on SIGINT support, and he wanted the new organization to create other such mechanisms. So he formed a high-level steering group to look at the problem. ¹²⁶

(U) In April of 1978 the Air Force announced that it would disestablish Security Service and consolidate intelligence functions within a new intelligence center at Kelly Air Force Base. This would involve USAFSS, the Foreign Technology Division at Wright-

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Patterson Air Force Base in Ohio, AFTAC (which monitored nuclear testing around the world), and Air Force Intelligence Service. The concept was clear, but the details were fuzzy; the affected organizations spent the summer thrashing out the implementation.¹²⁶

(U) The grand Air Force Intelligence Center study became subsumed under two other high priority Air Force concerns: how to organize electronic warfare and what to do with a growing responsibility called C3CM (command, control, and communications countermeasures). All three functions were closely related, and Allen wanted an organization that combined all three. As it happened, USAFSS had the majority role in intelligence and C3CM and was a major player in electronic warfare. So whatever happened would surely center on the USAFSS complex at Kelly AFB.

(U) In January of 1979 a general officers board recommended to Allen that, not surprisingly, a new electronic warfare command be created, and that it be composed of all three USAFSS missions. Like ASA, USAFSS would continue as a major command. Unlike ASA, however, it would not swallow the other intelligence disciplines, at least not yet. USAFSS reopened its doors in August of 1979 under a new name, Electronic Security Command. Its commander, Major General Doyle Larson, was known to be a Lew Allen confidant. When he appointed Larson, Allen told him *not* to emulate INSCOM, but to insure that all elements of electronic combat were integrated into a single structure. Together, they were moving the Air Force away from a major role in cryptology, toward a closer tie with Air Force tactical combat.¹²⁷



(U) Major General Doyle Larson

Notes

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8. (U) CCH Series XII.H.19.
9. (U) Interview William T. Kvetkas, 10/17 July, 17 Aug 1996, by Tom Johnson., OH 25-96, NSA.
10. (U) CCH Series XII.H.19.
11. (U) CCH Series XII.H.19; NSA Archives acc nr 27210, CBOK 68.
[Redacted]
13. (U) NSA retired records, 44699, 84-228.
14. (U) Interview, Colonel Cecil B. Fulford, 23 November 1987, by Robert D. Farley and Tom Johnson, OH 30-87, NSA.
15. (U) NSA retired records 44669, 84-228; NSA Archives acc nr 27263, CBUB 11.
16. (U) Fullford interview; NSA retired records 44669, 84-228.
17. (U) Ibid.
[Redacted]
19. (U) NSA retired records 10017, 83-473; 44669, 84-228 [Redacted], "A Historical Overview."
[Redacted]
21. (U) NSA retired records, 44670, 77-397.
22. (U) Ibid.
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24. (U) NSA retired records, 44760, 74-295; Allen interview; Williams interview.
25. (U) NSA retired records, 28515, 84-245.
26. (U) National Security Files, Gerald R. Ford Presidential Library, Ann Arbor, Michigan, in CCH Series XVI.H., "Southeast Asia/Vietnam/Cambodia"; CCH Series VI.HH.26.15.
[Redacted]
28. (U) Interview [Redacted] 23 December 1992, by Charles Baker and Tom Johnson, OH 8-92, NSA.

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29. (U) [redacted] interview.

[redacted]

31. (U) CCH Series VII.Q.1.15 [redacted] "A Chronology of Significant Events in the History of Electronic Security Command, 1948-1988, command history available in CCH Series X.J.

[redacted]

33. (U) [redacted] et al., "A Chronology."

34. (U) "A History of the USAFSS Airborne SIGINT Reconnaissance Program (ASRP), 1950-1977," 20 September 1977, available in CCH Series X.J; Interview, Gordon W. Sommers, by [redacted] and James E. Pierson, January 1990, available at Air Intelligence Agency, San Antonio, Texas; [redacted] et al., "A Chronology."

35. (U) NSA Archives, acc nr 33631, H01-0108-3.

36. (U) Ibid.

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38. (U) Ibid.

[redacted]

42. (U) Interview, Dr. Robert J. Hermann, 2 September 1994, by Tom Johnson, OH 45-94, NSA.

[redacted]

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[redacted]

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48. (U) [redacted] Task Force Report, 10 December 1973, in CCH Series VI.BB.1.4

49. (U) NSA Archives acc nr 32545, H01-0101-2.

50. (U) Ibid.

51. (U) [redacted] Task Force Report.

52. (U) Ibid.

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54. (U) NSA retired records, 44959, 80-302.

55. (U) Ibid.

[redacted]

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60. (U) [Redacted] interview.

[Redacted]

67. (U) NSA Archives, acc nr 12163, G12-0601-3.

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[Redacted]

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[Redacted]

76. (U) NSA retired records, 44959, 80-302; NSA Archives, 34420Z, H0-1-0109-6; Interview [Redacted] by Tom Johnson, 19 February 1997, OH 4-97.

77. (U) NSA retired records 44959, 80-302.

78. (U) NSA Archives acc nr 18802, CBTH 77; Interview, Richard L. Bernard, by Tom Johnson, 4 June 1996 and 13 January 1997, OH 15-94, NSA.

79. (U) Ibid.

80. (U) NSA Archives, acc nr 4200, CBUD 78; Bernard interview.

81. (U) [Redacted] NSA Archives acc nr 18802, CBTH 77; NSA retired records 44959, 80-302.

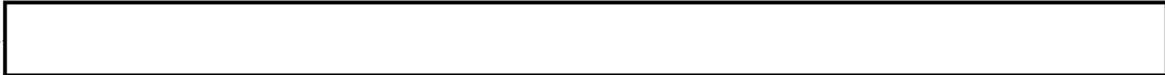
82. (U) NSA Archives 22965, H18-0104-3.

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84. (U) [Redacted] "Guardrail: A Joint Tactical SIGINT Support System," *Cryptologic Spectrum*, Spring 1975, 15-18.

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- 88. (U) NSA Archives, acc nr 16524, CBRG 36; acc nr 2737, CBUC 73.
- 89. (U) CCH Series XI.R; NSA Archives acc nr 16524, CBRG 37; acc nr 2737, CBUC 73.
- 90. (U) NSA Archives acc nr 16512, CBRG 35; acc nr 16512, CBRG 51; acc nr 2897, CBUC 52.
- 91. (U) NSA Archives, acc nr 2737, CBUC 73.
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- 98. (U) The Creation of Central Security Service - Background papers and memo files, in CCH Series VI.QQ.1.1-1.5.
- 99. (U) Ibid.
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- 103. (U) The Creation of Central Security Service....
- 104. (U) Interview, Carl W. Stapleton (Maj Gen, USAF, Ret.), by Lt Col William H. Buchholtz, unk date in 1986, USAFSS interview available at AIA, Kelly AFB, San Antonio.
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- 106. (U) The Creation of Central Security Service....
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- 108. (U) CCH Series VIII.H.48; The Creation of Central Security Service....; Interview, Gordon W. Sommers, by  and James E. Pierson, January 1990, available at AIA, Kelly AFB, Texas.
- 109. (U) DIRNSA msg 10 Nov 1972 in CCH Series XII.H.48.
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113. (U) The DIRNSA, VADM Noel Gayler, was also hoping for a fourth star, and was loathe to jeopardize advancement by seriously tangling with his potential benefactors, according to Major General Carl Stapleton; See Stapleton interview.
114. (U) Murphy Commission Report, Committee II - Intelligence, in CCH Series VI.C.1.23; Ray S. Cline, *The CIA Under Reagan, Bush and Casey* (Washington, D.C.: Acropolis Books, 1981), 261-62.
115. (U) "SIGINT Support to Military Operations" [the Hermann Study], 28 April 1975, in NSA records center 28792, 80-079.
116. (U) Hermann study; Interview, Robert J. Hermann, by Tom Johnson and Charles Baker, 2 September 1994, OH 45-94, NSA; Tencap information is from Angelo Codevilla, *Informing Statecraft: Intelligence for a New Century* (New York: The Free Press, 1992), 118-19.
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119. (U) Jack Finnegan, "IOSS And After," unpublished manuscript in HQ INSCOM files, 1987.
120. (U) Draft Army history.
121. (U) Finnegan, "IOSS And After."
122. (U) CCH Series XII.H.57.2
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(U) Chapter 16

Cryptology and the Watergate Era

(U) BACKGROUND TO SCANDAL

(U) The greatest political scandal in American history originated with an obscure note in the Metro section of the *Washington Post* on Sunday, June 18, 1972. In it, two Metro section reporters, Bob Woodward and Carl Bernstein, covered what appeared to be an amateurish break-in at the Democratic National Headquarters in the Watergate Hotel in downtown Washington.

(U) The Nixon administration managed to cover over the political effects of the break-in until after the elections in November. But when Congress returned in January, it was ready to investigate. In February 1973, the Senate voted to establish a Select Committee, commonly referred to as the Ervin Committee after Senator Sam Ervin, Democratic senator from North Carolina, to hold hearings. At the time, no one associated with the committee knew where they would get information, since the administration was keeping a tight lip, and the Watergate burglars weren't talking. But on March 23, one of the burglars, James McCord, turned state's evidence. The federal judge, John Sirica, had been pressuring the defendants by threatening lengthy prison terms if they did not cooperate. Now McCord was cooperating, and the entire thing began to unravel. The president, concerned with getting on with his second term, tried to shush the whole thing.



(U) President Nixon and his inner circle, 1973

(U) The scandal, of course, would not shush. Instead, it mushroomed, swallowing first Nixon's White House staff, then much of his cabinet, and finally the president himself. On August 8, 1974, Nixon resigned and Gerald Ford moved into the White House.

(U) In a real sense, Watergate resulted from Vietnam. President Nixon was obsessed with the disorder and demonstrations that hurled the Johnson administration down and

played a large role in the defeat of Hubert Humphrey in 1968. One of the central incidents of the disorderly 1960s was Daniel Ellsberg's decision to publish a collection of the Johnson administration's papers on the war, which came to be known as the Pentagon Papers. Nixon ordered an investigation of Ellsberg, and two of his White House confidants, Egil "Bud" Krogh and David Young, put together a clandestine unit, which they called the "Plumbers" because the objective was to plug leaks. The group obtained the assistance of White House Special Counsel Charles Colson, who brought in some experts in clandestine surveillance formerly from CIA and FBI, among them Howard Hunt and G. Gordon Liddy. The Plumbers broke into the office of Ellsberg's psychiatrist, Lewis Fielding. The unit itself was eventually disbanded, but the individuals were retained by the Committee to Re-Elect the President (CREEP), and they eventually bugged the office of Lawrence O'Brien, chairman of the Democratic National Committee, in the Watergate complex.¹

~~(TS-TK)~~ For a time, cryptology was a bystander in this turmoil, but the antiwar demonstrations eventually touched NSA's business. In 1966, Stanford University students picketed Stanford Electronic Laboratories, where Lockheed Missile and Space Corporation (LMSC) was designing [redacted] satellite payloads. When students occupied the building, James DeBroekert of LMSC smuggled one of the payloads out of the building, through Moffett Naval Air Station and over to Building 190 where the rest of the Lockheed [redacted] effort resided. This very close call [redacted] had a happy ending only because the students never really knew what they were picketing.²

~~(C)~~ Next year disorder hit the Princeton University campus. The radical group Students for a Democratic Society (SDS) discovered the existence on campus of the Communications Research Division of the Institutes for Defense Analyses (IDA/CRD), which had been set up in the late 1950s to help NSA with difficult cryptanalytic problems. Unclassified CRD publications appeared to link the organization with the Defense Department, and SDS set out to force a campus eviction. After several months of sporadic demonstrations, on May 4, 1970, students broke through police lines and vandalized the inside of the building. A few days later a student was arrested as he attempted to set the building on fire. CRD built an eight-foot-high fence around the building and occupied it in a permanent siege mode. But the students had already achieved their objective. The atmosphere was no longer good for defense contractors, and Princeton asked CRD to move. CRD found other quarters off campus and moved out in 1975.³

(U) In June 1971, amid the hysteria over the American invasion of Cambodia, the *New York Times* began publishing a series of documents relating to the war effort. The papers had originally been given to journalist Neil Sheehan of the *Times* by one Daniel Ellsberg, a former defense analyst during the Johnson administration. Two days later a federal judge issued a restraining order, but that did not stop the presses. Ellsberg sent copies to seventeen more newspapers, and the revelations continued. On June 30, the court lifted its restraining order, and the *Times* published the rest of the batch. Journalists quickly labeled them the Pentagon Papers.

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(U) Ellsberg had been hired into the Pentagon as one of Robert McNamara's "whiz kids." In 1967 Ellsberg was assigned to a project under Lawrence Gelb to undertake a study of U.S. involvement in Vietnam. Brilliant and dogmatic, Ellsberg turned against the war. He felt that the documents could be damaging to the war effort, so when he left the Pentagon to take a job with the Rand Corporation, he reproduced a copy and carried it with him.



(U) Daniel Ellsberg

(U) It was a very large document indeed - over 7,000 pages - and Ellsberg spent thousands of dollars making copies. For several years he tried to use the papers to convince policy makers (Henry Kissinger and William Fullbright, among others) to change U.S. policy in Southeast Asia, but in vain. As a last resort, then, in 1971 he turned the documents over to the newspapers.⁴

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(U) Ellsberg claimed that the Pentagon Papers, although officially classified, were actually unclassified.

[Redacted]

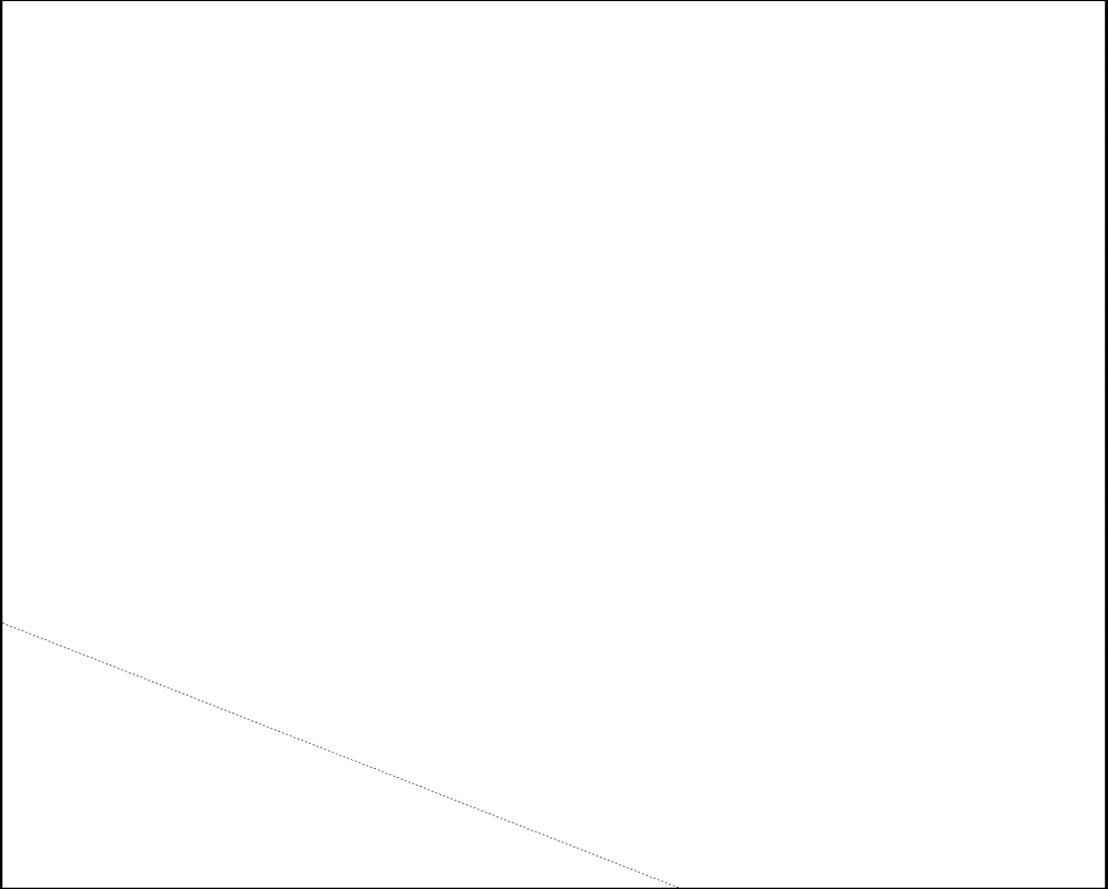
Newspapers did not release the information in 1971, but journalist Jack Anderson got the last four volumes and released them in 1972.

[Redacted]

(U) The Pentagon Papers and subsequent Anderson columns began a trend. The trend was to tell all. It started small, but became a tidal wave of revelations.

[Redacted]

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The previous insider-tells-all account, Herbert Yardley's *The American Black Chamber*, had been written in a fit of greed (Yardley needed money). People like [redacted] could apparently be bought by ideology. It echoed the climate of the 1930s, when the Soviets got their spies for free (or at the very least, for expense money).

(U) Ideology-based public revelations became fashionable with the publication in 1975 of ex-CIA agent Phillip Agee's *Inside the Company - A CIA Diary*. [redacted]



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(U) Using the indefatigable [redacted] as a key source, the Canadian Broadcasting Corporation did a 1974 series entitled "The Fifth Estate - the Espionage Establishment," which made a wide-ranging exposure of intelligence organizations in the United States and Canada. [redacted]

(U) NSA AND CLANDESTINE ACTIVITIES

(U) Over the years, cryptologists had participated in two activities whose legality was eventually called into question. One, codenamed Shamrock, was a way to intercept messages without setting up intercept sites. The other, Minaret, became enmeshed with an illegal use of information for domestic law enforcement.

(U) Shamrock

(U) The easiest way to get access to telegrams was to get them from the cable companies which transmitted them. This method actually dated back to World War I, when the federal government, using the implied war powers of the president, set up cable and postal censorship offices. A copy of every cable arriving and departing from the United States was routinely sent to MI-8, which thus had a steady flow of traffic to analyze. After the war, the Army closed all intercept stations. Yardley's Black Chamber continued to use messages provided by the obliging cable companies until 1927, when the Radio Act of 1927 appeared to make this illegal, and the Communications Act of 1934 reinforced this. Lack of traffic forced Friedman's SIS to set up intercept stations in the 1930s.¹³

(U) In 1938, the Army's chief signal officer, General Joseph Mauborgne, approached David Sarnoff, president of RCA, with a request from the secretary of war to renew the arrangement whereby the Army received drop copies of cable traffic. Sarnoff was willing, and during the war the major cable companies (RCA, AT&T, and Western Union) once again provided cables to the cryptologists. Signal Intelligence Service set up Radio Intelligence Companies to collect cables through censors installed at the cable company offices. Following the surrender of Japan, military officials approached the companies to request their continued cooperation, as they had after World War I. This time, however, they met considerable resistance. Cable company officials argued that the Federal Communications Act of 1934 appeared to make this illegal in peacetime. They wanted legislation.

(U) What they got was a promise from the attorney general, Tom Clark, that they would be protected from lawsuits while the Justice Department sought authorizing legislation. (Opinions differ as to whether or not President Truman put this in writing.) But the legislation was not forthcoming, and in 1947 the company executives contacted Secretary of Defense James Forrestal, who had to renew Tom Clark's assurance that they would not be prosecuted, and that the operations would not be exposed. Two years later, still lacking legislation, they approached the new secretary of defense, Louis Johnson. He advised them again that Clark and Truman had been consulted, and had once again approved the practice. Somewhat mollified, they finally dropped the subject.¹⁴

(U) At NSA the cable drop operation was treated as a compartmented matter, and only a few employees knew where the traffic came from. Couriers carried cabled messages to NSA, but there was no direct contact with the cable companies themselves. NSA selected about 150,000 cables per month for further analysis – the rest were destroyed. Although not technically illegal, Lew Allen, who was director in the mid-1970s, said it did not pass the "smell test" very well. Stopping it was not a difficult decision for him.¹⁵

(U) Minaret

(U) There is no stark line between "foreign intelligence" and domestic law enforcement. The phrases, which appear to be watertight, actually leak into each other at many points. But this never became an issue until the Watergate period.

(U) In the collection of foreign intelligence, cryptologists often came across unrelated communications, which were routinely destroyed because of their irrelevance. But when items of importance to the FBI came available, they were normally passed on. This was done without much thought given to the boundaries between foreign intelligence and law enforcement, which were by law to be kept separate. The practice began in the 1930s and continued through the war years and into the 1950s.¹⁶

(U) In 1962, following the Cuban Missile Crisis, the White House wanted to know who was traveling to Cuba (which had been made illegal but for exceptional cases). This involved passing on American names and violated customary SIGINT rules by which information on American citizens was to be ignored. It was clearly related to law enforcement, however, and it was the origins of the so-called "Watch List" which became known as the Minaret program.¹⁷

~~(S-CCO)~~ The idea proved to be irresistible. In 1965, as a result of the conclusions of the Warren Commission, the Secret Service asked NSA to be on the lookout for certain people who might be a threat to the president. The first list was composed almost entirely of Americans, but NSA complied because of the obvious implications of not providing such important information. In 1973 the Agency asked that the Americans be removed from the list and hung onto that position despite anguished protests from the Secret Service.¹⁸

(U) The Watch List expanded in the 1960s to include people suspected of narcotics trafficking, and at one point most of the names on the list were individuals suspected of

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narcotics-related activity. The list was formally documented by USIB in 1971.¹⁹ But by far the most controversial expansion of the list occurred in 1967, and it involved domestic terrorism.

—(S-CCO) In 1967 the country appeared to be going up in flames. Vietnam War protests were becoming common, and "ghetto riots" in America's urban centers had virtually destroyed sections of Detroit and Los Angeles. President Johnson wanted to know if the domestic antiwar movement was receiving help from abroad, and he commissioned Richard Helms at CIA to find out. CIA came up with very little, but in the process of mobilizing the intelligence community, the Army was tasked with monitoring communications for the purpose of answering Johnson's question. On October 20, Major General William P. Yarborough, the Army chief of staff for intelligence, informed NSA of the effort, in which ASA was involved, and asked for help.²⁰

—(S-CCO) With FBI as the prime source of names, NSA began expanding the watch list to include domestic terrorist and foreign radical suspects. The watch list eventually contained over 1,600 names



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—(S-CCO) The project, which became known officially as Minaret in 1969, employed unusual procedures. NSA distributed reports without the usual serialization. They were designed to look like HUMINT reports rather than SIGINT, and readers could find no originating agency. Years later the NSA lawyer who first looked at the procedural aspects stated that the people involved seemed to understand that the operation was disreputable if not outright illegal.²²

(U) ASA's monitoring of domestic radical communications was almost certainly illegal, according to the legal opinions of two different groups of government lawyers. Even worse, it had come to public notice in 1970 when NBC aired a program alleging that ASA had monitored civilian radios during the Democratic Convention of 1968. ASA quickly closed it down and went out of the civil disturbance monitoring business.²³

—(S-CCO) Minaret was quite another matter, and it did not depend on ASA for its existence. Lew Allen had been director for less than two weeks when his chief lawyer, Roy Banner, informed him of Minaret – it was the first the new director had known of the program. Banner noted a recent court decision on wiretaps that might affect the Watch List. A federal judge had ruled in a case involving leading Weathermen (SDS radical wing) that all federal agencies, including NSA, must disclose any illegal wiretaps of the defendants. NSA's communications monitoring, although not technically a wiretap, could be construed as such by recent court decisions. Although the Weathermen in question might not be on the Watch List, the time was not far off when a court case would expose the list.

~~(S-CCO)~~ This operation did not pass the "smell test" either. According to Allen, it appeared to be a possible violation of constitutional guarantees. He promptly wrote to Attorney General Elliot Richardson to request that Richardson himself authorize the retention of all individuals by name on the list.²⁴

(U) This was in September 1973. The Watergate hearings in Congress had just wrapped up, and the special prosecutor, Archibald Cox, had subpoenaed the presidential tapes. The executive department was in chaos. Richardson's predecessor, Richard Kleindeinst, had been forced out under pressure, and his predecessor, John Mitchell, was almost sure to go to jail. In that atmosphere, the attorney general was not going to permit the continuation of an operation of such doubtful legality. He requested that NSA stop the operation until he had had a chance to review it. With that, Minaret came to a well-deserved end.²⁵

(U) *Clandestine Methods*

(U) If you can't break a code, the time-honored method is to steal it. Two of NSA's most cherished secrets, the black bag job and the wiretap, became public knowledge during the Watergate period.

(U) Black bag jobs referred to the art of breaking, entering, and theft of codes and cipher equipment. The Office of Naval Intelligence (ONI), an unlikely leader in the field, became the first practitioner. In 1922 ONI picked the lock of the safe in the Japanese consulate in New York and filched a Japanese naval code. This theft led to the establishment of the first permanent American naval cryptologic effort, OP-20-G, in 1924.²⁶

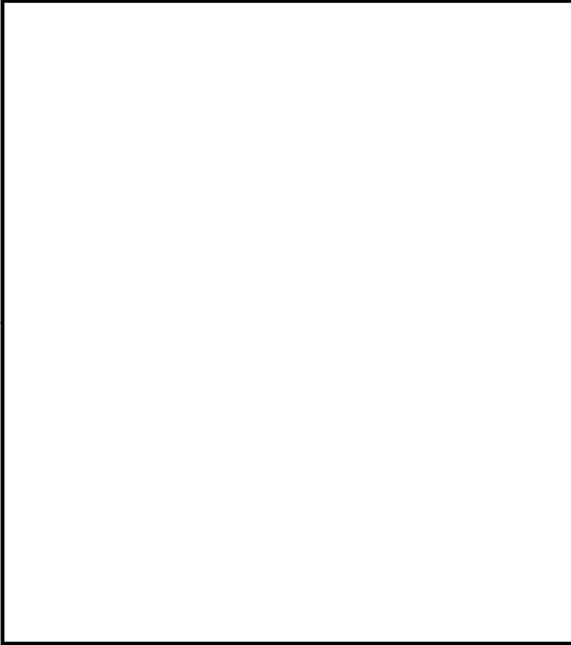
(U) ONI continued to be the main practitioner of the art. Prior to World War II the Navy pilfered a diplomatic code which was used at embassies which lacked a Purple machine. Joseph Mauborgne, the head of the Army Signal Corps, hit the overhead when he found out. Mauborgne reasoned that if the Japanese ever discovered the loss, they might change all their systems, including Purple, and extracted from the Navy an agreement that all such break-ins in the future would be coordinated with the Signal Corps.²⁷



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(U) J. Edgar Hoover

(U) *The Huston Plan*

(U) Richard Nixon had been president just over a year when he initiated a string of actions which ultimately brought down his presidency. The White House-ordered invasion of Cambodia, a militarily ineffective foray, unleashed a wave of domestic protests, culminating in the shootings at Kent State in May of 1970. Stung by the reaction, the president called the heads of the intelligence agencies, and on June 5 he told Richard Helms of CIA, J. Edgar Hoover of the FBI, Lieutenant General Donald Bennett of DIA, and Admiral Noel Gayler of NSA that he wanted to know what steps they and their agencies could take to get a better handle on domestic radicalism. According to journalist Theodore White, who later reconstructed the meeting:

He was dissatisfied with them all . . . they were overstaffed, they weren't getting the story, they were spending too much money, there was no production, they had to get together. In sum, he wanted a thorough coordination of all American intelligence agencies; he wanted to know what the links were between foreign groups - al-Fatah; the Arab terrorists; the Algerian subsidy center - and domestic street turbulence. They would form a committee, J. Edgar Hoover would be the chairman, Tom Huston of the White House would be the staff man.³¹

(U) Thomas Charles Huston, the evident object of the president's displeasure, was a young right-wing lawyer who had been hired as an assistant to White House speech writer Patrick Buchanan. His only qualifications were political - he had been president of the Young Americans for Freedom, a conservative campus organization nationwide. And Huston wasn't even the key player. Hoover was named chair of the committee, in order to place him in a position in which the FBI would finally be forced to confront domestic radicalism.³²

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(U) The committee report confronted the issue, all right, and it laid out a number of "further steps," many of which were illegal. The report recommended increasing wiretapping and microphone surveillance of radicals; relaxing restrictions on mail covers and mail intercepts; carrying out selective break-ins against domestic radicals and organizations; lifting age restrictions on FBI campus informants; and broadening NSA's intercepts of the international communications of American citizens. But Hoover knew the score, and he attached footnotes to each of the techniques which he did not want the FBI involved in. When it went to the president, it was carefully qualified by the FBI, the one organizations that would be the most involved.³³

(U) The president sent word back to Huston, through Haldeman, of his approval, but did not initiate any paperwork. So when the committee was tasked to implement the recommendations, it was tasked by Tom Charles Huston, not the president. Hoover informed John Mitchell, the attorney general, that he would not participate without a written order from Mitchell. Mitchell discussed this with Nixon, and both agreed that it would be too dangerous. Ultimately, the president voided the plan, but not before NSA had become directly involved in the seamier side of life.³⁴

~~(S-CCO)~~ NSA was ambivalent. On the one hand, Gayler and his committee representative, Benson Buffham, viewed it as a way to get Hoover to relax his damaging restrictions on break-ins and wiretaps. Gayler had personally pleaded with Hoover, to no avail; now the committee mechanism might force the stubborn director into a corner. But that was a legal matter for the FBI to sort out. When asked about intercepting the communications of Americans involved in domestic radicalism, Gayler and Buffham became more pensive. They informed the committee that "NSA currently interprets its jurisdictional mandate as precluding the production and dissemination of intelligence from communications between U.S. citizens, and as precluding specific targeting against communications of U.S. nationals." Of course American names occasionally appeared in intercepted traffic, but use of even this incidental intercept needed to be regularized by a change to NSCID 6.³⁵ As with the FBI, NSA wanted a legal leg to stand on.

~~(S-CCO)~~ What stand did NSA take? Gayler genuinely wanted to be helpful, especially when the president so insisted on getting help. In meetings he seemed ready to turn NSA's legendary collection capability to the services of the Huston mandate. But his lawyers advised caution, and, according to Huston himself, NSA was more nervous than any of the other intelligence agencies. Gayler clearly wanted a legal mandate.³⁶

(U) *The White House Tapes*

~~(S-CCO)~~ General Lew Allen, General Phillips's successor, came to the job with a strong admonition from his boss, Secretary of Defense James Schlesinger: stay as far away from Watergate as possible. He was aghast, then, when he learned on a Friday in January 1974 that a virtual army of lawyers was on its way to Fort Meade with the White House tapes. Howard Rosenblum, the director of research and engineering, had made it known that NSA might be able to analyze the infamous White House tapes which had been

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subpoenaed by the special prosecutor. They all arrived in staff cars on a Friday with boxes of tapes. NSA's experts went through the tapes for hours, then gave them back to the lawyers. They had found an eighteen-minute gap on one of the tapes. It appeared to be a deliberate erasure, as the tape had been gone over multiple times in a manner that did not support the president's contention that the erasure had been accidental.³⁷

(U) THE ALLEN ERA AT NSA

(U) Occasionally a person's impact on events demands that the period be named after him or her. General Lew Allen was such a man. But the "Allen Era" did not actually begin with Allen.

(U) In July 1972 Noel Gayler departed the Agency. He got a fourth star and became CINCPAC. Gayler, an upwardly mobile officer with high ambitions, was the first director to move up. NSA had always been a dead end, where mavericks could end their careers at an agency where mavericks were appreciated, even required. He was not to be the last - rather, Noel Gayler was the first of four officers in succession who gained their fourth star and moved on. The second was his successor, Air Force lieutenant general Sam Phillips.

(U) Phillips came from a highly technical background. A fighter pilot in World War II, he came to NSA from the Apollo program, where he had been the director. The visibility of the program, and the accolades that had been heaped on his management of it, indicated that he was destined for bigger things. According to one source, he knew before he arrived that he would stay only one year, and would move on to command the Air Force Systems Command as a four-star general. However, his successor, Lew Allen, believed that Phillips became aware of NSA's vulnerability to the Watergate mess once he was ensconced and that this influenced his determination to move on.³⁸

(U) Lew Allen came from the same sort of background, but more so. He had a doctorate in nuclear physics, had worked at Lawrence Livermore Laboratories, worked in the satellite collection business for the Air Force, and when nominated to be DIRNSA, was de facto director of the Intelligence Community (IC) Staff.

(U) He had become a protégé of James Schlesinger, who had brought him onto the IC Staff. But owing to a temporary feud between Schlesinger and Congress over whether the job should be civilian or military, Allen had not been confirmed. So when Schlesinger became secretary of defense, he asked Allen to become DIRNSA, a position that did not require congressional confirmation.³⁹

(U) Lew Allen was easy to like. His quick mind was covered over by a kindly demeanor and a slowness to anger. Even Stansfield Turner, who feuded endlessly with Allen's successor, Bobby Inman, wrote that Allen "particularly impressed me with a firm statement that the NSA took its direction on what information to collect from the Director of Central Intelligence. All I needed, he said, was to tell him what I wanted."⁴⁰



(U) Lieutenant General Sam Phillips



(U) Lieutenant General Lew Allen

~~(TS-CCO-TK)~~ Lew Allen once described candidly the baggage that he brought with him to NSA. Schlesinger was convinced that NSA was too large and too expensive, and he told Allen to look into the charge. (He found it to be unsubstantiated.) He had always been impressed with the technical competence resident at NSA, but he felt that "NSA, like many large bureaucracies, had a lot of turf. . . ." Having come from the NRO side of the satellite business, he knew firsthand of NSA's desire to control SIGINT satellites and ground stations, and he felt that NSA harbored "ambitions for responsibilities that somewhat exceeded the grasp." He had heard that NSA had enormous warehouses of undecipherable tapes. (This too he found to be exaggerated.)⁴¹

~~(C)~~ His focus on the technical side of life was perfect for NSA, a technical agency. Allen had no patience with bureaucratic turf battles, and he did not think that constant reorganizations were a good use of time. But he did bring over from the Air Force a penchant for systems design, and for that, one needed a designer. So one of his first acts was to appoint an architectural planning staff to design the various components of the cryptologic system. He had an architect for everything: Third Party, overhead, support to military operations, high-frequency systems, line-of-sight systems, signals search, and so on. One of Lew Allen's most important legacies was to institute a planning mentality where one had not existed.

~~(FOUO)~~ In 1977, in the last year of his tenure, he confronted a congressional proposal to pull NSA out of the Defense Department. To a man as firmly grounded in the military

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as Allen, this was a nonstarter. Pointing out that 75 to 80 percent of NSA's material supported the military, he came down firmly on the side of staying in the Defense Department. As to the concurrent proposal to civilianize the director's job, the continued credibility with military commanders was too important a qualification to lose.⁴²

(U) THE CHURCH COMMITTEE

(U) When John Dean, the president's legal counsel, began unburdening himself to the Ervin Committee in the spring of 1973, the testimony implicated the CIA in aspects of the Watergate scandal. So William Colby, the deputy for operations, decided to do a survey.⁴³

(U) The "Family Jewels" was a 693-page report of possibly illegal CIA activities through the years. Colby, who had become DCI by the time the report was finished, informed the four chairmen of the House and Senate committees which had oversight of the CIA and succeeded in convincing all of them that the matter was over with and that CIA would clean up its own house. But by then so many people within the CIA knew about the report that its eventual exposure became almost inevitable.



(U) William Colby

(U) On December 22, 1974, journalist Seymour Hersh published a story in the *New York Times* based on the "Family Jewels," charging that the CIA had been involved in Chaos, an operation to monitor domestic radical groups during the Nixon administration.⁴⁴ The next day, President Ford detailed Henry Kissinger to look into Hersh's allegations. (Although informing Congress, Colby had never told the White House about the report.) Colby confirmed the general outlines of the story to Kissinger, and the president knew that he would have to investigate.⁴⁵ So on January 4, Ford appointed a President's Commission on CIA Activities within the United States. It was headed by Vice President Rockefeller, and the press promptly dubbed it the Rockefeller Commission.⁴⁶

(U) While the commission was deliberating, the president himself revealed, on January 16, that some of the allegations of wrongdoing included plots to assassinate foreign heads of state. As if enough controversy did not already surround the commission, this new charge served to scuttle its effectiveness. In the end it issued a very reasonable and workmanlike report which recommended certain structural reforms to guard against



(U) Nelson Rockefeller

future transgressions, and it set forth specific prohibitions of certain activities like illegal wiretaps and participation in domestic intelligence operations. (It declined to rule on assassinations, pleading lack of time to get to the bottom of these allegations.) But by then no one was listening.⁴⁷

(U) Senators were clamoring for an investigation, and on January 27 the Senate established the Senate Select Committee on Intelligence. Philip Hart of Michigan was originally approached to chair the committee, but he was gravely ill with cancer, and so the job was offered to Frank Church of Idaho. Unlike Hart, Church harbored presidential ambitions, and some feared that he would use the committee as a pulpit to advance his ambitions. Like the Rockefeller Commission before it, this investigative body came to be known after its chair and has gone down in history as the Church Committee.

(U) Some, like Church himself, were suspicious of the intelligence community and sought to expose as much as possible. Into this camp fell Democrats Gary Hart of Colorado and Walter Mondale of Minnesota, along with Republicans Charles McMathias of Maryland and Richard Schweicker of Pennsylvania. Many were moderates (Warren Huddleston of Kentucky and Howard Baker of Tennessee being examples) while two senators, Barry Goldwater of Arizona and John Tower of Texas, did not believe in exposing intelligence secrets no matter what the provocation.⁴⁸

~~(S-CCO)~~ To begin with, NSA was not even on the target list. But in the course of preliminary investigation, two Senate staffers discovered in the National Archives files

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(U) Frank Church

some Defense paperwork relating to domestic wiretaps which referred to NSA as the source of the request. The committee was not inclined to make use of this material, but the two staffers leaked the documents to Representative Bella Abzug of New York, who was starting her own investigation. Church terminated the two staffers, but the damage had been done, and the committee somewhat reluctantly broadened its investigation to include the National Security Agency.⁴⁹

~~(S-CCO)~~ What the committee had found was the new Shamrock operation. It had become easier to use wiretaps than to get traffic from cable companies, and NSA was using this technique with increasing frequency. But the Church staffers quickly uncovered the older Shamrock operation, and this became the focus of its early investigation of NSA. Knowing the ramifications, Allen terminated the portion of Shamrock that dealt with the cable companies on May 15, in the middle of the preliminary hearings.⁵⁰

~~(FOUO)~~ NSA's official relationship with the Church Committee began on May 20 with a visit from the committee staff; five days later Church himself came to Fort Meade for briefings and tours. This began a close association which extended over the entire summer and through October 1975. In the beginning it was a rough road, with committee staffers trying to dig deep, while NSA officials tried to protect. But with a few choice words from Allen, NSA's responsiveness improved and, with it, the cooperation of the committee. By the time it was all over it had become a model of how an intelligence agency should relate

to Congress, and it enhanced NSA's reputation on Capitol Hill. But it had been tough slogging.⁵¹

(U) In September, the committee decided to request open testimony by Allen. They discussed two operations, Shamrock and Minaret, and in the end decided to question him about only Minaret. The committee discussions on the question were among the most rancorous of all, and Goldwater and Tower openly dissented from the proposition of requiring anyone at NSA to testify on any subject. But they were outvoted, and Allen was subpoenaed, despite a phone call from President Ford to Frank Church.⁵²

~~(S-CCO)~~ Never had NSA been forced into such a position, and Lew Allen was very nervous. In a preliminary letter to Church he stated:

As we prepare for open hearings, I am struck even more forcibly by the risks involved in this method of reporting to the American people. . . . Despite the honest and painstaking efforts of your Committee and Staff to work with us to limit damage, I remain concerned that the open hearing presents significant and unnecessary risks.⁵³

Allen pleaded that the cost of exposure of Minaret could be very high. The Watch List was a byproduct of NSA's operation to monitor ILC (international commercial) communications,



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(U) The Church Committee conducted its open hearing on NSA on October 29, after two days of meticulous closed-door rehearsals. The director began with a prepared statement describing NSA's mission in very general terms and used historical examples (the Battle of Midway and the decryption of the Japanese Purple machine being two) to depict the value of such operations. He detailed the Agency's legal authorities and defined what NSA thought was meant by "foreign intelligence" and "foreign communication." Conceding the murky nature of the definitions, he then launched into a discussion of the Watch List, placing it in historical context and discussing how NSA interpreted the tasking and executed the support to requesting agencies. He stated that he himself had closed down Minaret two years before.⁵⁵

~~(FOUO)~~ Lew Allen's performance was a triumph. Future vice president Walter Mondale noted to the director that "the performance of your staff and yourself before the committee is perhaps the most impressive presentation that we have had. And I consider your agency and your work to be possibly the single most important source of intelligence for this nation." Despite the accolades, however, when the committee in closed session discussed how much to tell about NSA, the majority voted to include Shamrock, which Allen had opposed because of the embarrassment to the cable companies. Goldwater, Tower, and Howard Baker were set in bitter opposition, but Church contended that legislation would be necessary to insure that abuses would not be repeated, and both Shamrock and Minaret constituted important material to back up the request for

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legislation. When asked, Secretary of Defense James Schlesinger and the DCI, William Colby, viewed the release of these two projects to be affordable.⁵⁶

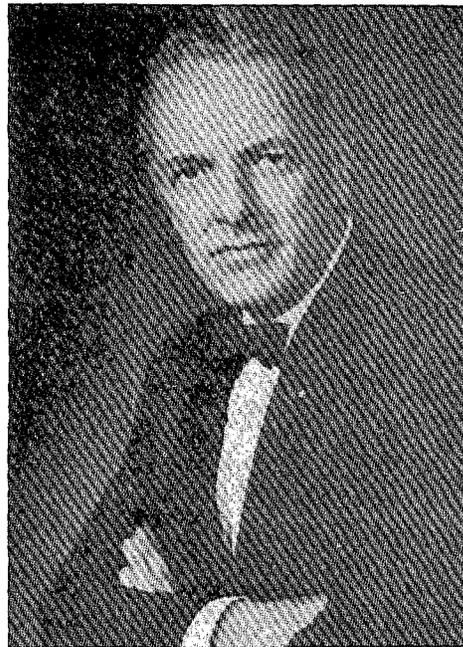
(U) When the Church Committee issued its final report in February 1976, the discussion of NSA was brief. Focusing on what NSA could *potentially* do, rather than what it *was* doing, Church concluded:

The capabilities that NSA now possess[es] to intercept and analyze communications are awesome. Future breakthroughs in technology will undoubtedly increase that capability. As the technological barriers to the interception of all forms of communication are being eroded, there must be a strengthening of the legal and operational safeguards that protect Americans.

NSA's existence should be based on a congressional statute which established the limitations, rather than on an executive order then twenty-three years old. And so ended the discussion of NSA, just seven pages in a report comprising seven volumes of hearings.⁵⁷

(U) THE PIKE COMMITTEE

(U) The backwash of Hersh's Family Jewels article also infected the House of Representatives and produced the predictable clamor to investigate. So the House held its own investigation, under Representative Otis Pike of New York. Not surprisingly, it became known as the Pike Committee.



(U) Otis Pike

(U) But it did not begin that way. The first chairman was to be Lucien Nedzi, who chaired the Intelligence Subcommittee of the Armed Services committee. But this effort dissolved in controversy when Democrats on the committee discovered that Colby had taken Nedzi into his confidence over the original Family Jewels report and had convinced him not to investigate. Fatally compromised, Nedzi resigned, and the task fell to Pike.⁵⁸

(U) While the Church Committee focused on CIA, the Pike Committee had a much broader charter. It was to review the entire intelligence apparatus and to focus on operational effectiveness, coordination procedures, the protection of individual liberties, possible need for more congressional oversight, and on planning, programming, and budgeting. Pike promised to evaluate the performance of the intelligence community

against its budget. But the membership was liberal (somewhat more so than that of the Church Committee) and the staff intrusive. The focus quickly swung to the topic of abuses of individual liberties, and stayed there.⁵⁹

~~(FOUO)~~ NSA had already had one experience with Pike, when he had chaired a subcommittee investigating the *Pueblo* capture of 1968. It had not been a happy encounter. The committee had leaked *in camera* testimony of the director, Lieutenant General Carter, to the press, and Carter was furious. Once burned, the NSA staff was wary (see *American Cryptology during the Cold War, 1945-1989, Book II: Centralization Wins, 1960-1972*, p. 449).

~~(FOUO)~~ The House charter gave the committee the power to determine its own rules concerning classification, handling, and release of executive department documents. Burned during the *Pueblo* investigation, NSA lawyers were anxious to nail down an agreed-upon set of procedures, but preliminary meetings yielded no agreement on the procedures for handling SIGINT documents. Lew Allen, who later characterized the Pike Committee staffers as "irresponsible," issued instructions to "limit our discussions with the full House committee and staff to administrative, fiscal and management matters."⁶⁰

~~(S-CCO)~~ Relationships quickly deteriorated. NSA officials described the committee staff as "hostile," the procedures for handling classified material as questionable, their willingness to learn about NSA as nonexistent. One NSA official noted that only one Pike staffer ever visited NSA, in contrast to the Church Committee, whose entire membership and staff visited Fort Meade in May 1975. Pike staffers objected to having NSA officials in the room when NSA employees were being questioned, and the staff interrogation of degenerated into a shoving match.⁶¹

~~(FOUO)~~ In August, the committee called Lew Allen to testify. The letter requesting his presence stated that the budget policies and procedures would be the topic, but questioning soon turned to supposed monitoring of Americans. Allen objected to covering this ground in open session, and after a long committee wrangle and Allen's adamant refusal to go further, the committee voted to go into executive session. Summarizing NSA's objections, he said: "I know of no way to preserve secrecy for an agency such as NSA other than to be as anonymous as possible, and to abide by the statutory restrictions which the Congress instructed us to, and those are that we do not discuss our operations; we do not discuss our organization; we do not discuss our budget in public."⁶² Throughout Allen's appearance, Pike and Congressman Ron Dellums of California seemed suspicious and disbelieving. At one point Pike interrupted the interrogation to say:

Now why don't you just tell us and be forthcoming, without my having to drag it out of you, or any other member having to drag it out of you, what sort of communications of American citizens you are intercepting, how you are intercepting them, what you are doing with them, and why you feel it is necessary to keep on doing it.⁶³

The presumption of guilt was palpable.

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~~(S-CCO)~~ The final report criticized NSA's reporting policy, which amounted to fire-hosing the intelligence community. [redacted]

[redacted]

It noted that NSA frequently had the right answers, but that customers probably did not fully understand what NSA was really saying. [redacted]

[redacted]

Like Church, Pike recommended that NSA's existence be authorized through congressional legislation and that "further, it is recommended that such legislation specifically define the role of NSA with reference to the monitoring of communications of Americans." ⁶⁵

(U) The Pike Committee ended awash in controversy. On January 19, the committee distributed its final report. The Ford administration protested that it contained classified information, including several sections with codeword material. The committee voted, 8-4, not to delete the classified sections, and it sent the 340-page report to the House. Faced with anguished protests from the Ford administration, the House Rules Committee on January 29 voted 9-7 to reverse the Pike Committee decision. (Pike condemned this as "the biggest coverup since Watergate.") ⁶⁶ But it was already too late. On January 22 the *New York Times* reported that it had knowledge of details of the report. On January 25, CBS correspondent Daniel Schorr stated triumphantly on national television, "I have the Pike Report." Four days later the House secured all copies of the report except the one in Schorr's possession. Fearing a Ford administration backlash and possible prosecution, CBS refused to publish. Schorr then contracted with the *Village Voice*, and the report

appeared in entirety in that publication in February, an event which led CBS to terminate his employment.⁶⁷

(U) Despite protestations by Pike that the executive department was doing all the leaking, his own committee appears to have been the source. The draft report was distributed to committee members the morning of January 19, and by four o'clock that afternoon a *New York Times* reporter was already on the phone with the staff director asking questions based on the report. Versions of the report would appear in the press, the committee would make wording changes, and the next day the new wording would be in the newspapers.⁶⁸

(U) Pike apparently began the investigation determined to produce a fair and balanced evaluation of American intelligence. He focused at first on job performance measured against funds expended. But the committee was top-heavy with liberal Democrats, and things quickly got out of hand ideologically. The committee and its staff refused to agree to commonly accepted rules for handling classified material, and when the executive department thwarted its desire to release classified material, it leaked like a sieve. The dispute with the administration over the release of NSA material produced an impasse, and diverted the committee from its original task. The House committee that was appointed to investigate the investigators turned up a shabby performance by the Pike Committee. In the end, it did Pike and Congress more damage than it did the Ford administration. All in all, it was a poor start for congressional oversight.

(U) THE ABZUG COMMITTEE

(U) Serious (if ideologically polarized) inquiry descended into opéra bouffe with the charter of yet a third investigation. The leader was Bella Abzug, who had been elected to Congress in 1972 from a liberal district in New York City amid the early voter reactions to Watergate.

~~(S-CCO)~~ Abzug chaired the Government Information and Individual Rights Subcommittee of the Committee on Government Operations. In mid-1975, with the Church Committee holding preliminary investigations in executive session, Abzug got hold of some of the more sensational information relating to Shamrock and Minaret. (The information was apparently leaked by Church Committee staffers.)⁶⁹ The climate for a



(U) Bella Abzug

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full investigation of NSA was right. The press had picked up some of the themes resonating in the Church and Pike hearings. An article in the September 8 edition of *Newsweek* described the "vacuum cleaner" approach to ILC collection and referred to NSA as "Orwellian." This was counterbalanced by a statement that "the NSA intends nothing like tyranny - it is probably the most apolitical agency in Washington." But the fourth estate had clearly discovered the technological advances that permitted NSA to cast a very broad net, and characterized it as a potential threat to individual liberty.⁷⁰

~~(S-CCO)~~ NSA relationships with the Abzug Committee staff were poisonous. At their very first session, Abzug staffers refused to sign the normal indoctrination oath, and further discussions proceeded at the noncodeword level. Despite the refusal to accept executive department rules on clearances, the committee subpoenaed huge amounts of material. One subpoena, for instance, demanded every record, including tape recordings, of every scrap of information pertaining to the Agency's COMINT mission since 1947. (Tape recordings alone comprised in excess of a million reels.)⁷¹ Fearful of leaks that might dwarf those of the Pike Committee, the Ford administration decided to deny these requests.

~~(C)~~ In October, Abzug began maneuvering to get Lew Allen to testify in open session. The sparring sessions (Allen had no intention of complying) ended on October 29 when Allen appeared before the considerably less hostile Church Committee. Preempted, Abzug pressed for lower level NSA officials, and subpoenas began arriving at NSA. With the climate of mutual suspicion that existed, NSA resisted. Allen went to Jack Brooks, chairman of the full committee, to protest, and extracted a promise that Abzug could subpoena, but Brooks would refuse to enforce the subpoenas. In the end, Abzug got her hands on one unfortunate NSA official, Joseph Tomba, who appeared in open session and refused, at the request of DoD lawyers, to answer most questions put to him. The committee held Tomba in contempt, but Jack Brooks was good to his promise, and the citation was not enforced.⁷²

~~(C)~~ In the process of dealing with Abzug, Lew Allen and his staff were subjected to fearful browbeating, but they held fast, defended by not only the full executive department, but by Congressman Jack Brooks himself. Hearings dragged on into 1976, making Abzug the longest running of the investigative committees. Then, in September of 1976 they began to fade, as Abzug became involved in a campaign for the Senate, and hearings ceased. (She ultimately lost.) The committee eventually issued a draft report (February 1977) which predictably concluded that there were still loopholes which would allow NSA to intercept U.S. communications for foreign intelligence purposes and that these loopholes should be closed. But the importance was secondary. Church had already exposed the loopholes and had made the same recommendations. Moreover, by then President Ford had issued his new executive order, 11905, which forbade many of the "abuses" that Abzug had in mind. The committee faded into irrelevance.⁷³

(U) With that, the investigative process had run its course. It had been a pretty thorough public housecleaning for all intelligence agencies. For CIA (and to a lesser extent FBI) it had been traumatic and damaging. For NSA, the trauma had been much

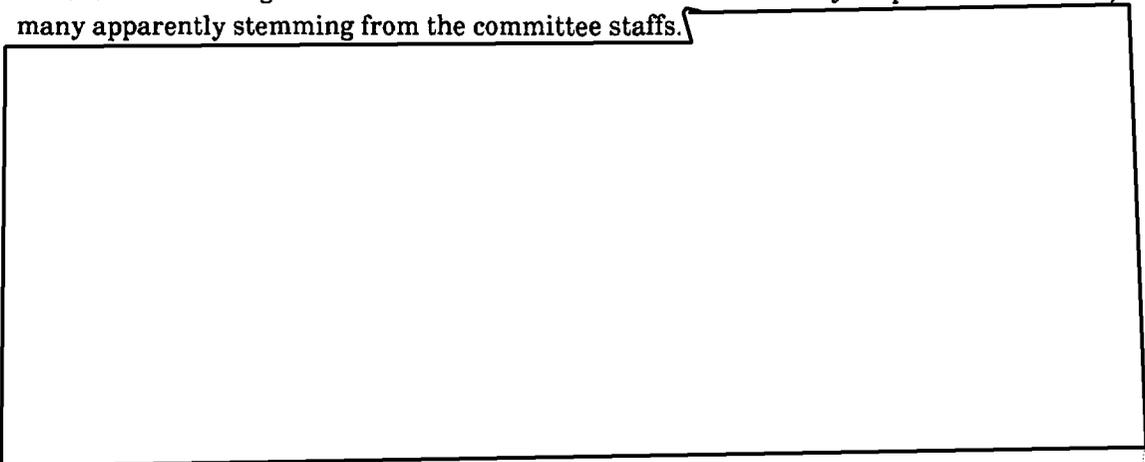
less. The principal reason was the director. Lew Allen – kindly, thoughtful, intellectual, and forthright – was just the right person at just the right time. He disarmed most of NSA’s more reasoned critics with the way he directed his staff to respond to Congress. He headed off controversy before it got well started. Most of all, his five-star performance before the Church Committee convinced many that NSA had not gone seriously off track and that it should be preserved at all cost. A glimpse under the cryptologic curtain convinced most senators and congressmen that NSA was the true gem of the intelligence world.

(U) THE BACKWASH

(U) The Watergate era changed cryptology. The tell-all atmosphere resulted in a flood of revelations unprecedented then and now. It also resulted in new executive department restrictions on cryptologic operations and ushered in a new era of congressional oversight.

(U) The Revelations

(U) The investigations were conducted amid an absolute fury of press revelations, many apparently stemming from the committee staffs.



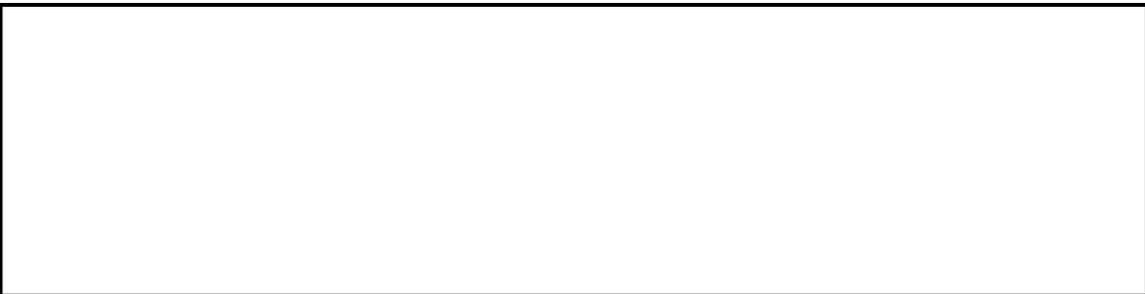
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(U) More serious still were articles on American cryptologic relationships with Second Parties.



In New Zealand, members of Parliament demanded that the government confirm or deny the nation’s membership in UKUSA.⁷⁵



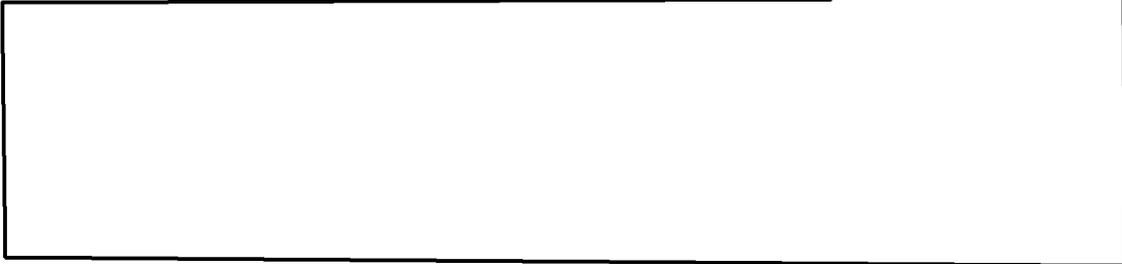
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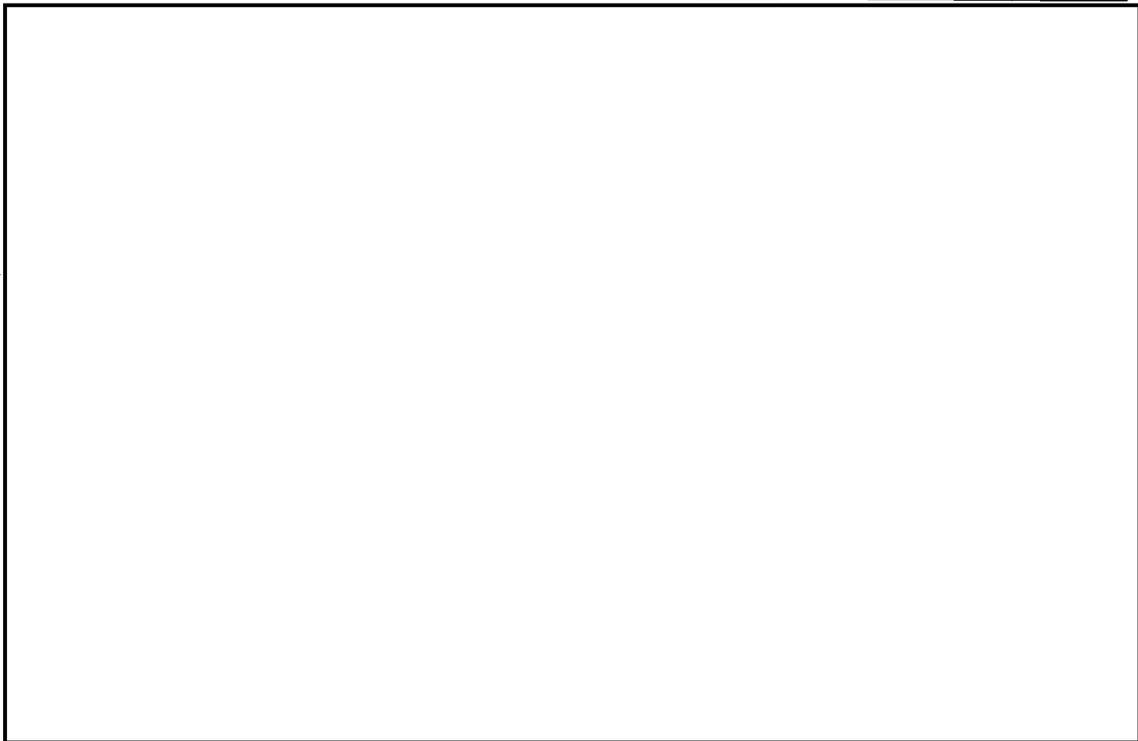
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(U) Glomar Explorer

~~(S)~~ [redacted] In 1968 a Soviet Golf-class nuclear submarine on patrol in the Pacific mysteriously went to the bottom with all hands. The Soviets could not locate the wreck, but the U.S. Navy could, and the U.S. began to study the feasibility of capturing it. [redacted]



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(U) Glomar Explorer



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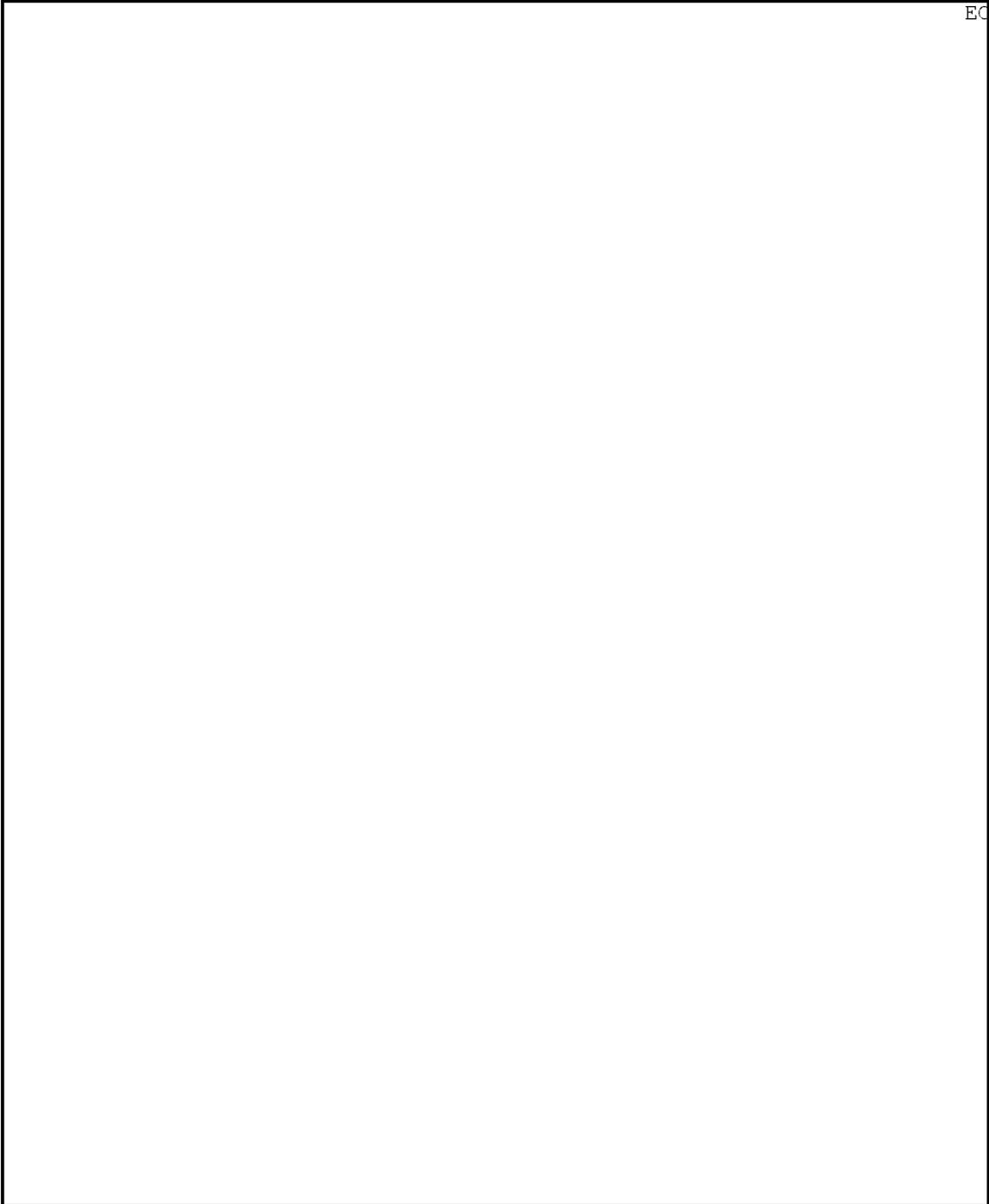
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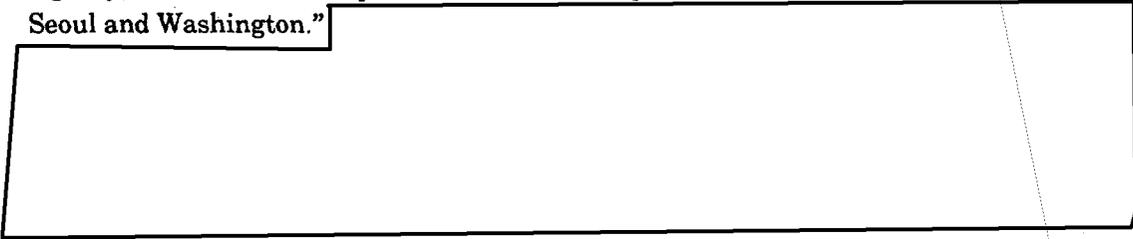
(U) Newspapers were, of course, following the Fraser investigation, and rumors began appearing that the indictment was based on NSA information. On September 4, 1977, the *New York Times* published an article alleging that Henry Kissinger, Melvin Laird, and other top officials had been aware of the South Korean bribery ring at least as early as 1972. In discussing the source of this information, the *Times* said: "While the investigators did not identify the documents precisely, other sources said that the

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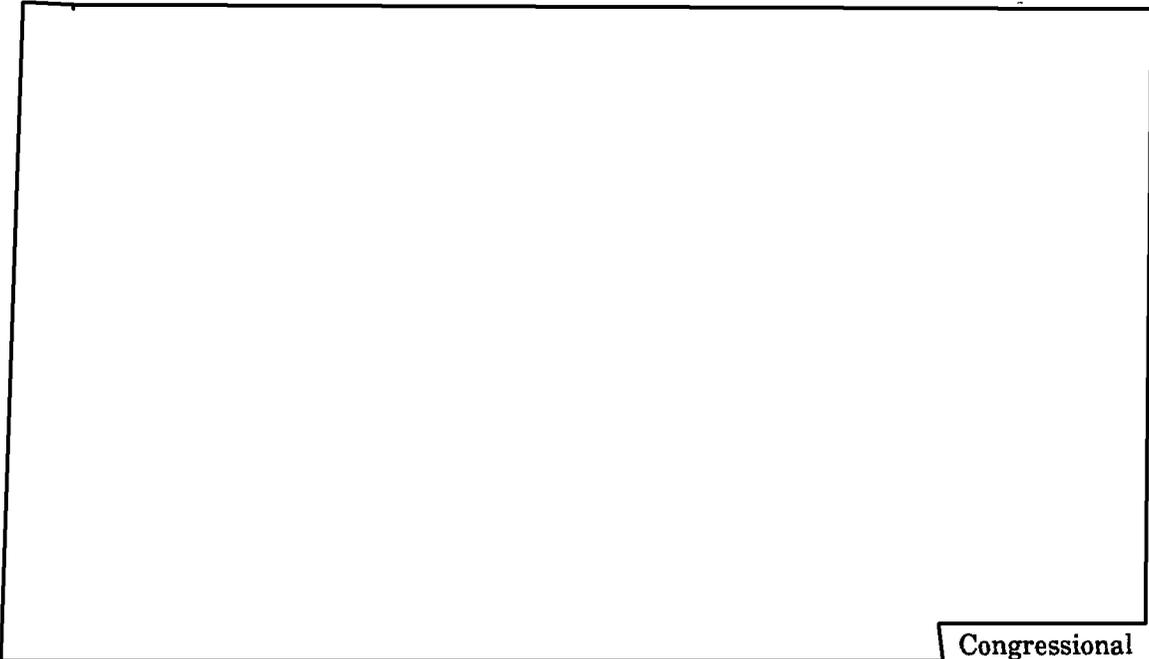
CRYPTOLOGIC QUARTERLY

documents came from the Central Intelligence Agency, which was earlier reported to have agents in the presidential executive mansion in Seoul, and from the National Security Agency, which has been reported to have intercepted South Korean cable traffic between Seoul and Washington.”



(U) On September 6, two days after the *Times* story, a federal grand jury indicted Tong-Sun Park on thirty-six felony counts of bribery, conspiracy, mail fraud, illegal campaign contributions, and other charges. A California congressman and several former Korean intelligence officials were listed as “unindicted co-conspirators.” This placed the issue in the realm of the courts.⁸³

(U) But the Koreagate affair was hardly dead. In October 1977, the *New York Times* reported the bizarre case of Sohn Young Ho. Sohn, the top KCIA agent in New York City, was in the process of asking the United States for political asylum when Edward J. Derwinski, a member of the Fraser Committee, allegedly tipped off the KCIA, which went looking for Sohn, possibly intending to mailbag him back to Seoul for safekeeping. Fortunately, the FBI got to him first, but the source of the information about the Derwinski leak, according to the *Times*, was NSA.⁸⁴



Congressional oversight was fine as long it was kept within a narrow range and subjected to the greatest restrictions. As a test of providing SIGINT support to law enforcement, however, it had a much shorter influence. The Reagan administration began reversing that course in 1981,

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insisting that SIGINT be expanded to provide more, rather than less, support to domestic law enforcement.

(U) Executive Order 11905

(U) If the president did not act to restrict the intelligence community, it was clear that Congress would. So during the fall of 1975, with the Church hearings in full throttle, President Ford appointed an Intelligence Coordinating Group, chaired by White House counselor Jack Marsh, to draft a comprehensive order, at once organizing the intelligence community and placing checks on it.⁸⁶ The result was Executive Order 11905.

(U) Organizationally, the president gave the DCI more authority to supervise the intelligence community, including the critical budget review "club" that Nixon had tentatively proffered to Richard Helms in 1971. The DCI became chairman of a new Council on Foreign Intelligence, which included the assistant secretary of defense for intelligence (a newly created position which would supervise NSA's director). Ford abolished the 40 Committee, which had ruled on all covert operations [redacted]

[redacted] and replaced it with an Operations Advisory Group. He continued the President's Foreign Intelligence Advisory Board and directed that three of its members constitute a special Intelligence Oversight Board to keep track of possibly illegal activities by intelligence organizations. The executive order attempted to draw a clear line between "foreign intelligence" and "domestic law enforcement."⁸⁷

(U) The organizational aspects were of less concern to NSA than were the specific prohibitions. The order prohibited the intercept of communications made from, or intended by the sender to be received in, the United States, or directed against U.S. persons abroad, except "under lawful electronic surveillance under procedures approved by the Attorney General."⁸⁸

~~(S-CCO)~~ The new executive order resulted in the termination of many NSA activities in support of law enforcement. [redacted]

[redacted]

~~(S-CCO)~~ The crisp wording of the order obscured the resident subtleties. How did an analyst know if a person was an American citizen, a resident alien, or just a person with an American-sounding name? How would NSA segregate within its database those

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individuals against whom collection was legal, from those against whom collection was authorized only in specific instances? In fast moving crises such as the *Mayaguez* affair, how could NSA determine if collection was authorized? If it was not, but lives were in danger, who would rule on permissibility? And how much easier it was to Monday morning quarterback the situation than to operate during crisis in the dim, floating world of possible prosecutability. In mid-1976 the NSA DDO, Robert Drake, noted to the IC staff that "To the question of whether or not day-to-day SIGINT production can continue under the provisions of the Executive Order, the answer is yes. In other words, although the guidance is annoying, at times conflicting, and necessarily subject to interpretations at the desk level, I can cope with it. . . . On Monday morning, of course, we all can judge that that incident [*Mayaguez*] was reportable but in cases such as this Monday may be too late." Despite such uncertainty, NSA drafted the general wording of the executive order into a new regulation, USSID 18, which stood the test of time for many years. As with the executive order, it was an attempt to preempt more restrictive congressional legislation. Lew Allen considered the matter to be extremely important and got White House approval.⁹⁰

(U) One result of the Watergate period was to complicate NSA's life [redacted]. [redacted] The matter of [redacted] for law enforcement had been contentious since the first Supreme Court decision in 1927, which gave the federal government broad latitude to do electronic surveillance. Courts gradually narrowed this down, and by the 1970s the new climate of concern for individual liberties had basically made warrantless electronic surveillance inadmissible as evidence. But [redacted] foreign intelligence did not fall within this rule, and in the early 1970s federal courts ruled that foreign intelligence [redacted] were legal.⁹¹

~~(S-CCO)~~ The "New Shamrock" operations involved [redacted]. [redacted] Begun in the 1950s, those [redacted] had continued for years despite periodic resistance by J. Edgar Hoover. Through the decade of the 1960s, the number of such [redacted] fluctuated in the sixty to seventy range. But in December 1974 Attorney General Levi instituted new and cumbersome approval procedures which both lengthened the time needed for approval and broadened the exposure of specific operations from just a few people to a number spread around the intelligence and national security community. At the top of the heap, the attorney general maintained personal control and began disapproving requests that sported justifications that he regarded as weak. Lew Allen tried to divest Levi of control of domestic foreign intelligence [redacted] but was unsuccessful. But, though EO 11905 specifically stated that [redacted] foreign intelligence would be treated differently from [redacted] domestic law enforcement, successive attorneys general continued to control foreign intelligence [redacted] through the Carter administration. To NSA, it was a cost of doing business that had not existed before Watergate.⁹²

(U) The last act in the play occurred in 1978 when Congress passed, and the president signed, the Foreign Intelligence Surveillance Act (FISA). This added another approval layer, consisting of a special court of seven judges which would rule on requests from the attorney general [redacted]. Although this lengthened further the process of

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instituting the [redacted] it had no effect on their approval. [redacted]

(U) Congressional Oversight

(U) Congressional oversight of the intelligence community sprang from the Watergate period. Prior to the Church and Pike committees, oversight was more or less nominal and was confined to just four committees: the Armed Services and Appropriations committees in both houses of Congress. Had Congress no budget to approve, oversight probably would have been even more sketchy than it actually was.

(U) Each of the four committees set up special intelligence subcommittees, comprising the full committee chairman and three or four trusted members from both sides of the aisle. Their examination of funding requests was cursory, and they never asked embarrassing questions about operations. The president controlled the requests, and if someone's intelligence budget were to be shaved down, the executive department would have to do the shaving - congressmen did not get into those details. Thus, inclusion in the president's budget was tantamount to approval.

(U) In the Senate, one man dominated oversight - Richard Russell of Georgia. Serving from 1933 to 1971, Russell chaired both the Armed Services Committee and the Intelligence Subcommittee of the Appropriations Committee. In the House, a succession of chairmen, almost all from conservative southern states with strong national defense leanings, dominated the proceedings. Mendel Rivers, Carl Vinson, and F. Edward Hebern strongly supported intelligence projects and insured that the information was held as tightly as possible in Congress. [redacted] the CIA general counsel, once said that "Security was impeccable. We never had the slightest breach." ⁹⁴ Summing up the dealings with Congress, Clark Clifford said, "Congress chose not to be involved and preferred to be uninformed." ⁹⁵ This situation lasted as long as bipartisan consensus continued.

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(U) Special intelligence clearances remained mysterious and obscure. In 1968, at the time of the Tonkin Gulf hearings in the Senate Foreign Relations Committee, no committee members, not even the chairman, William Fulbright, had even heard of clearances above top secret. This problem tied the committee in knots during the testimony of Robert McNamara relating to the August 4, 1964, attack (see Book II, p. 518) :

Senator Gore: Mr. Chairman, could we know what particular classification that is? I had not heard of this particular classification.

Senator Fulbright: The staff, Mr. Marcy, and Mr. Hold are cleared for top secret information. This is something I never heard of before either. It is something special with regard to intelligence information. However, Mr. Bader was cleared for that.

Secretary McNamara: If the staff would wish to request clearance, I am sure the Government would do it.

Mr. Marcy: All of the members who are here submitted renewal requests for top secret clearance recently and, so far as I know, all of those requests have been granted.

Secretary McNamara: But that is not the issue. Clearance is above top secret for the particular information involved in this situation.⁹⁶

(U) By the time the congressional hearings had ended in 1975, the culture had completely changed. Church had termed CIA a "rogue elephant," and closer congressional scrutiny was inevitable. The first thought of Congress was to set up a joint House-Senate committee, but the House fell behind and, unwilling to wait, the Senate established the Senate Select Committee on Intelligence (SSCI) on May 19, 1976. The tardy House, consumed with procedural wrangling over the release of the Pike Report, delayed until July 17, 1977, more than a year later, when it established the House Permanent Select Committee on Intelligence (HPSCI).⁹⁷

~~(FOUO)~~ Ultimately, all members of Congress were to be presumed cleared, and all staff members from the two oversight committees had SI and other security clearances to allow them to do their job. Clearances were also granted to select staff members of certain other committees (like Appropriations) to permit them to do their jobs. Though there were some rough spots at first, NSA-congressional liaison came to be a more or less routine function bedeviled only occasionally by security problems. Certainly there were no repeats of the maverick Pike Committee performance. NSA senior Walter Deeley summed up the matter ten years later: "... I think one of the best things that ever happened to this country is the fact of the establishment of the House Committee on Intelligence and the Senate Committee on Intelligence, and they have total, absolute total, scrutiny over what NSA does."⁹⁸

(U) The Enabling Legislation

(U) The same Congress that decreed congressional oversight also wanted enabling legislation for the intelligence agencies that had not been established by law, as well as specific limiting legislation for CIA (which had already been established by the National Security Act of 1947). NSA was the most visible of the agencies that had come into being by executive order, and the Agency was one of the main targets of the draft legislation. All the drafts took the same basic form. NSA would have the same authorities as under the Truman Memorandum and would remain within the Department of Defense. The director and deputy director would be appointed by the president and confirmed by the Senate. As with the CIA, the director could be either civilian or military, but if military, the deputy must be a career civilian. What distinguished these drafts from the Truman Memorandum was the heavy emphasis on civil liberties, to be guaranteed through an overlay of oversight bodies - checkers and people to check the checkers. The driving force

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behind the legislation seemed to be the final report of the Church Committee, in which the committee promised to end the abuses of the past.⁹⁹

~~(C)~~ Initially the enabling legislation was pushed along by the strong breeze of reform dominating the Carter White House. But as the president settled into the business of governing, he found this focus on supposed abuses of previous administrations to be increasingly irrelevant. Moreover, the intelligence agencies, and especially NSA, yielded a cornucopia of information. He became less and less interested in pushing legislation that would remove NSA from his total control and give part of that control to Congress. The Carter White House allowed the breezes of reform to blow themselves out, and NSA remained firmly tied to the president's authorities. The Truman Memorandum stood.¹⁰⁰

(U) The Enigma Revelations

(U) In England, far away from Watergate's tumultuous effects on government, a storm was brewing that was to help NSA, even as it stripped away the gauze of anonymity that remained. It became known as the Enigma revelations.

(U) The story of cryptology's role in World War II had been kept secret since 1945. Only the Americans, who had publicly investigated the surprise attack on Pearl Harbor, had uncapped that bottle, and even they had managed to confine the story to 1940 and 1941, and to limit the disclosures to the breaking of Japanese diplomatic codes and ciphers. The other 95 percent had remained hidden.

(U) The story began to trickle out in 1972, with the publication of John Masterman's book *The Double Cross System*, which covered the capture and turning of German human agents in Britain during the war. How they were captured was another story and went to the heart of the Enigma story, but Masterman kept that part a secret.¹⁰¹

(U) The first break to the Enigma story itself occurred in France in 1973, when Gustave Bertrand, the head of French intelligence before the war, published his memoirs revealing the Polish break into Enigma and the conference in 1939, just before the German Blitzkrieg swept over the country. Bertrand detailed his key role in obtaining information on Enigma for the Poles, and he described France's attack against Enigma in the final months preceding the German invasion of 1940. He also described what the British knew about the system.¹⁰²

(U) For a time the British remained silent. But within the ranks of World War II veterans there was a movement to tell their own story, largely to set right what they felt were distortions in the Bertrand account. Leading this effort was Frederick Winterbotham, a former RAF lieutenant colonel who had devised the system for protecting SIGINT during World War II. Winterbotham began working on his own book, published in 1974 as *The Ultra Secret*. He did not speak with a grant of authority from his government and had in fact been warned not to publish. But since the publication of Bertrand's book a year earlier, references to the British attack on Enigma had appeared in nooks and crevices of articles and book reviews, many of them authored by people who had

participated in the operation during the war. Winterbotham knew that it was only a matter of time, and he determined to beat the rush. His book laid out the entire story of Bletchley Park, albeit with certain inaccuracies which came with the fading of memory.¹⁰³

(U) Following Winterbotham, many participants told their stories. For some, like Peter Calvocorresi, editor-in-chief of Penguin Books, revelation became eloquent literature. For others, like Gordon Welchman, it became a detailed technical description that caused the government to blanch (and NSA to pull his accesses).¹⁰⁴

(U) But none exceeded in scope and detail Harry Hinsley's book on British intelligence during World War II, which was largely a detailed history of Bletchley and the Enigma project. Alone among the writers and historians, Hinsley was given access to the still-classified documents, so that a well-documented story would emerge from among the welter of revelations and memoirs. Hinsley was given permission to use classified documents largely to correct misimpressions stemming from the memory-based accounts of Winterbotham, Calvocorresi, and others.¹⁰⁵

(U) The story of American codebreaking successes was later in coming. Ronald Clark's *The Man who Broke Purple*, a somewhat breathless (and not entirely accurate) biography of William Friedman, came out in 1977, and was followed by less memorable personal accounts by two Navy men, Edward Van Der Rhoer's *Deadly Magic* in 1978 and Jasper Holmes's *Double-Edged Secrets* in 1979. These could not compete in drama and readability with the stories churning out of the British press, and it took an Englishman, Ronald Lewin, to begin to tell the American story in his book *The American Magic*.¹⁰⁶ The British story captured the moment, while accounts of similarly significant American COMINT successes bobbed unhappily in their wake.

(U) Memoirs, biographies, and selective leaks of information would not, of course satisfy either the public or the historians. The only realistic alternative was to begin declassifying and releasing documents. Here, national security came to loggerheads with the public's right to know, and the issue was resolved only during the post-Watergate sorting out. The declassification effort resulted from two post-Watergate initiatives, FOIA and EO.

(U) Congress passed a new Freedom of Information Act (FOIA) in 1974. In it the congressmen took an old law relating to government documents, which required the requester to prove the need for the documents, and reversed it, instead requiring the government to prove the need to maintain secrecy.¹⁰⁷ Under this new law each government agency set up special arrangements to process FOIA requests. For several years NSA's FOIA team routinely denied every request based on national security. This worked under President Ford, but the new Carter administration in 1977 took the side of the plaintiffs on FOIA. Releasing significant numbers of documents became only a matter of time.

~~(FOUO)~~ Executive Order 11652, issued in 1972, dealt with openness in government, and decreed that government documents be automatically declassified and released to the

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(U) World War II SIGINT histories

National Archives after thirty years.¹⁰⁸ The order actually preceded FOIA, but it did not have a major effect on NSA until after the Church and Pike hearings. By then, Lew Allen had become director, and Winterbotham had begun the Enigma revelations. Seeing that it was only a matter of time, Allen's staff began negotiating with GCHQ for a coordinated bilateral policy on release. They agreed to concentrate on World War II records (those most in demand) and to restrict their declassification initially to the COMINT effort against German, Japanese, and Italian armed forces. In Britain, declassified records would go to the Public Records Office – in the United States, to the National Archives in Washington. NSA would also look at selected Korean War and Vietnam era records,

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(U) NSA began the Herculean task of reviewing millions of pages of World War II (and prior) records in 1976, with four reemployed annuitants hired on a temporary, sixty-day basis. The program expanded as more and more files were discovered. Admiral Inman decided to set up a classified NSA archives to hold the records which had been saved but were not yet ready for declassification, and the new "Cryptologic Archival Holding Area" was set up in SAB-2, which had been built in the early 1970s as a warehouse to hold material being transported to a records destruction facility. (At the time NSA did not have its own facility.)¹¹⁰

~~(FOUO)~~ FOIA ran parallel to the systematic declassification effort, and the two threads became frequently intertwined. In 1978 a researcher named Earnest Bell, who had worked in the Army's wartime COMINT office in London, submitted a FOIA request for all German and Japanese COMINT material for the entire war. NSA's legal counsel, Roy Banner, advised Inman that NSA would likely lose a lawsuit, and the Bell FOIA request greatly expanded the volume of material that the reemployed annuitants had to review. Ultimately twenty-one REAs were hired under Inman to plow through the enormous pile of raw COMINT reports to satisfy Bell's request.¹¹¹

(U) THE IMPACT OF WATERGATE

(U) The Watergate period resulted in a massive change in the way the cryptologic system related to the American public. Congressional oversight, which sprang from the Church and Pike Committees, fundamentally altered the way NSA related to the legislative branch of government. In a real sense, NSA had to answer to two masters, and the relatively simple life of prior decades became more complex. The new arrangements took some getting used to, but in many ways accountability worked to the advantage of an agency that worked within the law, and within a decade few could imagine going back to the old way of doing business.

(U) If congressional oversight ultimately worked to NSA's benefit, the public exposures accompanying the Watergate period did not. Too many sensitive operations were exposed; too many exposés were splashed across the newspapers. The deleterious effects of the Watergate period stayed with the cryptologic community for many years to come.

Notes

1. (U) Theodore H. White, *Breach of Faith: The Fall of Richard Nixon*, 1st ed. (New York: Atheneum Publishers, 1975); Karnow, *Vietnam*, 634.
2. (U) Bradburn, et al., *The SIGINT Reconnaissance Satellites*, 5-37.
3. (U) CCH Series VI.A.1.6.2.
4. (U) Seymour Hersh, *The Price of Power: Kissinger in the Nixon White House* (New York: Summit Books, 1983), 321-32.
5. (U) CCH Series VI.H.H.19.6; 19.16.
6. (U) CCH Series VI.H.H.19.6; Harrison Salisbury, *Without Fear or Favor* (New York: Times Books, 1980), 315-18; Interview, Milton Zaslow, by Tom Johnson, 19 June 1998.
7. (U) Hersh, *Kissinger*; CCH VI.I.I.1.2.
8. (U) Ibid.
9. (U) Interview, Meyer J. Levin, by Robert D. Farley and Tom Johnson, 14 January 1987, OH 2-87, NSA.

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10. (U) Winslow Peck [Percy Fellwock], "U.S. Electronic Espionage - a Memoir," *Ramparts*, August 1972, 36-50.
11. (U) CCH Series VI.I.I.1.2.; DDIR files, 96026, box 13, "1974."
12. (U) CCH Series VI. I.I.1.2; Frank Smist, Jr., *Congress Oversees the United States Intelligence Community, 1947-1989* (Knoxville, Tenn: University of Tennessee Press, 1990),184-86); DDIR files, NSA retired records, 96026.
13. (U) "Summary of Statutes Which Relate Specifically to NSA and the Cryptologic Activities of the Government," undated file in CCH administrative files collection.
14. (U) Athan Theoharis, *Spying on Americans: Political Surveillance from Hoover to the Huston Plan* (Philadelphia: Temple University Press, 1978), 120; NSA Archives, acc nr 18238, CBTF 36; Unpublished manuscript by David Alvarez, Chapter 1, in CCH files.
15. (U) Allen interview.
16. (U) CCH Series VII.B.4; F.19, Vol 1.
17. (U) David Kahn, "Big Ear or Big Brother?," *New York Times Magazine*, May 16, 1976, 13, 62-72.
18. (U) CCH Series XII.H.57.4.
19. (U) Church Committee hearings, Vol V, 10, in NSA records center, 28791-2, 80-079.
20. (U) Theoharis, *Spying on Americans*, 121-22; James Bamford, *The Puzzle Palace: A Report on America's Most Secret Agency* (Boston: Houghton Mifflin Co., 1982), 248; Church Committee correspondence.
21. (U) NSA Archives, acc nr 18238, CBTF 36; Church Committee correspondence, Vol V, 12. Kahn, "Big Ear or Big Brother?," 13, 62.
22. (U) Interview, Tom Charles Huston, by 31 January 1986, OH 6-86, NSA.
23. (U) Theoharis, *Spying on Americans*, 20, 121.
24. (U) Allen interview.
25. (U) Theoharis, *Spying on Americans*, 122-23.
26. (U) National Archives, Record Group 457, SRH-001.
27. (U) Ibid.
28. (U) DDIR files, 96026, box 8, "CIA Sensitive Items."
29. (U) When Nixon became president, Carter tried to brief him on a current wiretap program, but Haldeman, whom Carter called "a first class son of a bitch," insisted on being briefed first. Carter refused, and he and Hoover agreed to cancel the operation. See NSA's oral history interview with Carter, by Robert D. Farley, 3-6 October 1988, OH 15-88, NSA.
30. (U) Theoharis, *Spying on Americans*; DDIR files, 96026, box 13, "1974."
31. (U) White, *Breach of Faith*, 133; Theoharis, *Spying on Americans*, 22-26.
32. (U) Theoharis, *Spying on Americans*, 16, 22-31.
33. (U) Ibid.
34. (U) Ibid., 32-33.
35. (U) File on the Huston committee in CCH Series XII.D.; Church Committee correspondence.

36. (U) Huston interview; Kahn, "Big Ear or Big Brother?," 13, 62; Theoharis, *Spying on Americans*, 27.
37. (U) Allen interview; Interview, [redacted]
[redacted] by Charles Baker, Tom Johnson [redacted] 25 February 1993, OH 4-93, NSA; Interview, Paul Brady, by [redacted] 25 July 1995, OH 22-95, NSA; Interview, Howard Rosenblum, by Robert Farley and Charles Baker, 19 September 1991, OH 3-91, NSA. The existence of a taping system in the Oval Office had been revealed to the Ervin Committee by a Nixon aide, Alexander Butterfield, in July of 1973. Individual tapes were under subpoena, and the most controversial of them contained a gap of eighteen minutes at a crucial point in the Watergate coverup. It was the tapes under subpoena, and especially the tape containing that eighteen-minute gap, that were taken to NSA for examination.
38. (U) Allen interview.
39. (U) Ibid.
40. (U) Stansfield Turner, *Secrecy and Democracy: The CIA in Transition* (Boston: Houghton Mifflin, 1985), 24.
41. (U) Allen interview.
42. (U) CCH Series XII.D; DDIR files, 96026, box 10, "Directorate Correspondence, Nov. 75-Dec 76."
43. (U) Powers, *Man Who Kept the Secrets*, 288.
44. (U) Smist, *Congress Oversees the United States Intelligence Community*, 9-10, 149; Powers, *Man Who Kept the Secrets*, 288-89.
45. (U) Theoharis, *Spying on Americans*, 9-11.
46. (U) John Robert Greene, *The Presidency of Gerald Ford* (Lawrence, Kansas: University of Kansas Press, 1995), 106.
47. (U) Greene, *The Presidency of Gerald Ford*, 106; NSA Archives acc nr 45146N, H07-0201-6.
48. (U) Smist, *Congress Oversees the United States Intelligence Community*, 30.
49. (U) Huston interview; Smist, *Congress Oversees the United States Intelligence Community*, 63.
50. (U) Huston interview; Church Committee correspondence.
51. (U) Ibid.
52. (U) Christopher Andrew, *For the President's Eyes Only: Secret Intelligence and the American Presidency from Washington to Bush* (New York: HarperCollins, 1994), 415.
53. (U) Church Committee correspondence; DIRNSA letter of 7 October 1975.
54. (U) Ibid.
55. (U) CCH Series VI.D.2.18; Smist, *Congress Oversees the United States Intelligence Community*, 73.
56. (U) Kahn, "Big Ear or Big Brother?," 65; Smist, *Congress Oversees the United States Intelligence Community*, 73.
57. (U) Smist, *Congress Oversees the United States Intelligence Community*, 10; Kahn, "Big Ear or Big Brother?," 72; Church Committee correspondence.
58. (U) Smist, *Congress Oversees the United States Intelligence Community*, 135; [redacted] "The Pike Committee Investigations and the CIA," *Studies in Intelligence* (1997), 41:3, 54.
59. (U) Church Committee correspondence; House Committee on Intelligence - correspondence files, 1975, in NSA retired records 28792, 80-079, [redacted] "The Pike Committee," 56.

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- 60. (U) Allen interview; House Committee on Intelligence – correspondence file; Smist, *Congress Oversees the United States Intelligence Community*, 175.
- 61. (U) House Committee on Intelligence – correspondence file.
- 62. (U) Ibid.
- 63. (U) Ibid.



- 65. (U) House Committee on Intelligence – correspondence file.
- 66. (U) Ibid.
- 67. (U) Ibid.
- 68. (U) Ibid.
- 69. (U) NSA Archives, 28795, 80-079.
- 70. (U) Ibid.
- 71. (U) Gerald R. Ford Library, NSF, in CCH Series XVI.H., "Abzug Committee."
- 72. (U) Huston interview; NSA retired records, 28795, 80-079.
- 73. (U) NSA retired records 28795, 80-079.
- 74. (U) CCH Series VI.I.I.1.2.
- 75. (U) Ibid.
- 76. (U) CCH Series I.I.1.2; DDIR files, 96026, box 10, "Director's correspondence, Nov 75-Dec 76."
- 77. (U) [redacted] "Project Azorian – The Story of the Hughes Glomar Explorer," *Studies in Intelligence*, Fall 1985; Interview, David Boak, by Tom Johnson, 11 May 1998.
- 78. (U) *Newsweek*, October 31, 1977; *Washington Post*, June 6, 1977.
- 79. (U) Interview, Michael A. Smith, by Tom Johnson and [redacted] September 8, 1997, OH 14-97, NSA.
- 80. (U) *New York Times*, September 4, 1977; Memo for the Record, Lt. Gen. Lew Allen, 10 March 1977, in CCH Series XII.D.
- 81. (U) Smith interview; Carter Library, NSF, in CCH Series XVII.I., "Koreagate."
- 82. (U) *Facts on File*, Weekly World News Digest, June 11, 1977, 441, 688; Carter Library, NSF, undated 1978 memo to Brzezinski (signature illegible), in CCH Series XVI, "Koreagate"; *New York Times*, September 4, 1977.
- 83. (U) *Facts on File*, 441, 688.
- 84. (U) *New York Times*, October 20, 1977.
- 85. (U) [Signature illegible] Memo to Brzezinski, unknown date in 1978, in Carter Library NSF, in CCH Series XVII.I., "Koreagate."
- 86. (U) Andrew, *For the President's Eyes Only*, 416.
- 87. (U) Ray S. Cline, *The CIA Under Reagan, Bush and Casey* (Washington, D.C.: Acropolis Books, 1981).

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- 88. (U) Church Committee correspondence.
- 89. (U) Ford Library, NSF, in CCH Series XVI.H., "Legal"; Church Committee correspondence; CCH Series XII.H.57.4.
- 90. (U) CCH Series XII.D., "EO 11095"; XII.H.57.4, Drake memo to IC staff, 9 August 1976; Allen interview. Ford Library, NSF, in CCH Series XVI.H., "Legal."
- 91. (U) Church committee hearings, Vol. 5, 81, in NSA retired records 28791-2, 80-079; House Committee on Intelligence - correspondence file, 1975, in NSA retired records 28792, 80-079.
- 92. (U) DDIR files, 96026, box 13, "1974." Ford Library, NSF, "Wiretap/domestic collection," in CCH Series XVI.
- 93. (U) Edwin Moise, *Tonkin Gulf and the Escalation of the Vietnam War* (Chapel Hill: University of North Carolina Press, 1996), 17-18; Carter Library [redacted] exit interview, June 15, 1994.
- 94. (U) Smist, *Congress Oversees the Intelligence Community*, 4.
- 95. (U) *Ibid.*, 5.
- 96. (U) The Gulf of Tonkin, the 1974 Incidents: Hearing Before the Committee on Foreign Relations, 90th Cong., 2nd sess., Feb. 20, 1968.
- 97. (U) Cline, *The CIA Under Reagan*, 279.
- 98. (U) NSA Archives, acc nr 36740, CBPJ 47, Deeley testimony before Congress, September 27, 1985.
- 99. (U) NSA Archives, acc nr 42764, H03-0501-4.
- 100. (U) Carter Library, NSF, in CCH Series XVII.I., "Intelligence Oversight."
- 101. (U) John C. Masterman, *The Double Cross System in the War of 1939 to 1945* (New Haven: Yale University Press, 1972).
- 102. (U) Gustave Bertrand, *Enigma: The Greatest Enigma of the War, 1939-1945* (Paris: Plon, 1973).
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- 104. (U) Peter Calvocoressi, *Top Secret Ultra* (New York: Pantheon Books, 1980); [redacted] *Six Story: Breaking the Enigma Codes* (New York: McGraw-Hill, 1982).
- 105. (U) Francis H. Hinsley and C.A.G. Simkins, *British Intelligence in the Second World War*, 3 vols (New York: Cambridge University Press, 1990).
- 106. (U) Ronald Lewin, *The American Magic: Codes, Ciphers, and the Defeat of Japan* (New York: Farrar, Straus and Giroux, 1982); See also Edward Van Der Rhoer, *Deadly Magic: A Personal Account of Communication Intelligence in World War II in the Pacific* (New York: Scribner, 1978) and Wilfred J. Holmes, *Double-Edged Secrets: U.S. Navy Intelligence Operations in the Pacific During World War II* (Annapolis: Naval Institute Press, 1979).
- 107. (U) Brady interview.
- 108. (U) NSA Archives, acc nr 31218, CBOE 67.
- 109. (U) [redacted] "The Reemployed Annuitant (REA) Program in NSA: An Evaluation of the Agency Archives," undated paper in CCH records collection; DDIR files, 96026, box 2, [redacted] papers.
- 110. (U) [redacted] "The Reemployed Annuitant Program"; Interview, Norman Boardman, by Robert D. Farley, 17 January 1986, OH 3-86, NSA.
- 111. (U) Boardman interview.

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~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

(U) Chapter 17

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The New Targets and Techniques

~~(S-CCO)~~ The demise of the Southeast Asia problem caused a revolution in SIGINT targeting. In many ways, though, it was no revolution at all, because the new focus was simply an old problem - the Soviet Union.

(U) STRATEGIC ARMS LIMITATION

(U) History shows that many presidents who have been given credit for starting something actually did not. This was the case with the negotiation of strategic arms limitations with the Soviets. President Lyndon Johnson, rather than Richard Nixon, initiated negotiations in 1967. At the time, Secretary of State Dean Rusk predicted that it would become "history's longest permanent floating crap game."² He was very nearly right.

(U) The Warsaw Pact invasion of Czechoslovakia in 1968 brought the abortive Johnson negotiations to an early and abrupt end. But Richard Nixon, hoping for some real departures in the foreign affairs field, got them started again. His new foreign policy ombudsman, National Security Advisor Henry Kissinger, contacted the Soviet ambassador to Washington, Anatoly Dobrynin, and they agreed to meetings in Helsinki. The "crap game" then floated to Vienna and finally to Geneva, where it settled for the duration of the Cold War. Negotiations survived the bombing of Hanoi, the Watergate crisis, and the invasion of Afghanistan in 1979.³

(U) In May 1972 the protracted negotiations produced the first Strategic Arms Limitation Treaty, called SALT I. The treaty had two parts.

a. Part 1 was defensive. The two sides agreed to limit their antiballistic missile forces to two locations. Each side was permitted to defend its capital city with defensive missiles, plus one other site, which would be a single cluster of silo-based launchers. This part of the treaty was of unlimited duration, to be reviewed every five years.

b. Part 2 was offensive. It froze the silo-based missiles and submarine-launched ballistic missiles at their current (1972) level for five years (until October 1977). Since the Soviets would not admit what total number they possessed, the treaty did not express any numerical figures. American intelligence estimated that they possessed about 2,400 launchers while the U.S. had only 1,700. This left the Soviets with a larger total missile force, but there were compensations. It did not cover strategic bombers and excluded

MIRVs (multiple independently targetable reentry vehicles) – the U.S. was far ahead in both categories.

(U) Congress ratified both parts of the treaty, but Senator Henry M. Jackson of Washington succeeded in passing an accompanying resolution requiring that future treaties embody the principle of numerical parity. This set the tone for treaty negotiations through the end of the decade.⁴

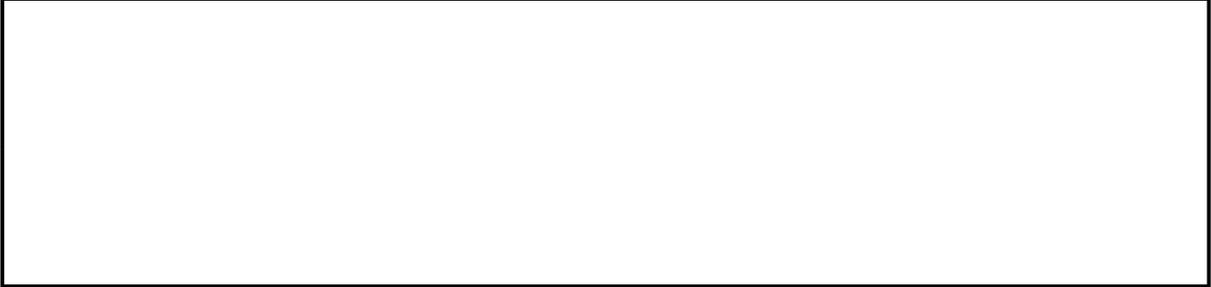
(U) With "numerical parity" being the goal, the two sides continued negotiating and set 1974 as a goal to hammer out a SALT II treaty. But Watergate turmoil set back the timetable, and when Gerald Ford moved into the White House in August of 1974 things were far from settled on the SALT front. But then chance intervened. Kissinger had arranged a "getting to know you" meeting between Ford and Brezhnev in the Russian city of Vladivostok, and the meeting produced an unexpected interim agreement, henceforth called the Vladivostok Accords. The two chiefs agreed on a numerical ceiling of 2,400 launchers (which just happened to be the approximate total of Soviet launchers) and a ceiling of 1,320 MIRVed warheads for each side. The Soviets had for the first time accepted the principle of numerical equivalence, and in return the U.S. had agreed to count strategic bombers. They dropped their insistence that future treaties include U.S. forces in Europe, which the American side regarded as strictly tactical and defensive.⁵



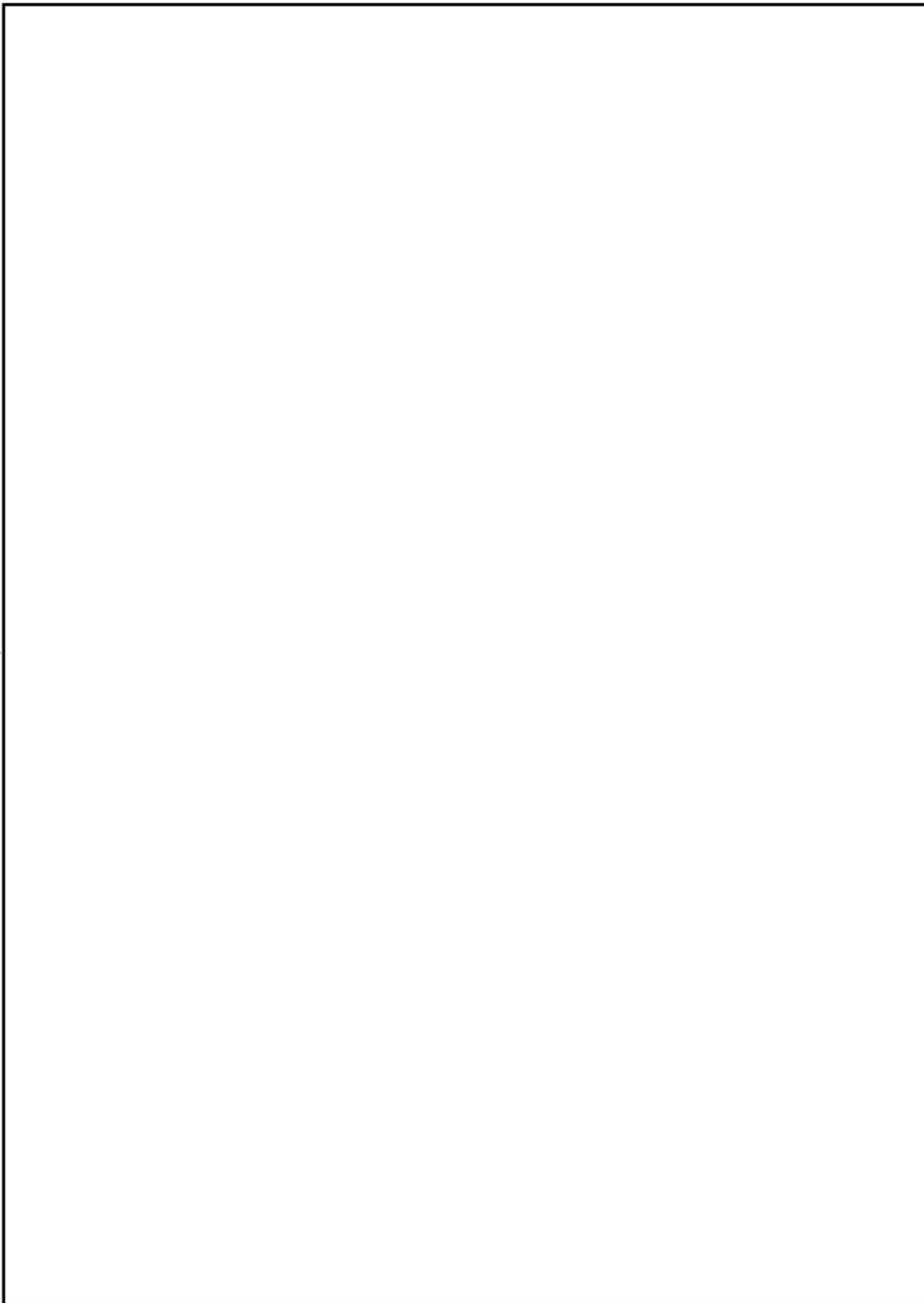
(U) President Ford and Soviet premier Brezhnev in Vladivostok, 1974

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(U) The Vladivostok Accords left as many loose ends as they tied up. They did not define "strategic bomber," and future years saw endless wrangling over whether or not the new Soviet Backfire would be counted in SALT II. On the American side, the F-111 fighter-bomber would have a nuclear capability, but would it have any sort of strategic mission? These issues remained murky.

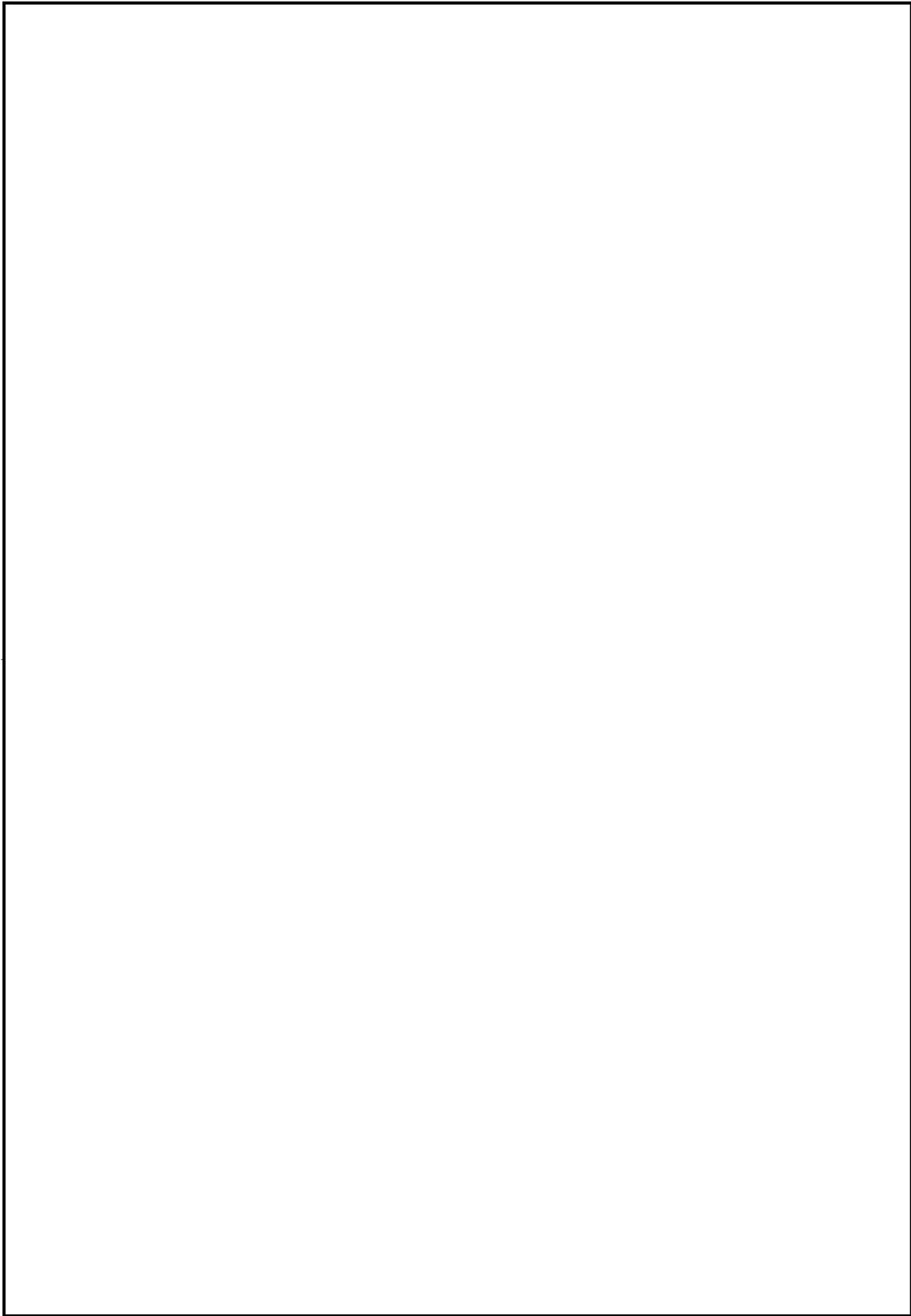


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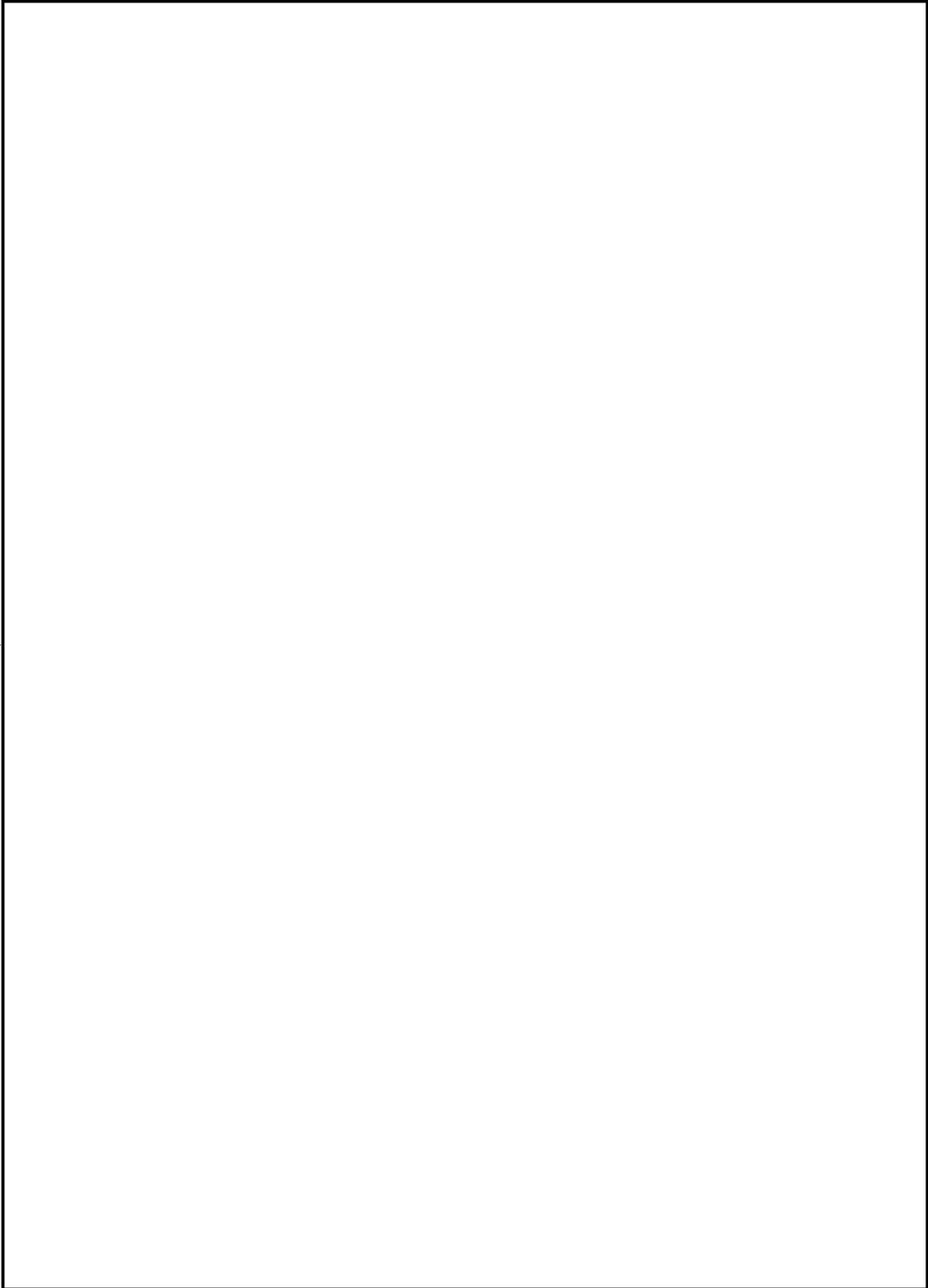
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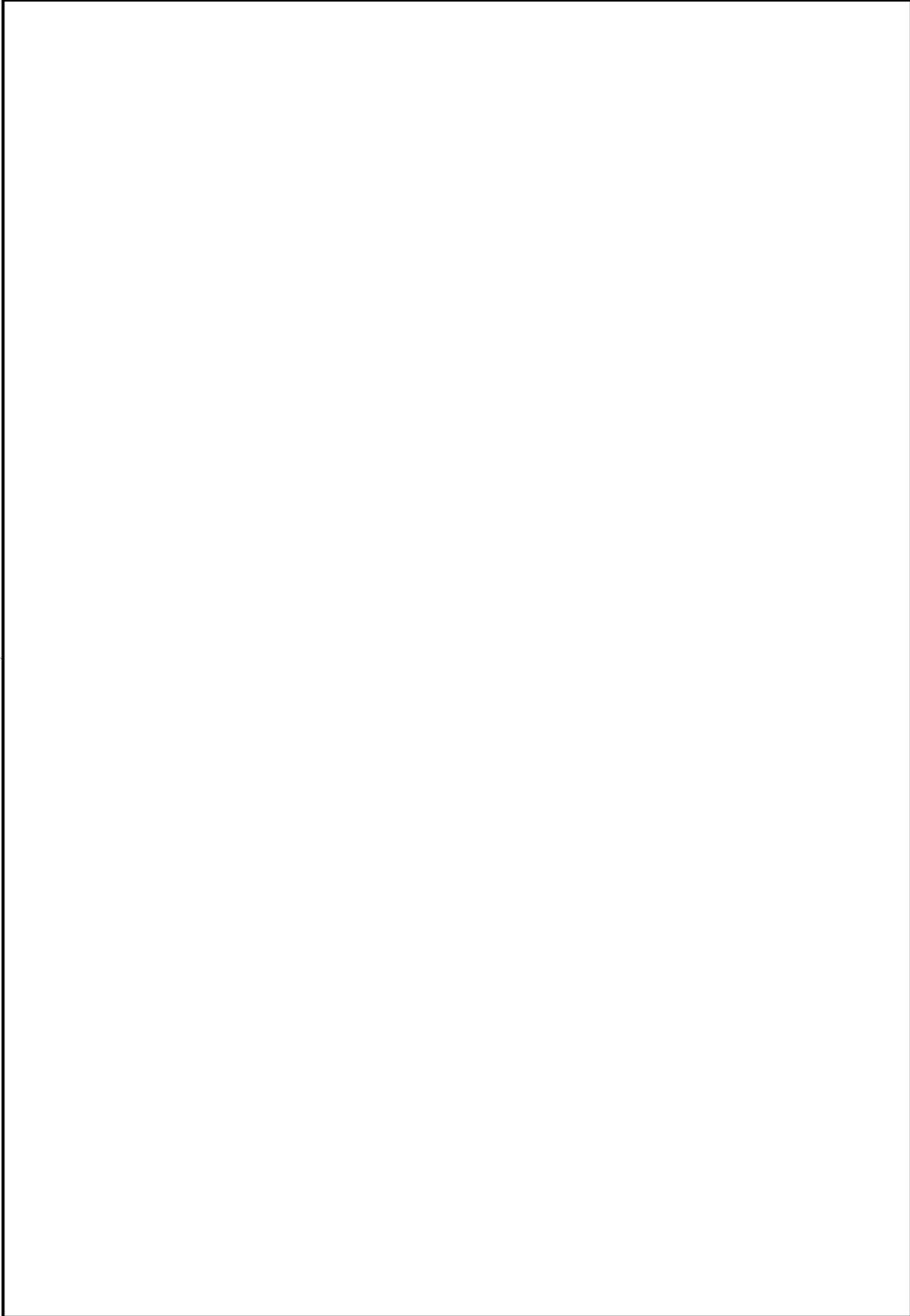
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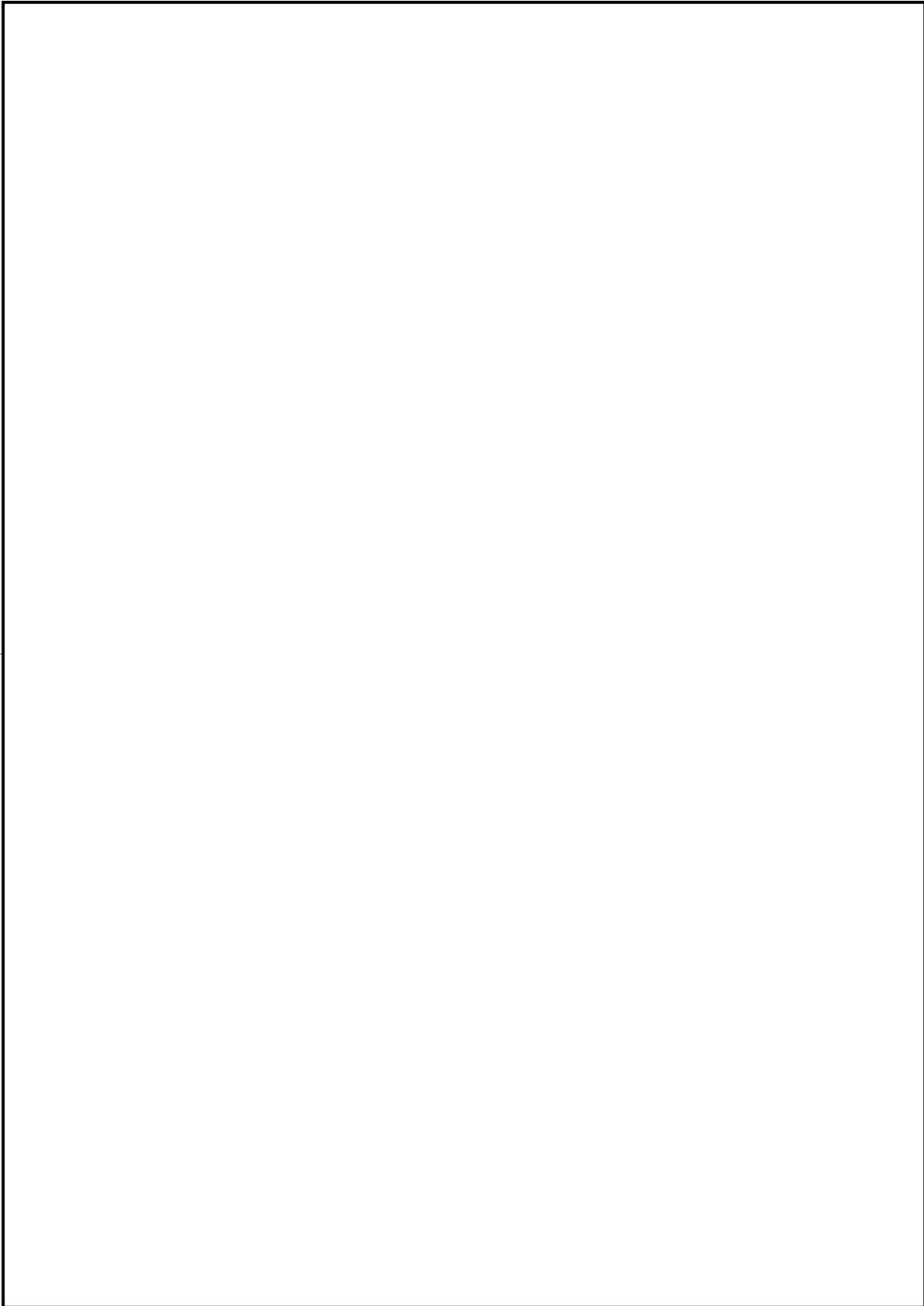
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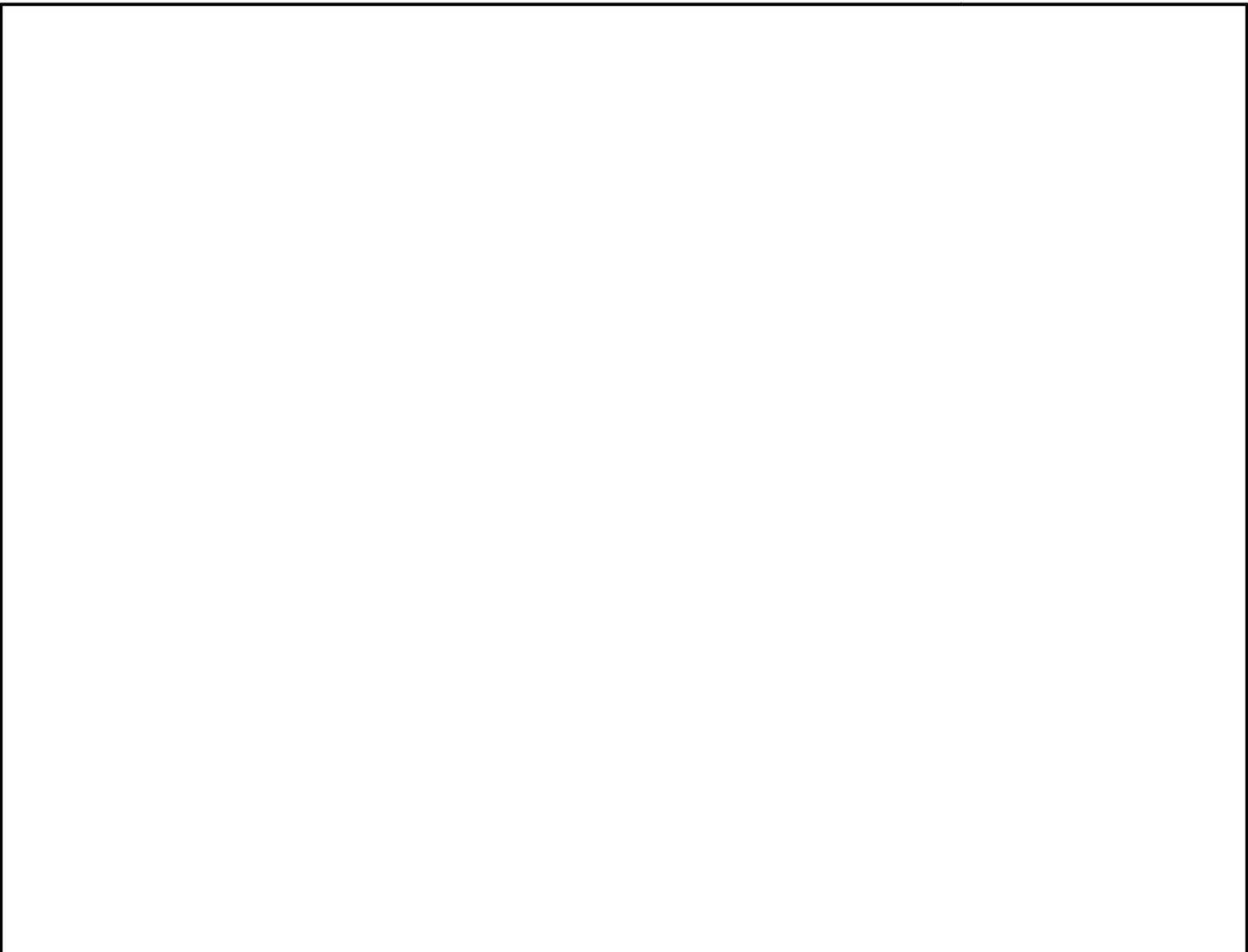
(U) David Boak

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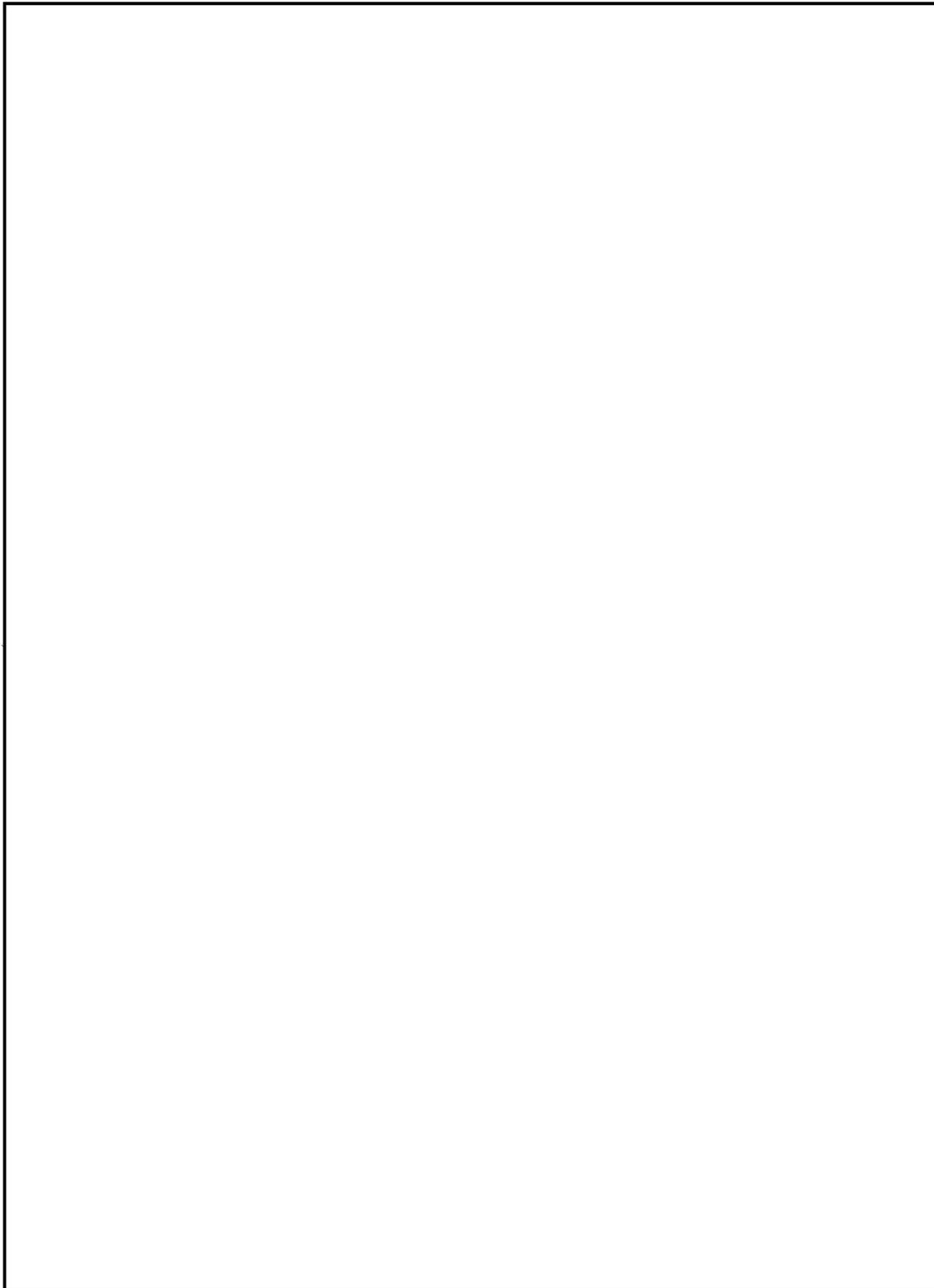


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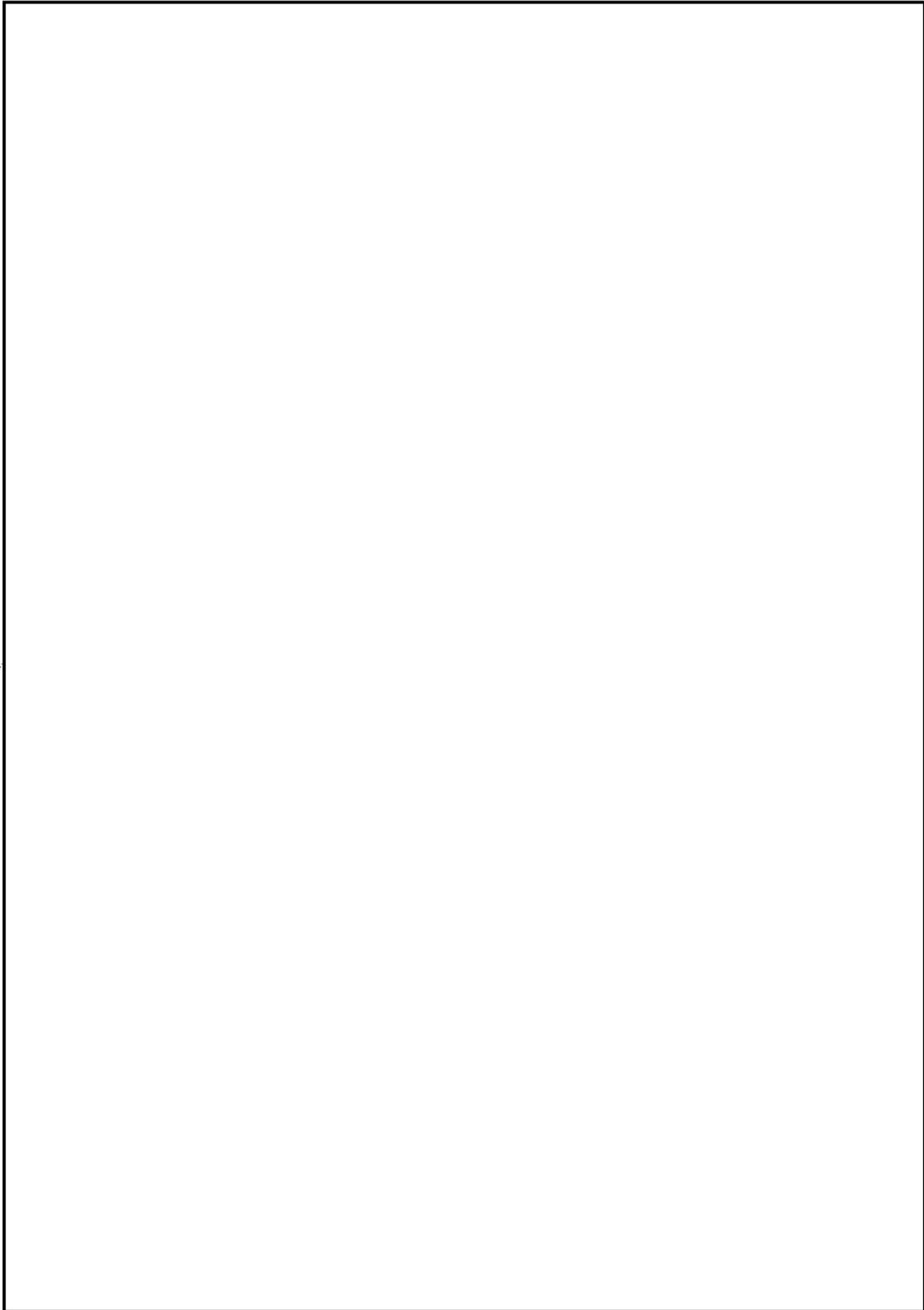
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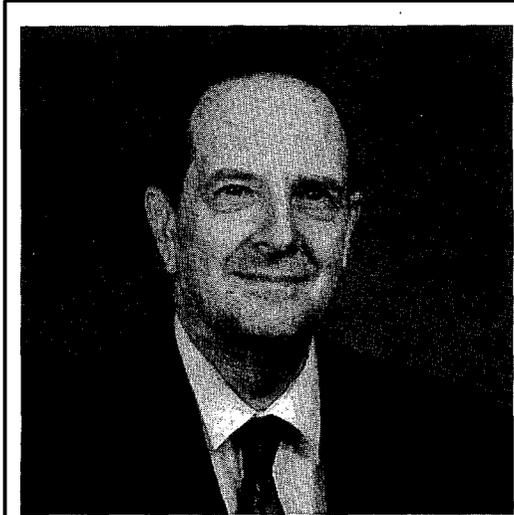
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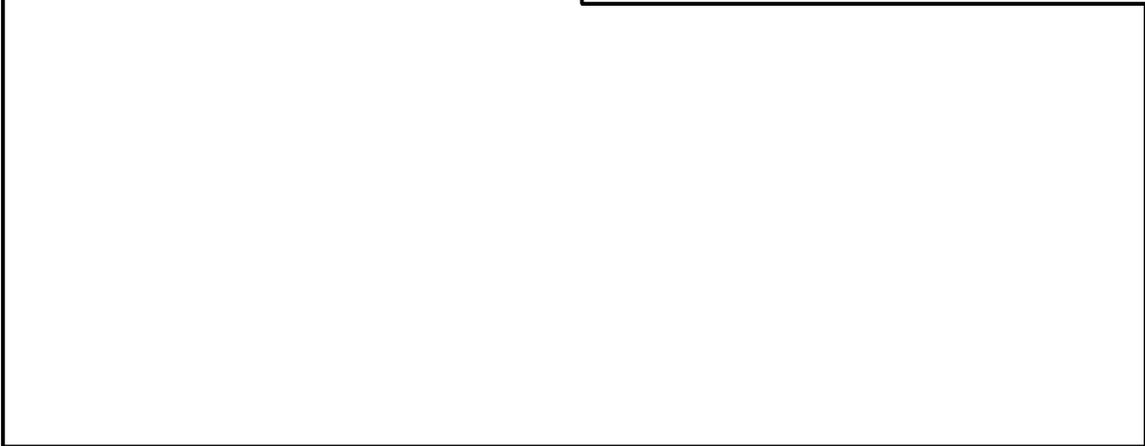


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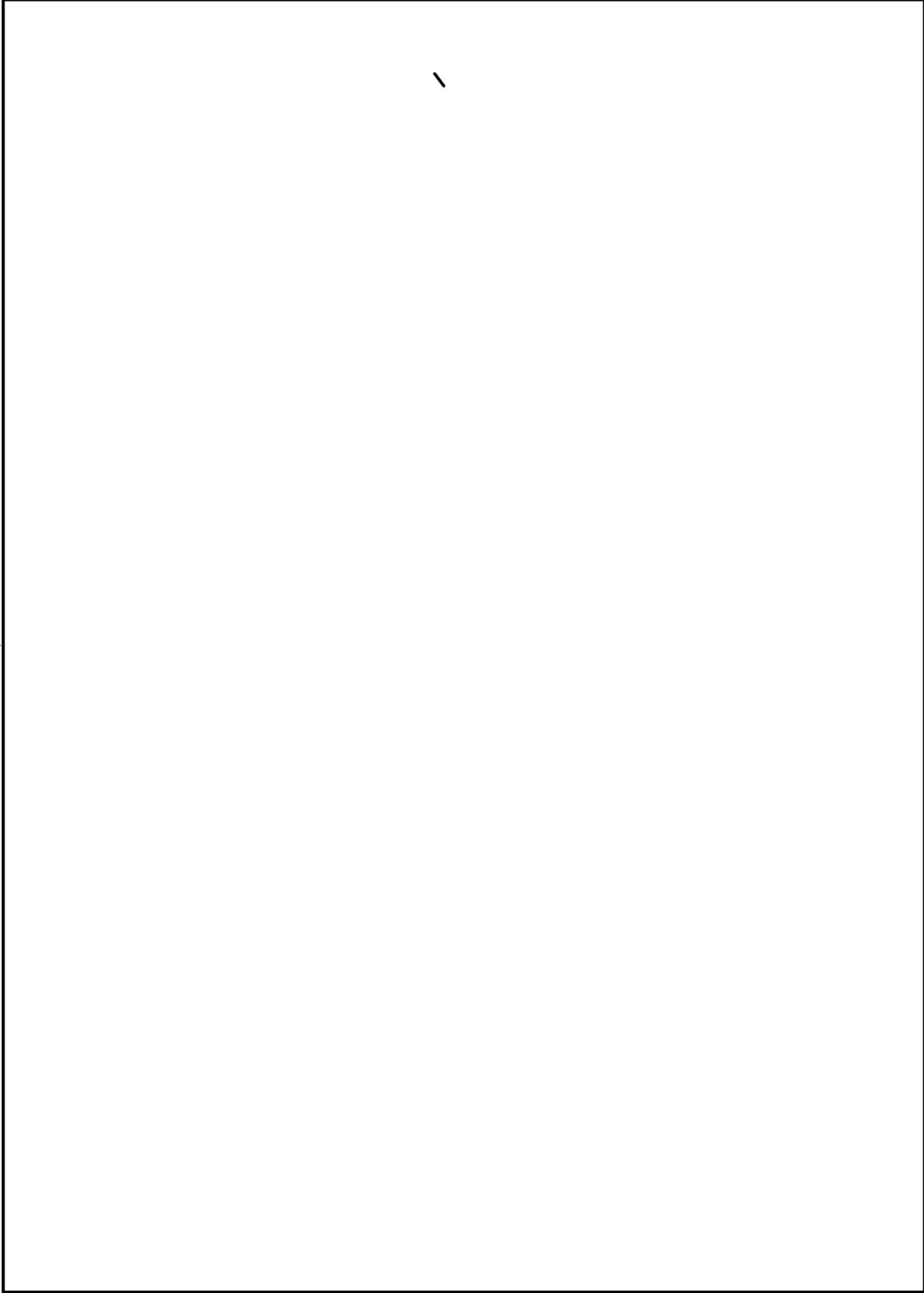


(U) Richard Bernard



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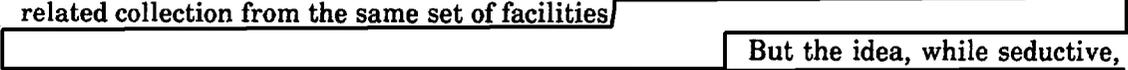
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(U) COMSAT/INTELSAT

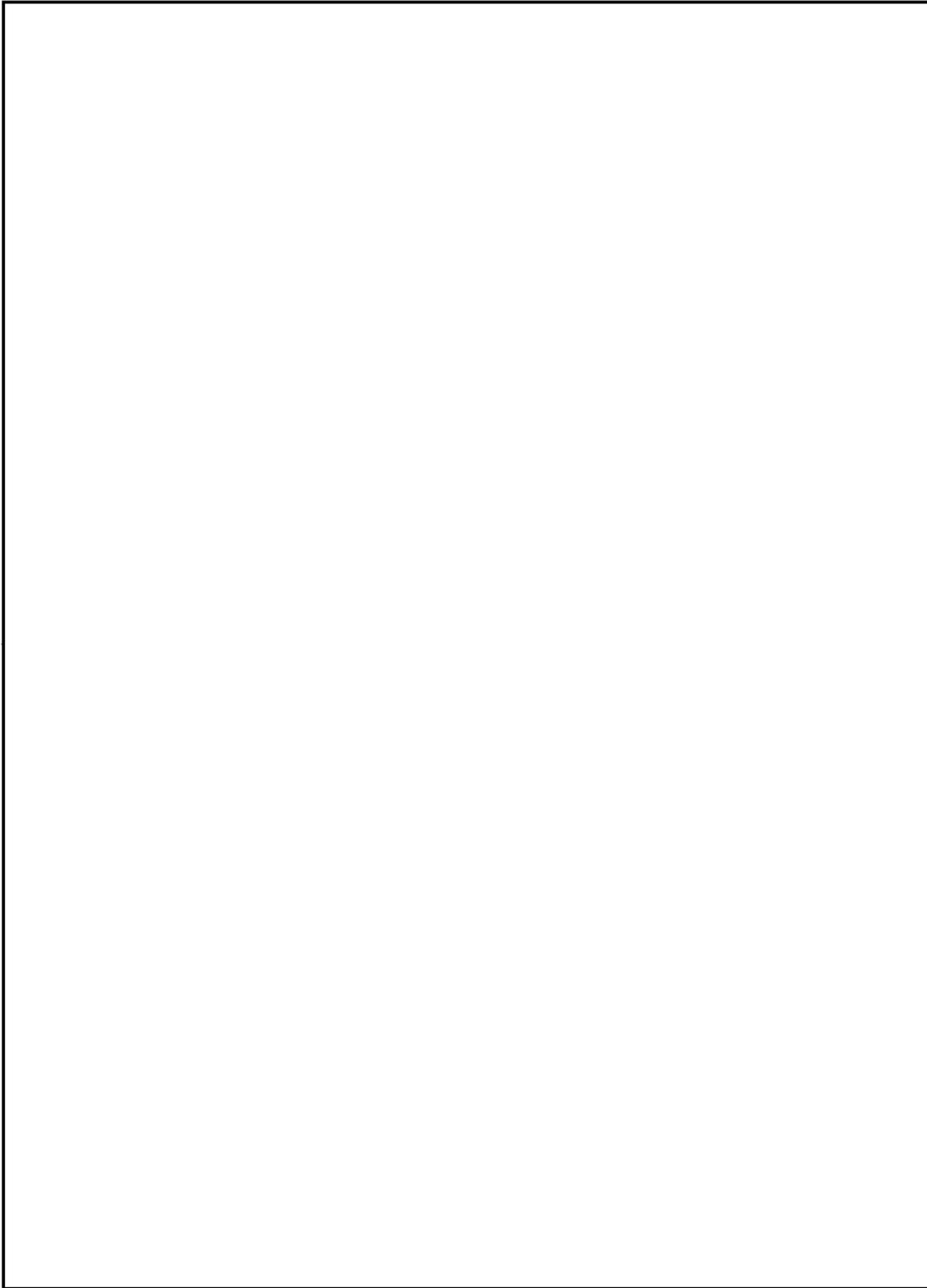
~~(S-CCO)~~ The rapid growth of communications satellites spurred NSA in the 1960s to develop a whole new SIGINT program. The original idea had been to try to do all space-related collection from the same set of facilities



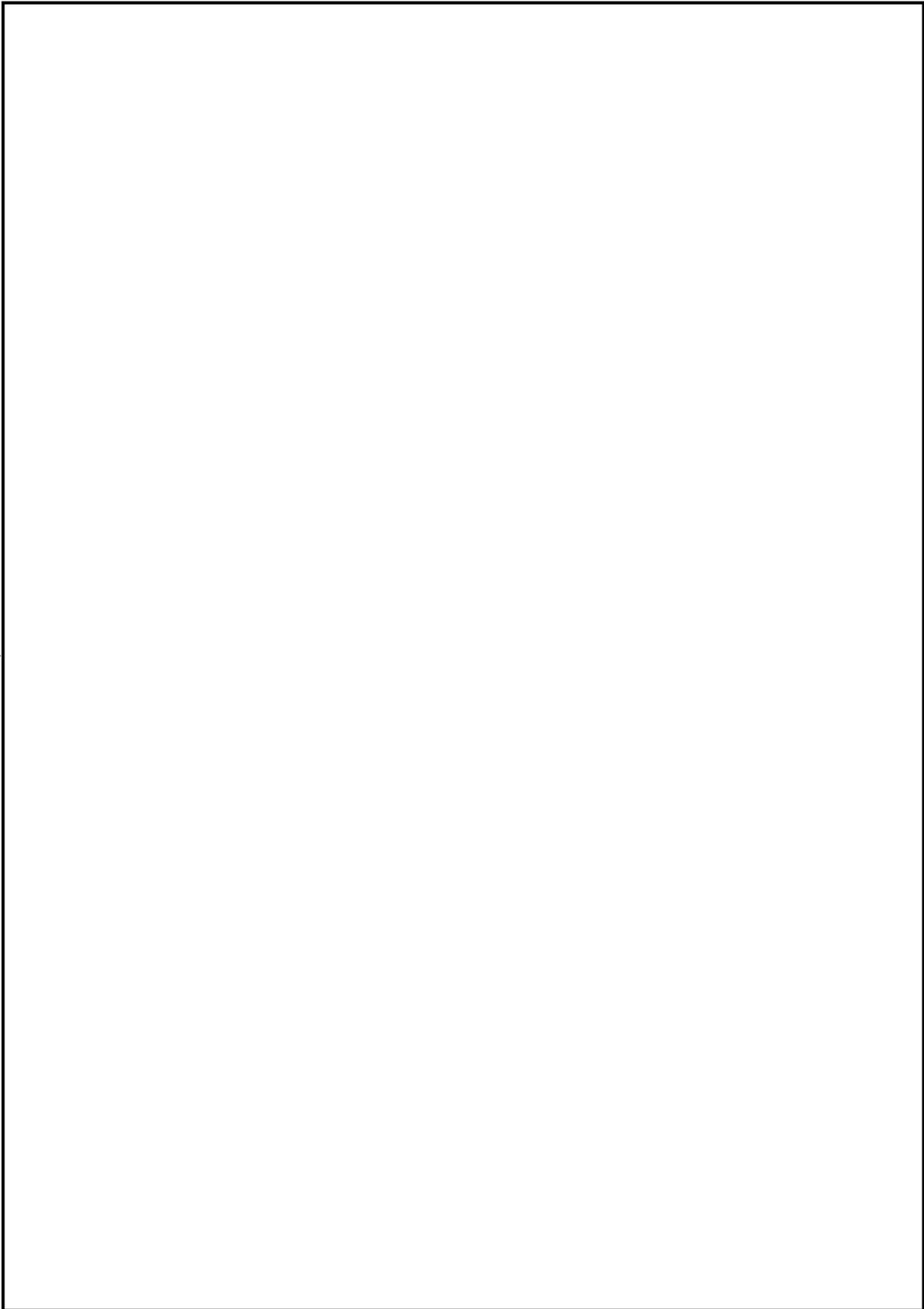
But the idea, while seductive, soon fell to the ground.



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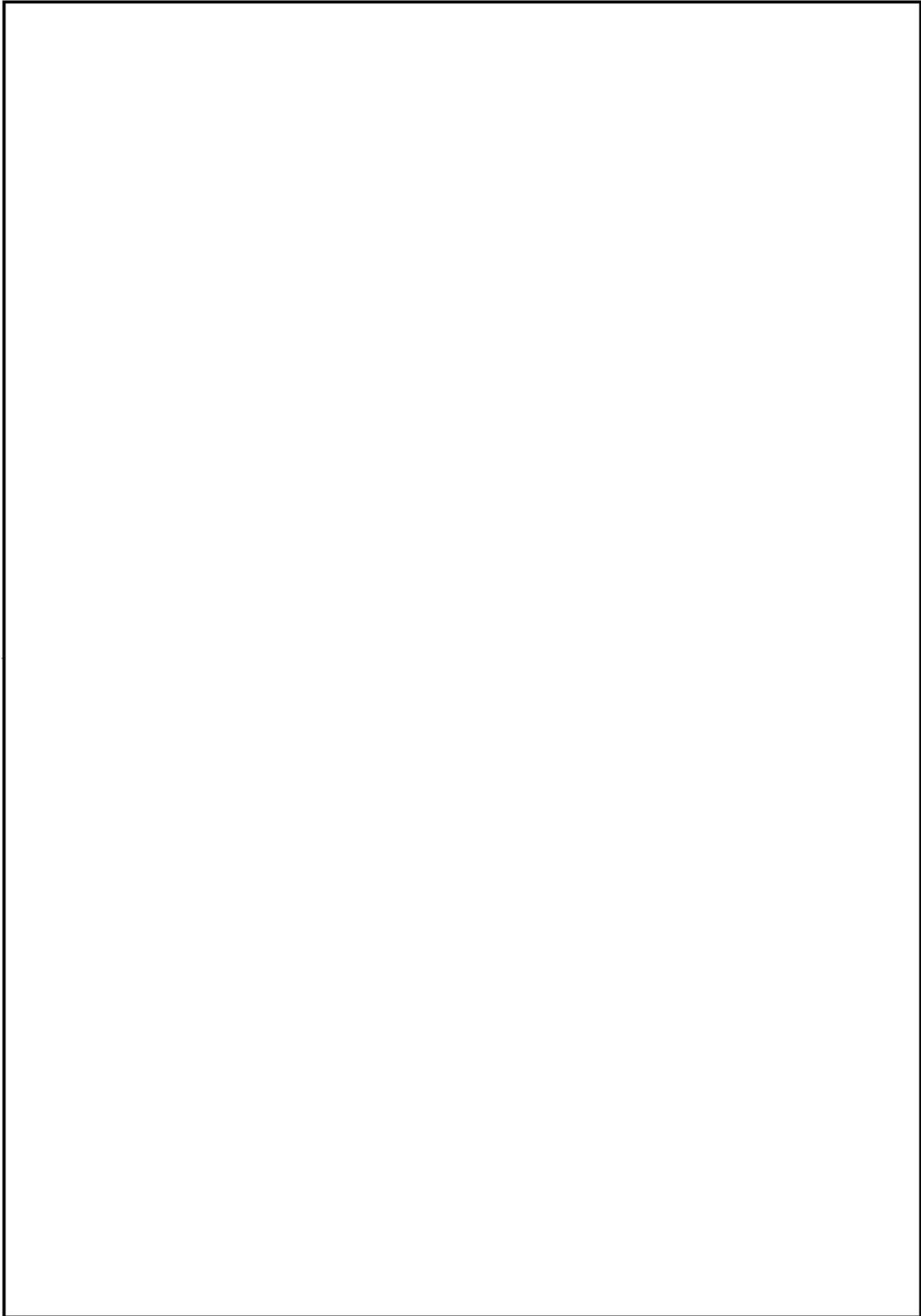
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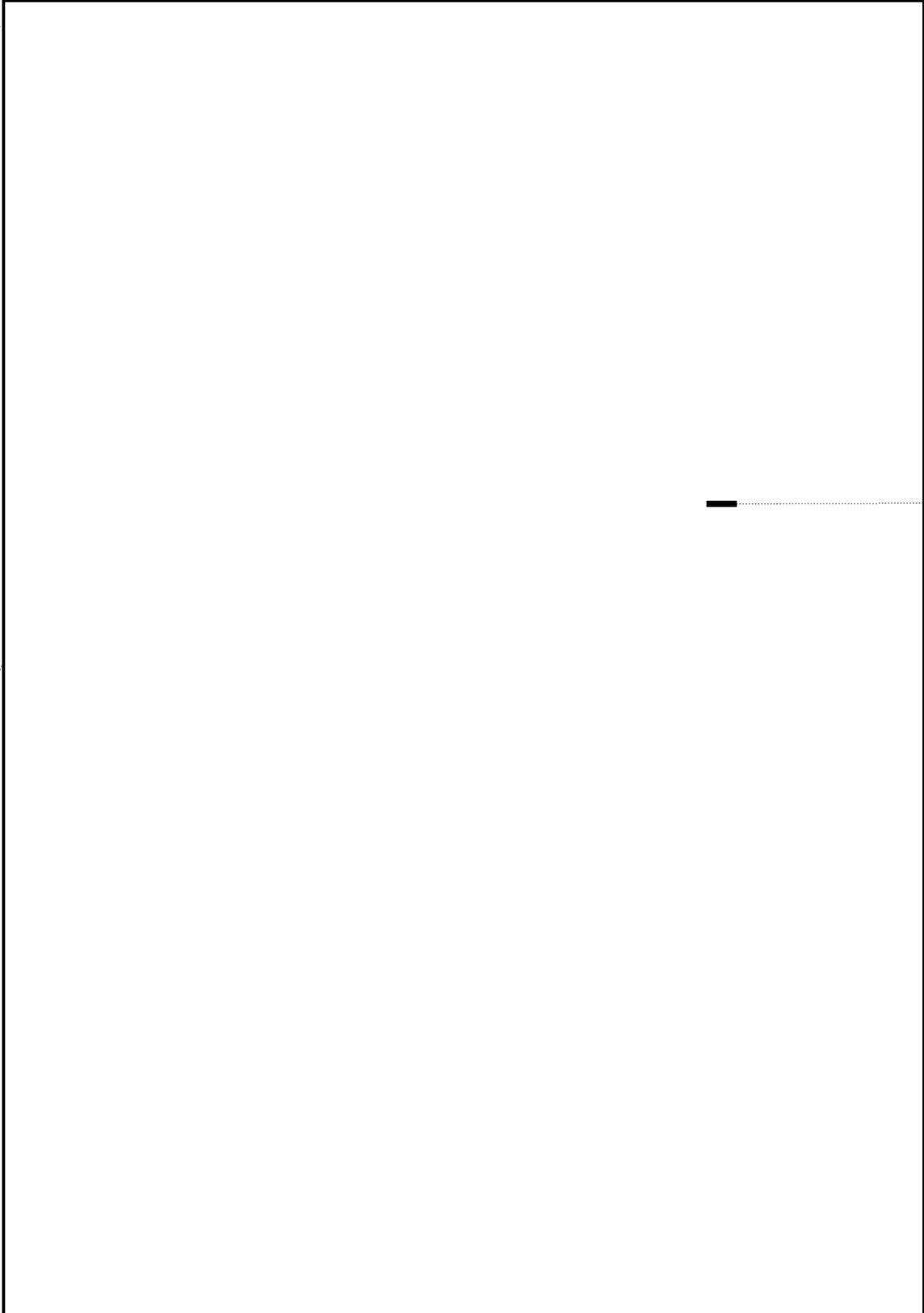
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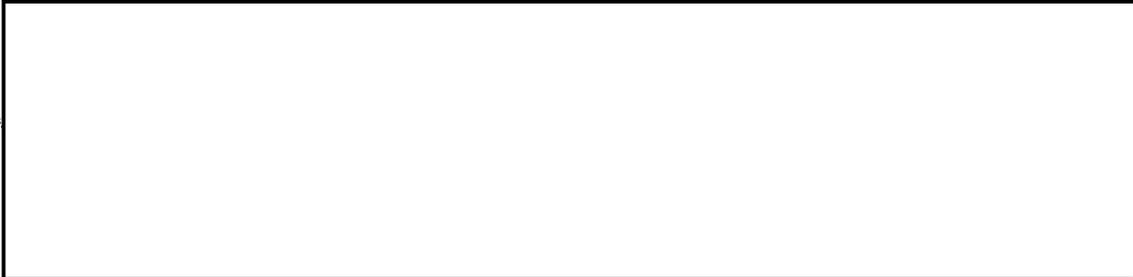
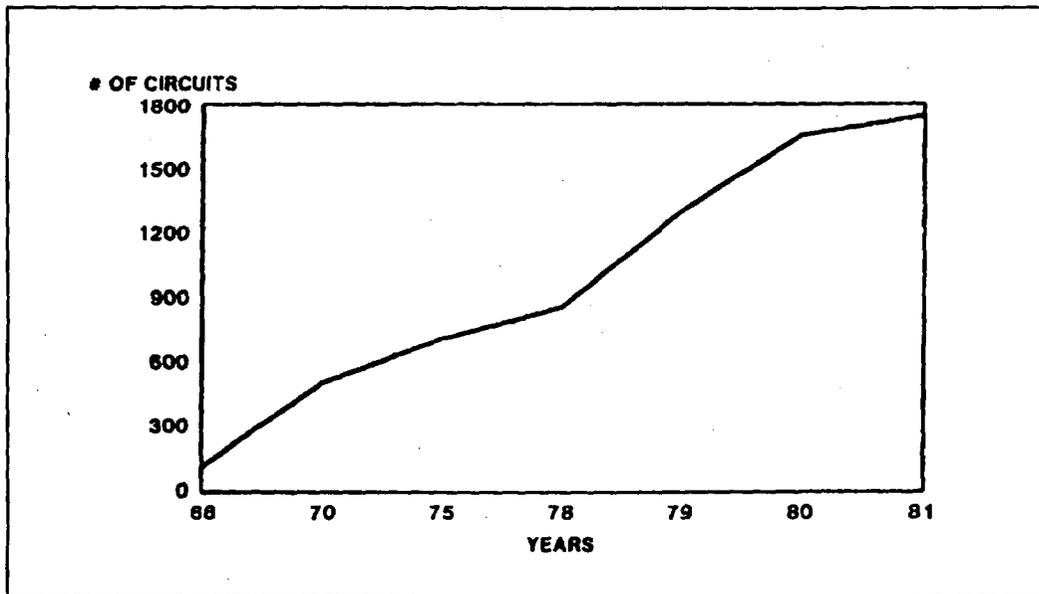
(U) CRYPTOLOGIC COMMUNICATIONS IN THE POST-VIETNAM ERA

(S-CCQ) The communications engineers who had devised ways to get raw traffic back to Fort Meade electrically in the 1960s were not permitted to rest. The new requirement for the 1970s was to bring back raw RF so that all intercept and processing could be done in the U.S. The new communications capabilities came just in time to solve the woeful budget problems of the early 1970s [redacted]

[redacted] In a way, the communicators had become victims of their own success - remoting and data linking, now technically feasible, became the minimum essential requirement for a cryptologic system that was becoming increasingly centralized.

(FOUO) To understand the explosion of circuit requirements, one need only glance at Table 9. Cryptologic remoting brought the number of NSA circuits up to 1,755 by 1981, an increase of almost 1,100 percent in fifteen years. Cryptology had become the largest single user of DoD communications capability.⁷⁰

(U) Table 9⁷¹
Growth of NSA Telecommunications Circuits (1966-1981)



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~~(C)~~ The communications conflicts of the 1960s were not resolved by the end of the decade. The great move toward centralization was a creation called the Defense Special Security Communications System (DSSCS), which was to combine Criticomm (the NSA system) with Spintcom (the DIA system to support the SSOs). It involved new sponsorship (DCA, Defense Communications Agency), new technology, and lots of money. Within five years all was wreckage. DSSCS was grossly over budget and under capability, and DCA terminated it in 1969. So the decade ended with NSA still clinging tenaciously to its own unique communications network, with all its offshoots - Criticomm, Opscomm, Strawhat, and the like. NSA had designed the entire system to support unique cryptologic requirements, and DCA, despite promises, had been unable to meet them.⁷³

~~(FOUO)~~ In 1970, the secretary of defense decided that the remnants of DSSCS would join its new Autodin communications system, which had been created to carry Genser traffic for the rest of the Department. Because Genser (general service, non-SI) communications centers operated on the basis of noncodeword traffic, all cryptologic traffic would have to enter the system already encrypted. To insure that a firewall existed between codeword and noncodeword messages, DCA introduced a special communications router system - Genser stations had R routers, while cryptologic stations had Y routers. NSA joined Autodin in 1972, phasing in over the ensuing three years.⁷⁴

~~(FOUO)~~ DCA had great hopes for the Autodin system, and in this case they were (mostly) fulfilled. Manpower required to operate the system declined by almost 1,800 billets, while speed of service increased dramatically. But while record traffic melded into the Autodin system, NSA retained its "special" systems: IATS (which had replaced Strawhat), Opscomm, and direction finding circuits. The General Accounting Office pointed out rather testily in 1973 that the IATS circuitry alone had a higher capacity than all the circuits NSA had integrated into Autodin. NSA admitted this and promised that it would work to achieve IATS/Autodin integration.⁷⁵

~~(S CCO)~~ The Opscomm explosion of the 1960s had continued unabated into the 1970s. By 1973 there were 323 of them, being used for every conceivable purpose from passing analyst-to-analyst chatter to technical reports and diarized raw traffic. The largest single owners were NSOC, DEFSMAC and the COC [redacted]

[redacted]. The operators loved having their own communications system, but the communicators chafed. Chief NSA communicator Max Davidson wrote in that same year that "Production personnel consider the OPSCOMM complex as their 'own' communications, quite apart from the CRITICOMM, et al., systems. . . . It is unconventional, expensive, uses non-standard procedures and requires dedicated circuits. Paradoxically, it either rigidly enforces specific formats or ignores formats and procedures entirely." Despite such protests by communications people, Opscomms survived because of their great versatility. They had been the bases for the revolution in timely reporting, and no one in DDO could conceive of operations without Opscomms.⁷⁶

(U) NSA continued its communications improvement program to speed message processing. After the activation of IDDF, the new communications center in 1972, the Agency matched the new technology with AMPS (Automated Message Processing

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System), which was a way to prepare outgoing messages in a format that could be read by an OCR (optical character reader) by typing it on an IBM Selectric typewriter with a special ball. Mating the AMPS message preparation system with the OCR devices in the communications center relieved communications operators from the drudgery of retyping messages for transmission. Initially activated in May 1970, AMPS technology spread slowly through the headquarters and out to the field.⁷⁷

(U) After working with DCA for many years to come up with an automatic switch for comm center use, NSA turned to its own resources and finally developed a usable product in the early 1970s. The new system, called Streamliner, automated communications center functions like traffic routing. It was married to OCR technology and new Teletype Mod 40 terminals to replace the antiquated Mod 35s. Streamliner was developed at NSA, and the contract was awarded to General Telephone Electronics Information Systems in 1974. The first of thirty-three Streamliner systems was activated at Northwest, Virginia, in 1976.⁷⁸

(U) COMSEC AND THE SECURE VOICE PROBLEM

~~(FOUO)~~ Operations security studies like Purple Dragon (see *American Cryptology during the Cold War, 1945-1989, Book II: Centralization Wins, 1960-1972*, 551) brought home the vulnerability of telephones and speech sent over unprotected tactical radios. Of all the various areas of OPSEC, the unsecure telephone was the greatest security threat. A DoD study in 1971 stated that "Voice communications are the most significant exploitable weakness in present-day military communications. The highest national COMSEC priority is assigned to research, develop, production and operational deployment of techniques and equipment to reach an acceptable level of voice security." It was estimated that voice security was required on five to ten percent of all the Department of Defense telephones.⁷⁹

(U) Through prodigious effort, NSA had fielded families of equipment for use on the battlefields of Southeast Asia, some of which filled the need, and some of which were wanting. But voice security was costly and added considerably to the weight of equipment that had to be dragged along. Narrowband systems produced Donald Duck voice quality, while wideband systems, while producing good voice quality, were hardly small enough to be called "tactical." Keying was always a problem, and most potential users did not use voice security in any form. The enemy went right on exploiting voice communications. This was the most frustrating of all NSA's COMSEC concerns.

(U) NSA's first program for DoD telephone protection had been Autosevocom, a cumbersome and expensive system that was available only for high-level users. Because of its inadequacies, the Defense Department capped it at 1,850 terminals, and in the late 1960s, hoping for something better, decided not to continue with the expansion of Autosevocom.⁸⁰

(U) In order to produce a system that worked, NSA needed to solve two problems: voice quality and keying. The first was solved through a revolutionary system called "linear predictive coding," which permitted good voice quality in a narrowband system.

~~(S)~~ In 1967, because of the tremendous pressure to build a cheap, high-quality voice encryption system, Howard Rosenblum of NSA's R&D organization proposed a radical departure in key distribution. At the time, the limit of keyholders for a single secure telephone system was about 300. So Rosenblum proposed that each secure telephone should have its own unique key, and that secure telephones communicate with each other after using their unique keys to receive a common session key from a central key distribution center. When a user picked up his secure telephone and dialed a number, the transmission would go to a central key facility which would look up the key of both the sender and receiver and match them so they could talk. Neither end had the key of the other; only the central facility would hold both. He called the concept Bellfield, and through it, he hoped to be able to put a secure telephone on the desks of everyone in DoD.⁸¹



(U) Howard Rosenblum

~~(S)~~ NSA secured a secret patent on the concept and worked on Bellfield for several years, first designing a system called STU-I (Secure Telephone Unit I). STU-I would involve a narrowband, full-duplex voice security system using commercial telephone lines. Everything would be contained within the terminal device, so that no communications center would be needed to encrypt the voice. The goal was to develop a system that would cost, initially, about \$5,000 per unit, but that cost would slide to \$2,500 once contractors began full production. The key to it all was to deploy huge numbers of the devices so that unit production costs could go down to an affordable level.⁸²

~~(S)~~ STU-I did not measure up. It was as big as a two-drawer safe and cost \$35,000 per copy. But it validated the Bellfield operational concept, and NSA gave no thought to not continuing. The COMSEC organization promptly embarked on its replacement, STU-II.

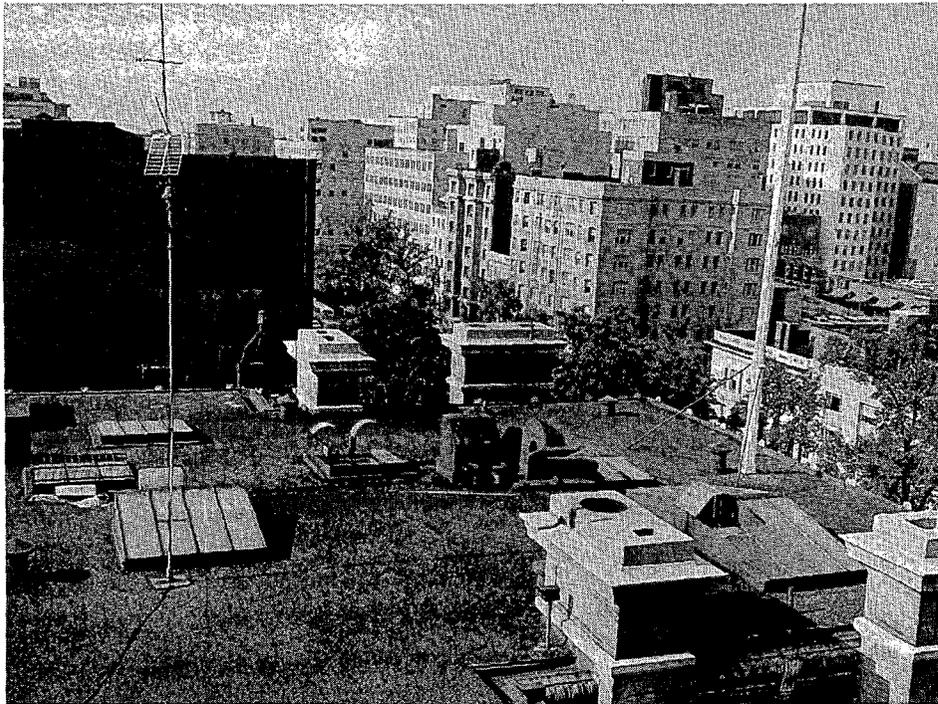
~~(S)~~ To tackle the tactical secure voice problem, NSA launched the Saville program in the late 1960s. The objective was inexpensive, small, lightweight, high-voice quality (i.e., wideband) tactical COMSEC appliques for the warfighter. The war in Vietnam drove this program almost completely. Vinson, designed to replace the far bulkier KY-8, was part of the Saville family and became virtually synonymous with Saville. Perhaps the most innovative area in Vinson design was the application of Saville Advanced Remote Keying, which permitted local users to generate cryptographic keys and distribute them over the

Vinson protected net. Eventually over 250,000 Vinson tactical secure voice equipments were delivered to U.S. and Allied forces.⁸³

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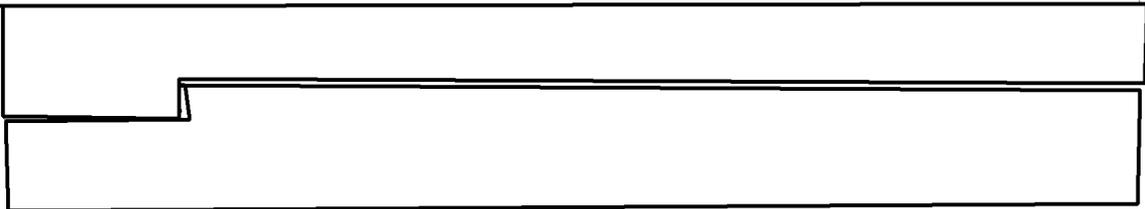
(U) The Soviet Threat

~~(S)~~ During the 1960s U.S. counterintelligence officials got wind of Soviet SIGINT operations in the United States. In the early years, the information, [redacted] [redacted] was rather vague, but was sufficient to focus attention on the Soviet embassy on 16th Street in downtown Washington, only two blocks from the White House; the Soviet mission to the UN in Manhattan; and the Soviet residential centers at Oyster Bay, New York, and Glen Cove, Long Island. There were also reports of the Soviets using cars to conduct microwave surveys and of their using apartments in Arlington, Virginia, and New York. A defector reported that the Washington area intercept was the most valuable source of intelligence that the Soviets had in the U.S.⁸⁴



(U) West portion of the roof of the Soviet embassy, Washington, D.C.

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~~(S)~~ In the early years the Soviets concentrated on U.S. government communications, including military commands like SAC and NORAD, military airborne command posts, and nonmilitary agencies, including the State Department, FBI, and NASA

[Redacted]

In 1968, 126 military command and control circuits were rerouted from microwave to cable in the Washington area, but these were the only countermeasures taken before the mid-1970s.⁸⁵

~~(S)~~ In the early 1970s Soviet interest began to shift to defense contractors. A 1971 KGB directive ordered that intercept work against scientific and technical work be strengthened. Grumman, Fairchild, GE, IBM, Sperry Rand, and General Dynamics were all named as targets by confidential sources. The Soviets reportedly obtained information on the most sophisticated new weapons systems, including the F-14 fighter, B-1 bomber, Trident submarine, and advanced nuclear weapons developments. If true, this would mean that the Soviets no longer needed spies as they had during the years of the Philby and Rosenberg rings. They could simply get the information from the airwaves. This brought a new factor into the equation. If telephones were such lucrative targets, the U.S. would have to start thinking about voice security for defense contractors, too.⁸⁶

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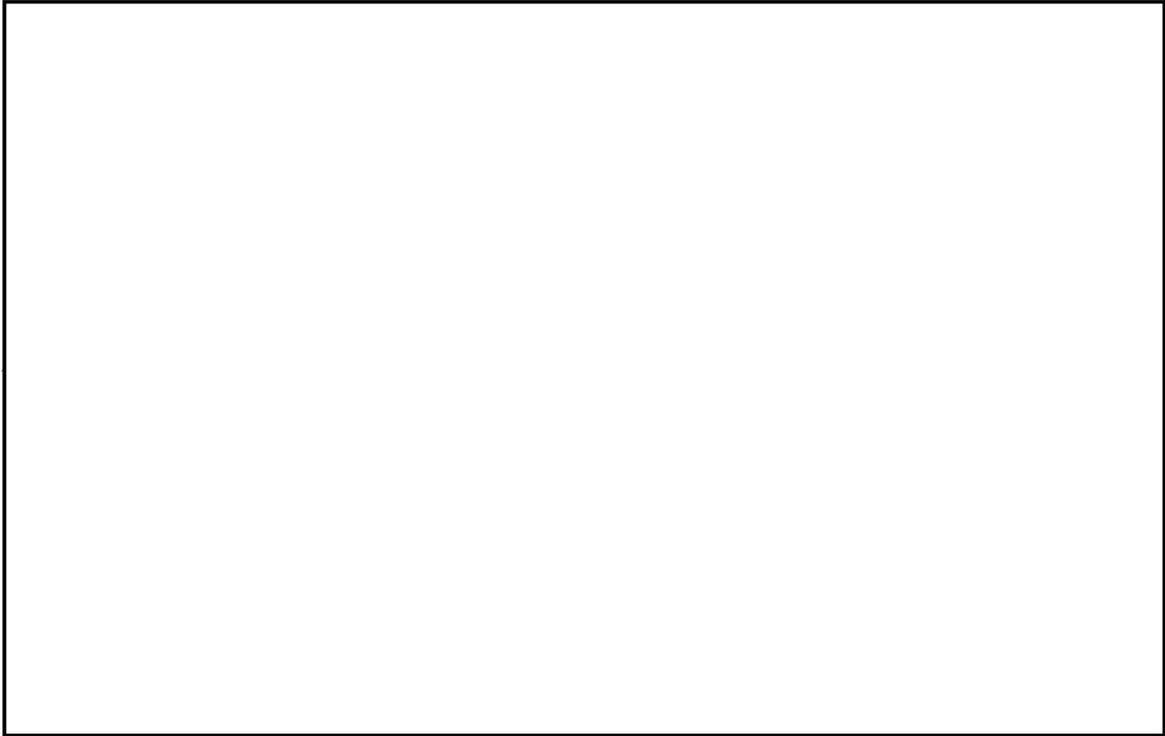
(U) The Solutions

~~(TS-CCO)~~ [Redacted]

The initial result was a highly sensitive National Security Defense Memorandum 266, signed by Henry Kissinger, then the National Security

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Advisor, and addressed only to the secretary of defense, director of OMB, DCI, and the director of Telecommunications Policy. This memorandum directed that Washington area microwave communications be buried to the extent possible. This would be a near-term measure. Longer term solutions would include expanding secure voice communications throughout the government and private industry. The Office of Telecommunications Policy would work on the long-term solutions.⁸⁸



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~~(TS)~~ The issue remained under study, and President Ford reviewed the options in the waning days of his administration. By that time [redacted] it became obvious that securing only Washington area communications would not do. Some circuits had been secured, but many had not. The major corporations were cooperating with the government program, but other, smaller companies just entering the market did not have the capital base to pay for a large program of rerouting their circuits to underground cables. Forcing them to bury their circuits could put them at a competitive disadvantage with AT&T. Ford's advisors outlined a wide-ranging and complex program which would include burying more microwave circuits, developing and distributing more and better secure telephones, close interworking between government and private industry, and federally mandated programs directing implementation of approved protection techniques throughout the national microwave net. Securing the nation's vital national defense-related communications would cost in the neighborhood of \$1 to \$2 billion.

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(U) Soviet mission,
United Nations



(U) Soviet consulate
in San
Francisco

~~(TS)~~ Ford approved a program to proceed with protection of both government and private sector communications. He also approved the establishment of a joint National Security Council/Domestic Council Committee on Telecommunications Security to oversee the effort. But he did not approve making a public announcement about the problem.⁹²

~~(TS)~~ Just prior to the November elections in 1976, President Ford signed PD-24, a presidential directive so sensitive that only fifteen copies were made. Expressing the administration's concern over the Soviet exploitation program, the directive brought contractors into partnership with the government to evaluate the potential damage. Five companies - Vitro Laboratories Division of Automation Industry, Newport News Shipbuilding and Drydock Company, General Electric, IBM, and Lockheed - were named to work with the federal government on the issue.⁹³ Only a matter of days later Ford lost the election, and the whole issue became Jimmy Carter's problem.

~~(TS)~~ Ford and his vice president, Nelson Rockefeller, had been strong supporters of NSA's efforts. Carter's administration brought a new look. New White House officials were not so inclined to view this solely as a national security issue, but as related also to the protection of individual liberty and privacy. Carter directed a complete review of the Ford administration program. Carter was concerned about countermeasures, including the legality of the program to secure wirelines in the Washington, New York, and San Francisco areas under Project [redacted]. He questioned the effect of proposed countermeasures, including denial of Soviet requests to purchase more property in the Washington area. He also wanted to know what effect the [redacted] project, which involved close interworking with AT&T, would have on the ongoing Justice Department antitrust suit against that same corporation. He suggested that countermeasures could lead to Soviet retaliation, especially the possible increase in microwave bombardment of the U.S. embassy in Moscow. In short, he wanted a new program that would have the stamp of the Carter administration. And he wanted the entire thing kept absolutely secret.⁹⁴

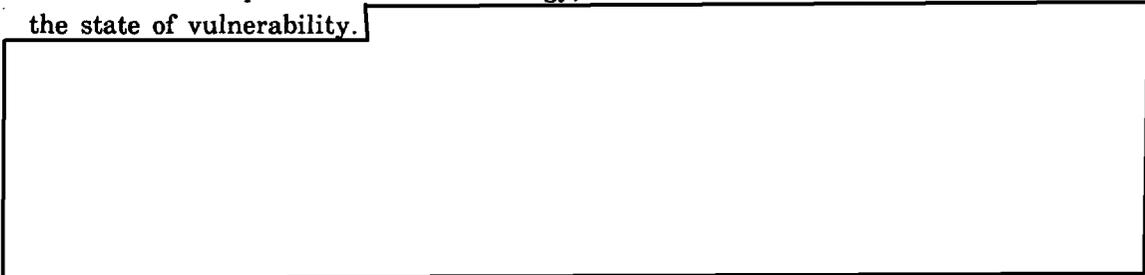
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~~(TS)~~ The joint government-contractor study initiated by Ford concluded that the Soviets were getting very valuable national security data from defense contractor communications. The CEOs of the participating companies were shocked at the degree to which their telephone conversations were being exploited. With this report in hand, in June 1977 the deputy secretary of defense told Lew Allen to alert certain other defense contractors and bring them into the problem. Ultimately, NSA contacted seventeen contractors and briefed them about their vulnerabilities.⁹⁵

~~(TS)~~ Meanwhile, Carter's national security advisor, Zbigniew Brzezinski, directed that [redacted] the wireline security project, be rushed through to completion. He also requested that government-developed wireline and circuit security technology be made available immediately, but here the competing Defense and Commerce authorities slowed things. The Carter administration, initially suspicious of Defense influence in the private sector, wanted Commerce to take the lead in dealing with private industry on the issue. A presidential directive in 1979 divided responsibility between Defense (with NSA as the executive agent) for the protection of government communications, and Commerce for the

protection of private and industry communications. This was to be the first of many conflicts between Defense and Commerce over cryptographic and telecommunications technology policy.⁹⁶

~~(TS-CCO)~~ As part of the Carter strategy, the White House directed the DCI to assess the state of vulnerability.



~~(TS)~~ Brzezinski, who was turning out to be a hawk's hawk in a generally dovish White House, actually considered employing active measures such as jamming the Soviet interception program.



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~~(S)~~ Another diversion which proved not at all helpful at solving the problem was Vice President Mondale's concern for the protection of individual privacy. The vice president viewed the matter in the context of civil liberties, and he kept wanting to know how we were going to stop the Soviets from reading the mail of individual Americans. This frequently diverted cabinet-level discussions into fruitless pursuits, until Brzezinski succeeded in relegating it to a low priority at meeting agendas. As the national security advisor told Mondale at one point, "An effective program in this area would cost several billion dollars and we need to know much more about the actual threat before recommending an expenditure of this magnitude. . . ." Budgetary realities do have a way of killing off diversionary issues.⁹⁸

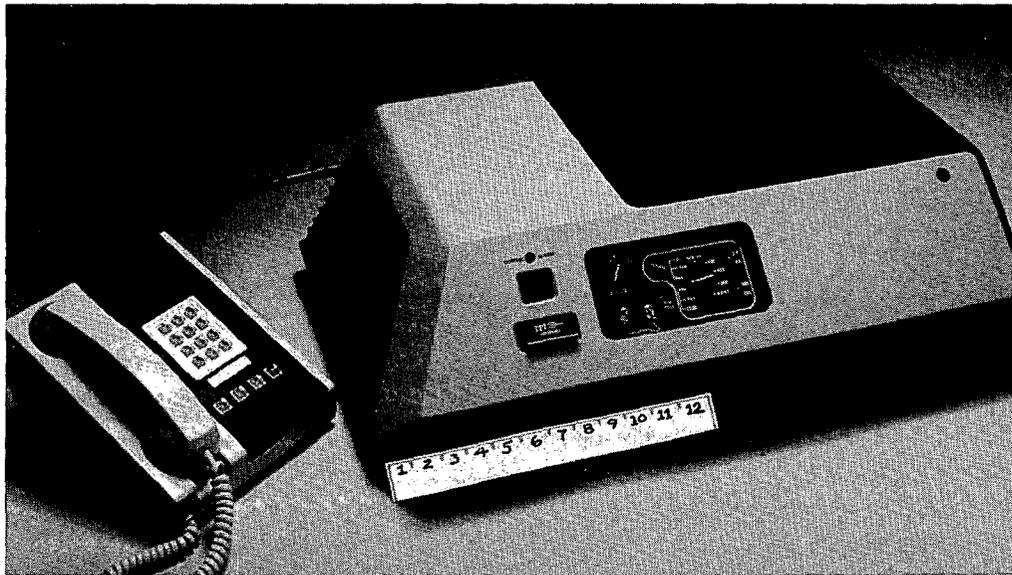
~~(S)~~ The whole matter became a key input into the "battle of the embassies" that was so important during the Reagan administration. In 1966 the U.S. and the Soviet Union began negotiating for new space in Moscow and Washington for the construction of new, modern embassies to replace the cramped and aging buildings then in use. State notified Defense.



~~(S)~~

The protest did not crest until after Ronald Reagan had been elected, but the Carter administration was concerned about it, even though determined to keep the whole matter quiet.

(U) The long-range solution was to develop the elusive universal telephone encryption device. STU-I, with its \$35,000 price tag, had not been the answer. The follow-on, STU-II, came in at half the cost, but still required that all contacts run through a central key facility. This made call set-up awkward and time consuming and meant that even people



(U) STU-II

having the instruments would use them only when they had plenty of time or were certain that they would get into classified material during the call. Moreover, the instrument itself rested on a fifty-pound box that resembled the aged KY-3. It just wasn't user friendly, and only 15,000 of them were produced before the program ended. It began in 1979 and ended in 1987 when it was overtaken by the "real deal," the STU-III.¹⁰⁰



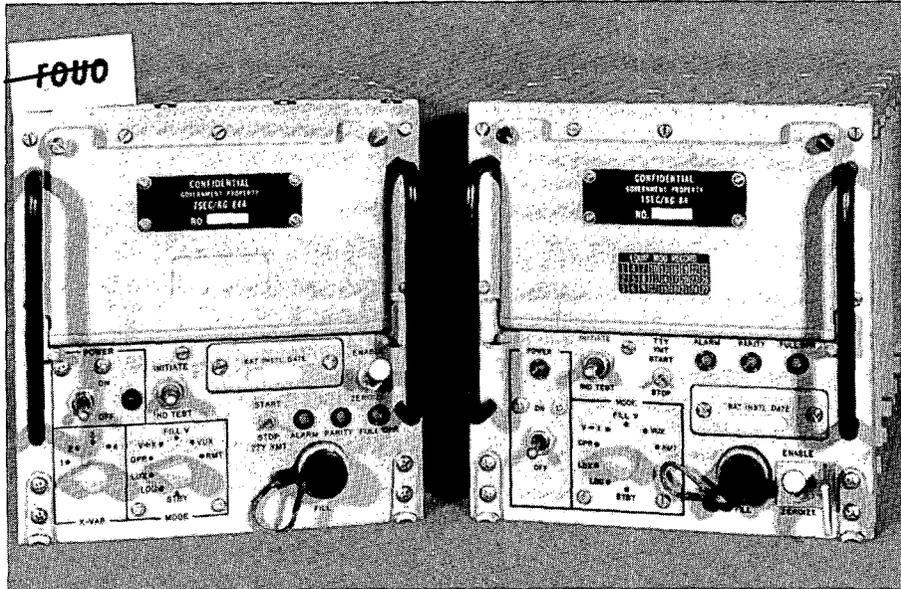
(U) Record communications were easier to protect than were voice systems, and the U.S. government had secured just about all the circuits that it needed to protect long before. But the redoubtable KW-26, which had been the standard since the mid-1950s, was showing its age. NSA had known about the KW-26's drawbacks since its first deployment. A point-to-point circuit encryption device, its numbers had to be multiplied by the number of circuits arriving in a comm center. In the mid-1960s NSA began working

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on a replacement under Project [redacted] was designed under the premise that the only thing unique to an individual circuit was the key generator. All other equipment, including modems and amplifiers, could be used by all circuits in common.¹⁰²

(U) What emerged from [redacted] was the KG-84, the next generation of key generator. It was a key generator only, and a very fast one which could be used on the high-speed circuits that had evolved since the early days of the KW-26. NSA awarded the contract to Bendix in 1979, with delivery scheduled to begin in December of 1981.¹⁰³



~~(FOUO)~~ KG-84

(U) NSA COMPUTERS ENTER THE 1970s

(U) By the 1970s NSA was no longer making computer history. Industry development was more diffuse, and many of the ideas that spawned corporate computer development were originating in other places. Important as it was, cryptology did not drive technology to the extent that it had earlier. Internally, concerns were shifting to organizational issues.

(U) The Era of Mainframes

~~(FOUO)~~ Beginning with Harvest in 1962, NSA was dominated by general-purpose mainframes. These were "nested" in centralized complexes consisting of many computers, and each complex was dedicated to a particular purpose. A 1973 study of NSA computers done by a panel chaired by Dr. Willis Ware of the Rand Corporation identified six large complexes.¹⁰⁴

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~~(S-CCO)~~ At the front end of the process was the communications complex. This complex consisted primarily of Univac and Honeywell products, which were especially adaptable to receiving streams of data typical of those originating from communications centers. (Honeywell, in fact, provided the IATS computers at field sites.) IDDF, the main communications center, used Sigma computers which processed record traffic from the Criticomm system. On the operations side, the complex of Univacs and Honeywells sucked up the deluge of intercept files being forwarded from field sites via the IATS system. It entered NSA through the Daysend program, and from there it was sent to [redacted] which split out the intercept files for various applications programs according to the target signals (A Group, B Group, and G Group, primarily).

~~(S-CCO)~~ The next stop was [redacted]

[redacted] These fourth generation computers were the most advanced on the market, but IBM products were notoriously difficult to mate with those of other companies, and material from the [redacted] system had to be reformatted and spun off onto magnetic tapes, which were then hand-carried to the [redacted] complex and processed in job batches according to their priority. Batch jobs tended to be run at night so that the material would be ready for the analyst in the morning. [redacted] ran the applications programs that were specific to each analytic organization. This was almost entirely a traffic analytic process.

~~(S-CCO)~~ The Rye complex began in the late 1960s supporting NSOC's predecessor, the Current SIGINT Operations Center (CSOC), which served as a timely operations center on the Soviet problem. Klieglights were the grist for the mill - short, highly formatted information fragments which often became formal product reports. The technology had been put together by [redacted] and a team of traffic analysts and computer systems people. Like his boss, Walter Deeley, [redacted] was abrasive and iconoclastic. But he got things done, and Deeley liked that.

~~(S-CCO)~~ The Rye complex ran several different software systems, most important of which was called Tide, which processed incoming Klieglights. Rye became the central nervous system for NSOC, and it internetted over 100 Opscomm circuits. By this time the Opscomm traffic (primarily Klieglights) flowed directly into two Univac 494s, which distributed it via CRTs to analysts on the NSOC floor. But by the mid-1970s Tide had become overburdened.

[redacted] The end was near, and programmers and systems analysts hurried a new system, called Preface, into being. Preface operated on a Univac 1100. Although it began handling its first job in 1978, it took several years to move all the processing off the 494s and onto the new system.¹⁰⁵

~~(S-CCO)~~ Cryptanalytic processing was still the biggest computer processing effort. [redacted] In addition, cryptanalysis was still the home of the special-purpose device (SPD)

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[Redacted]

~~(S-CCO)~~ Two other complexes made up the NSA computer mainframes.

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The CDC 6600, considered by many to be the first supercomputer, was built by the successor to ERA, which had done so much contracting in support of NSG in the days following World War II.

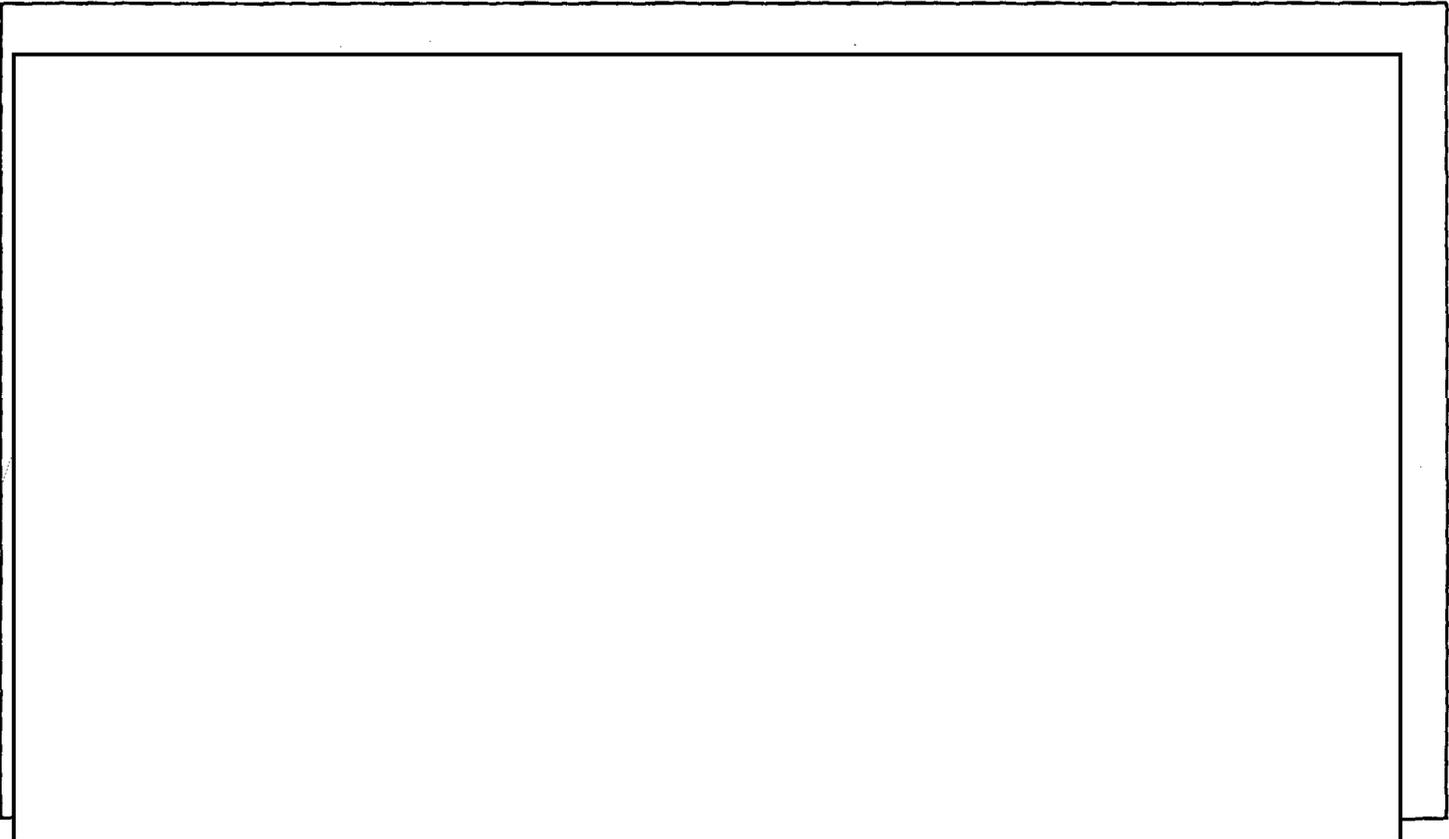
(U) In fact, the CDC 6600 represented the dawning of the supercomputer business in NSA. It was succeeded by the CDC 7700, four times as fast and more capable in every respect. Seymour Cray, who started at CDC, formed his own company, Cray Research Incorporated, in 1972, and NSA purchased the first machine, the Cray 1, in 1976.¹⁰⁷ (Table 10 contains a brief history of supercomputer purchases by NSA.)

~~(FOUO)~~ In 1973 a full-scale debate erupted within NSA over closed- versus open-shop programming. Under the closed-shop system, naturally favored by C Group, all programming and systems design people would be concentrated in a central organization (i.e., C Group), which would take care of all requests for support. In the open-shop concept, most computer people would be distributed to customer organizations where they could write applications programs while in daily contact with the people who needed the support. Needless to say, DDO favored this approach and even pushed the idea that the best applications programmer would be a person who came from the supported organization and did programming on the side. Dr. Willis Ware, a Rand Corporation executive who served on NSASAB, sponsored a compromise, wherein large systems would be centralized in C Group, but applications programming would be done, in the main, in the customer organization. After a long and bitter argument, this approach prevailed, to the relief of many who believed that this was the inevitable outcome.¹⁰⁸

(U) A year earlier another simmering organizational feud had resulted in a special study. The debate, which had begun at least as early as 1970, involved the possible merger of computer and telecommunications functions into the same organization. The two had become so inextricable that the technology drove the issue. In 1972 Paul Neff, the chief of the policy staff, suggested that a full study be made, and this spawned the Carson Committee, chaired by Neil Carson of P1. Carson recommended that the computer organization should be pulled out of DDO and merged with telecommunications, the so-called "take T and C" approach. DDO strongly opposed the divestiture of resources, and the issue remained an irritant for four more years, when Lew Allen took a new look and finally directed the merger.¹⁰⁹

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(U) Table 10 ¹¹⁰
Evolution of the Supercomputer



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(U) Platform

~~(S-CCO)~~ The great weakness of the disconnected mainframes was interaction. As systems became more interdependent and SIGINT requirements became more time-sensitive, the need to send information across computer boundaries affected NSA more and more seriously. Under Walter Deeley's direction (Deeley was then chief of V, the organization that ran NSOC), William Saadi wrote a requirements paper for the internetting of Agency computers. [redacted]

(U) Kermit Speierman, the chief of C, asked his deputy, Cecil Phillips, to put together a seminar of NSA and non-Agency people to look at the problem. A young systems engineer named [redacted] was urging NSA to look at some technology that had been developed by the Defense Advanced Research Projects Agency (DARPA). In 1969 DARPA had developed a computer internetting system called ARPANET. At the seminar called by Phillips, the DARPA representative explained ARPANET, and NSA quickly adopted the DARPA solution. The project was called Platform.¹¹²

(U) The schema for Platform was worked out for NSA by Bolt, Beranek and Newman, Incorporated, which released its report to NSA in 1974. The original plan allowed for four host complexes, which could be expanded as the system got bigger. The core process was to be run on a Honeywell 316, which would be the Interface Message Processor (IMP). Platform soon expanded to the field, [redacted] was the first field site brought into the system.¹¹³

~~(S-CCO)~~ The 1970s was a period of accelerated development of software and database systems. The volumes of data flowing into the Agency every day demanded very sophisticated databases, and in this NSA pioneered relational systems. Some, like M-204, were developed specifically for NSA. One database, called COINS (Community On-line Information System), began in the mid-1960s under NSA executive agency. Initially a joint NSA/DIA project, it became a community-wide database at the SI/TK level. COINS became a substitute for various product reports, and customers were simply given direct access to massaged SIGINT data rather than having NSA take the data and manufacture a product report of mind-numbing length and detail. Still another database, then called SOLIS, was created in 1972 to hold all NSA electrical product reports.¹¹⁴

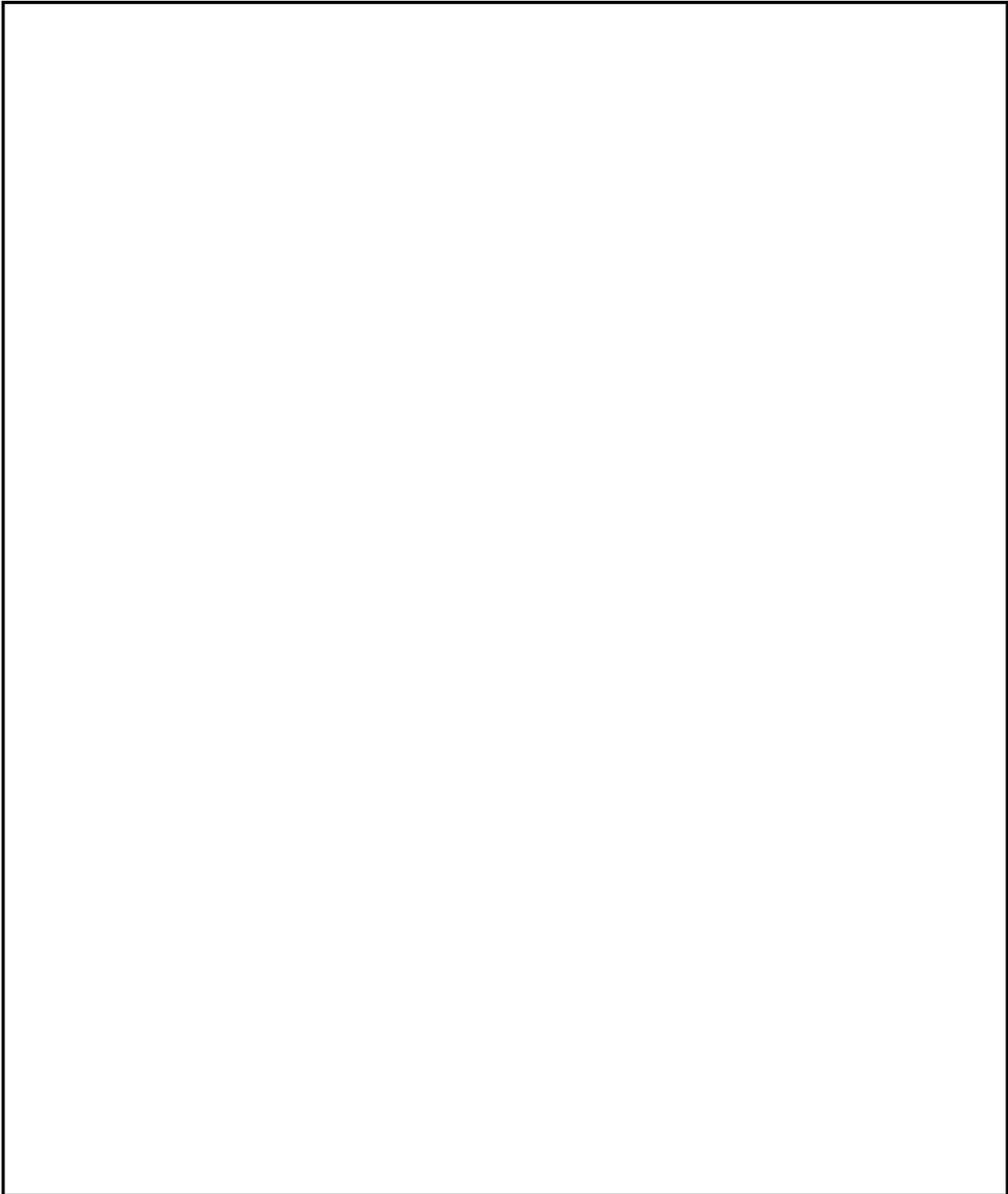
(U) NSA'S FOREIGN COLLABORATION

~~(S-CCO)~~ Scarce resources meant reliance on outside help. And as the budgets got slimmer, NSA turned increasingly to the help that foreigners could provide. This trend accelerated in the 1970s to a greater degree than at any time in U.S. post-World War II cryptologic history.

(S-CCO) There were dramatic differences in reliance on foreign partners depending on the target. [redacted]

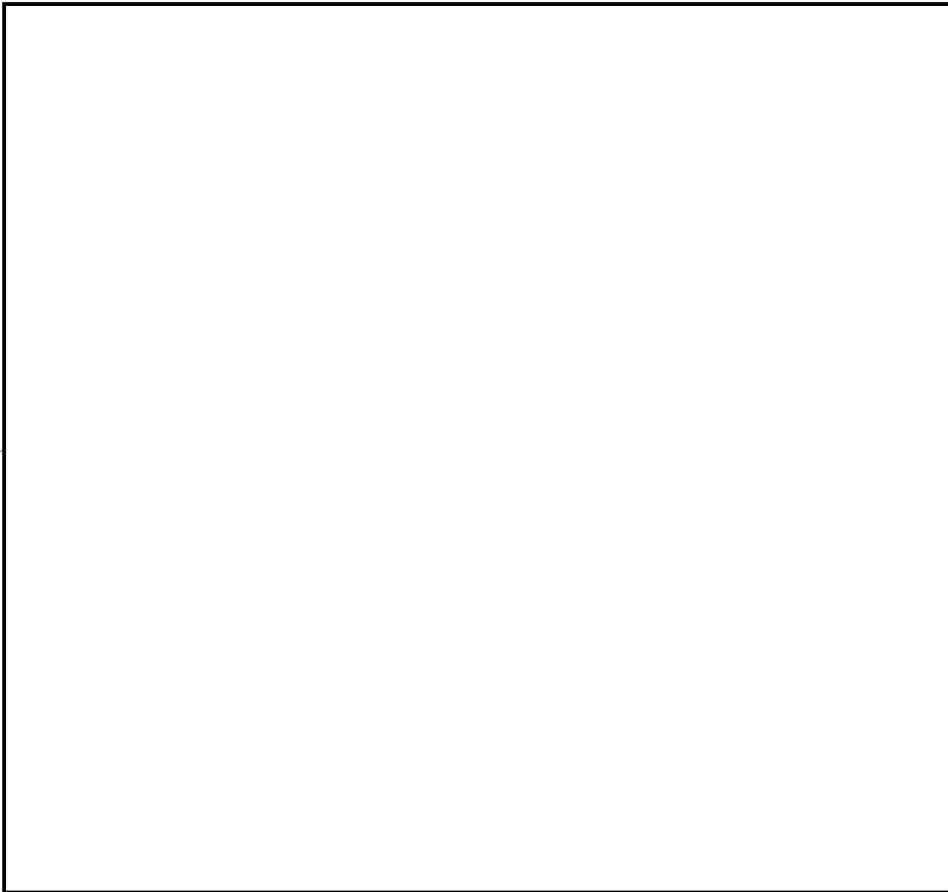
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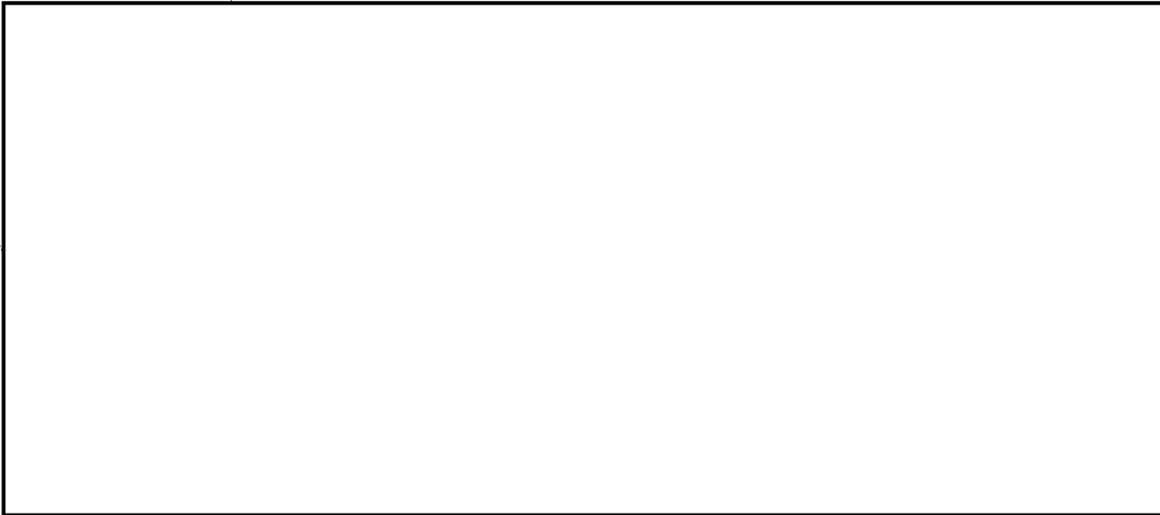
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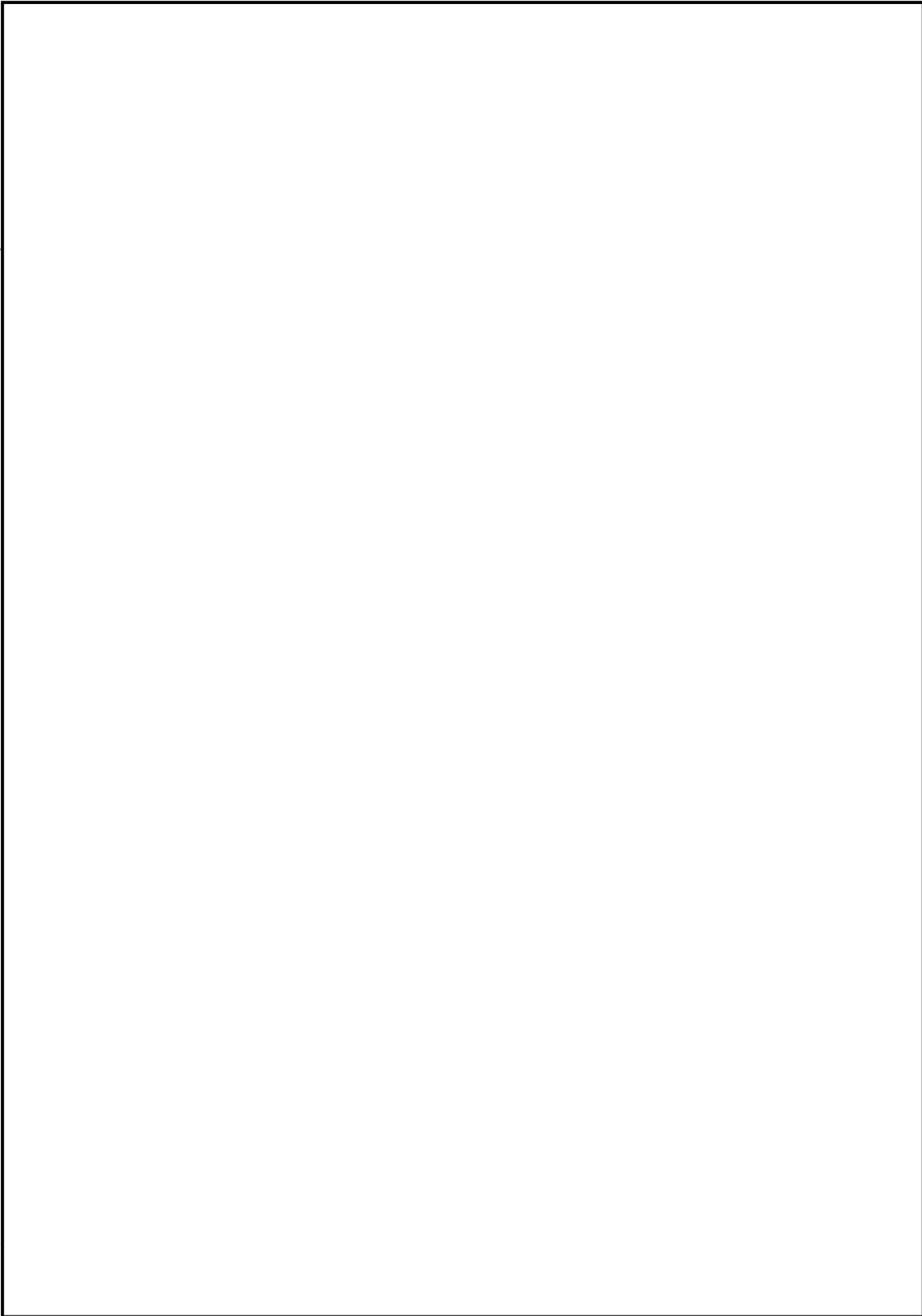
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(U) Great Britain

~~(S-CCO)~~ With the British, collaboration remained almost total. The key decisions that kept the two countries closely tied related generally to advances into new technological realms. At each bend of the road, NSA made a conscious decision to remain engaged.



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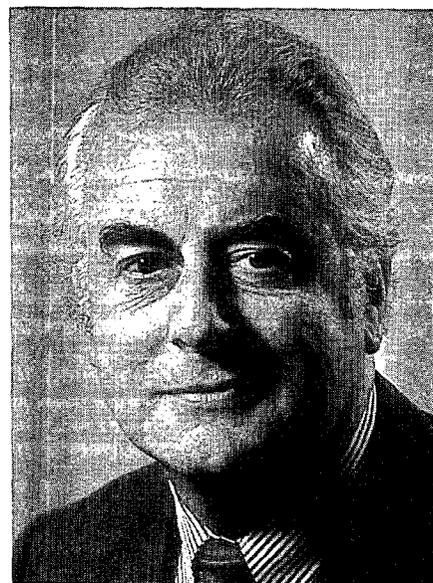
(U) Each country lived with the foibles of the other. The American tendency to leak everything significant to the press was counterbalanced in England by the Official Secrets Act, by which the government tried, often unsuccessfully, to stop publication of material regarded as "sensitive." GCHQ employees were unionized from an early date, and this introduced some interesting twists to the relationship with the Americans, who were not unionized. Politically, the Left in England was stronger than in the U.S., and they employed some novel techniques to attempt to wreck the intelligence business. One such was the device of "public foot paths," a Medieval concept by which, under British common law, paths that had been used by walkers in previous centuries were required to be kept open. Careful research into public records almost always yielded one or more such ancient walking routes through military installations. Thus diligent British researchers discovered foot paths across both [redacted] and would endeavor, at least once a year, to walk them to maintain the concept. [redacted]

(U) Australia

(U) American intelligence had enjoyed a long and close relationship with Australia from the time of the election of Robert Menzies (of the Liberal Party) in 1949 through the end of his very long term of office (1961). His successors were also inclined to be pro-American, and the sunny situation continued through the end of the decade. But in 1972 the Australian Labor Party (ALP), headed by one Gough Whitlam, assumed the reins, and relations turned stormy. While conservative Australians generally supported the bilateral relationship with the U.S., the ALP had developed a leftist and decidedly anti-American stance.¹²²

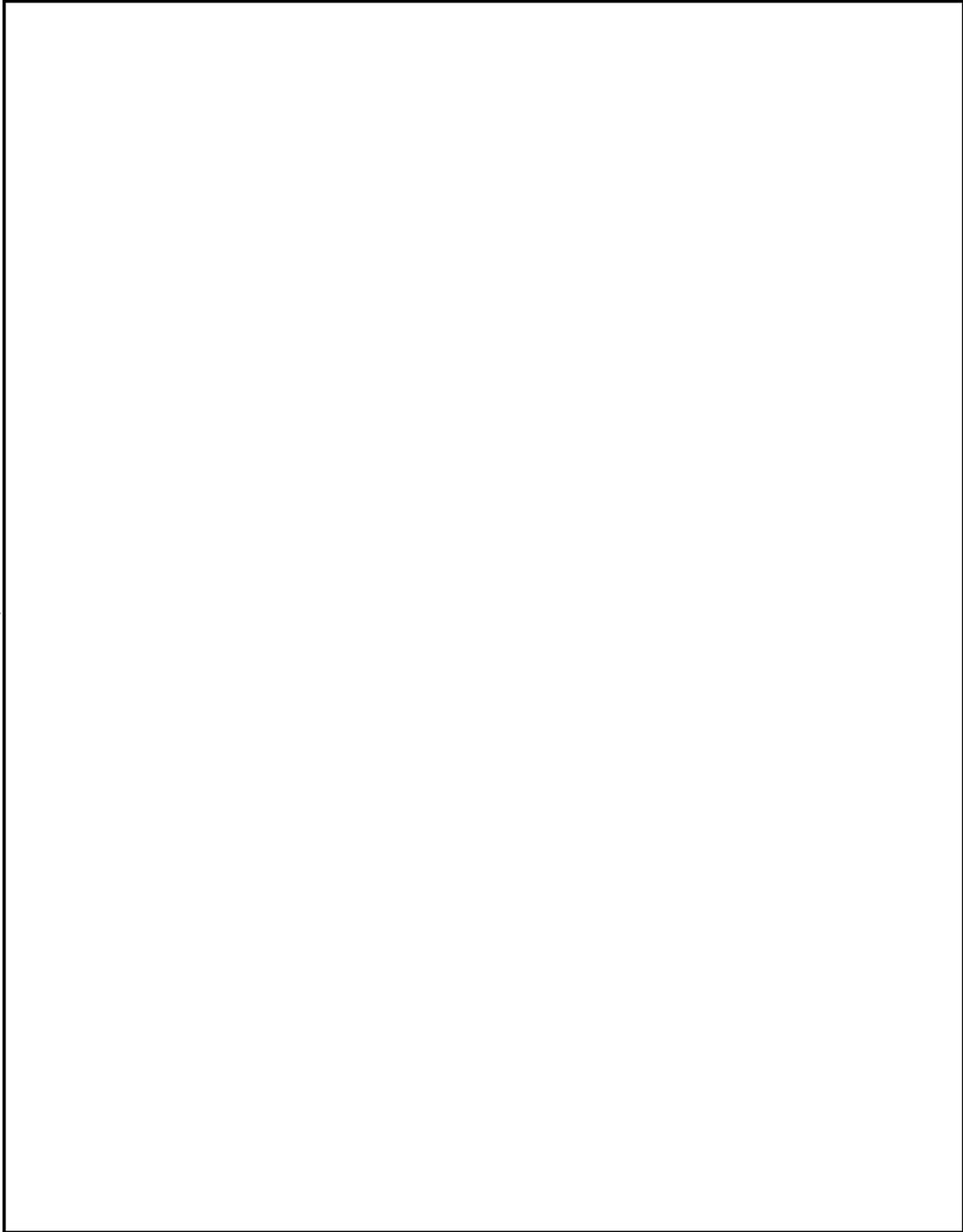


(U) Robert Menzies



(U) Gough Whitlam

(U) Whitlam was opposed to Australian participation in the war in Vietnam, and he pulled Australian troops out of the combat zone. He also announced that he would see to it that Australian forces came home no matter where they were; this included a small contingent in the island nation of Singapore.



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(FOUO) Cryptology and Whitlam were not done, even after he departed for private life. Soon after he was sacked, the press revealed that Whitlam planned to accept a hefty financial donation to the ALP from the Ba'ath Party in Iraq.



Even in 1975 the regime of Saddam Hussein was so odious that Whitlam could not survive the besmirchment. His political career was effectively over. The new prime minister, Malcolm Fraser, was decidedly pro-American, and U.S.-Australian relations returned to something approaching an even keel.¹²⁶

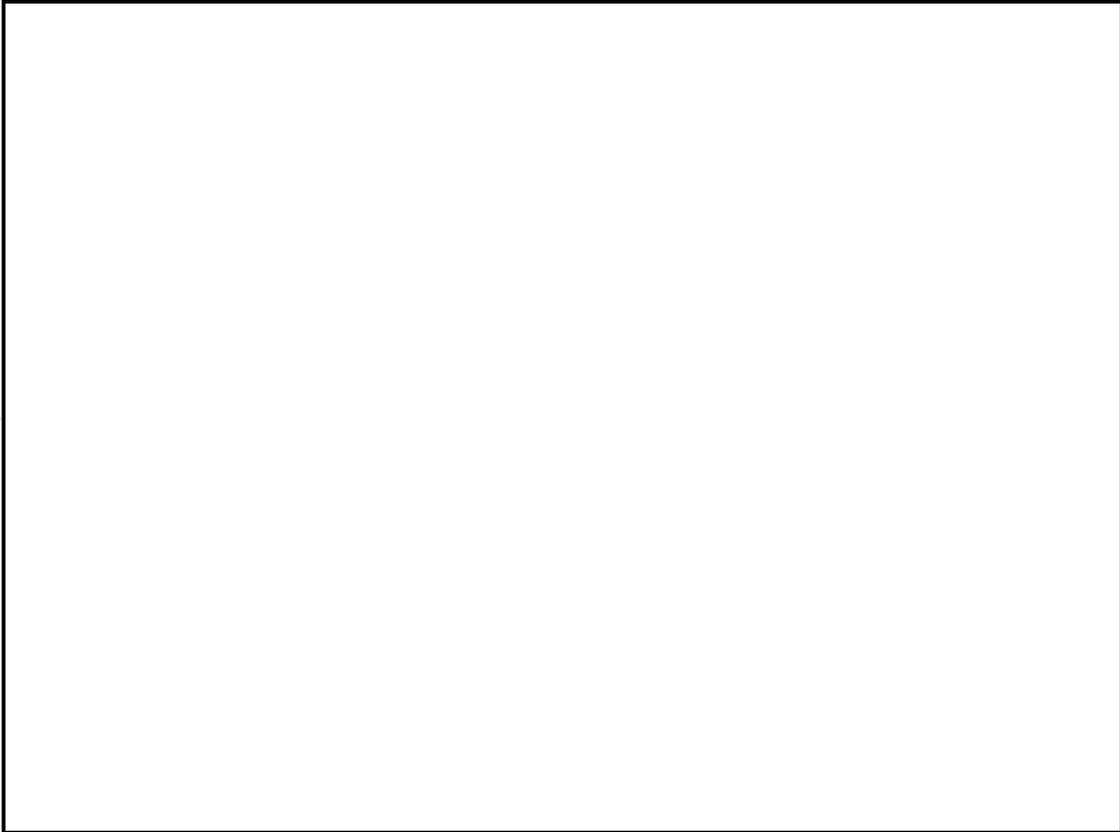
(U) During his days in power, Whitlam subjected his entire intelligence establishment to a searching evaluation. To take charge of the investigation, he appointed Mr. Justice R. M. Hope, whom everyone in Labor regarded as a dedicated civil libertarian. The Hope Commission continued to investigate and deliberate for almost three years, releasing its final report in 1977, long after Whitlam was at home growing roses. But instead of destroying the intelligence mechanism that Whitlam so detested, Hope proposed to strengthen it. His greatest praise was reserved for DSD, which he and his committee members regarded as the best source of intelligence available.

(U) DSD resided in the Defence establishment, but rather than remove it, Hope proposed to give it more autonomy, more people, and more money. In many ways Hope's recommendations paralleled events in the United States in 1952, when NSA was created within Defense, but autonomous from the JCS. DSD's mission was a national one, Hope wrote, and should be strengthened in all its aspects, especially in economic and diplomatic intelligence important to non-Defence organizations. The commission also praised the relationships with NSA and GCHQ.¹²⁷



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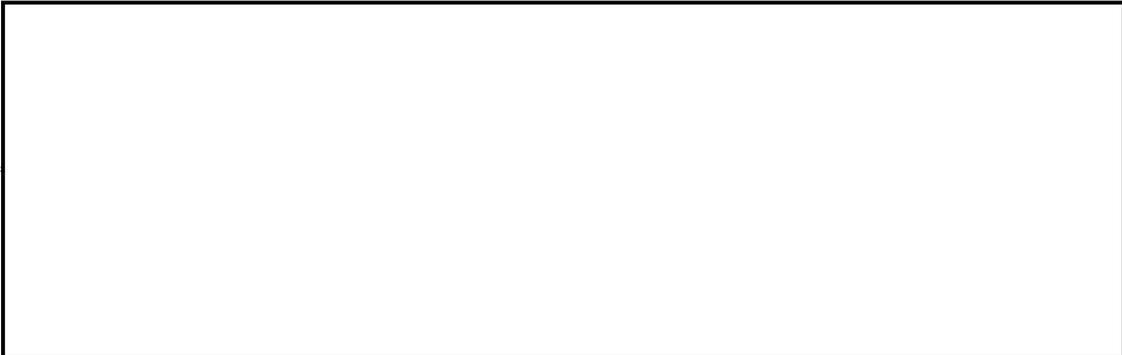
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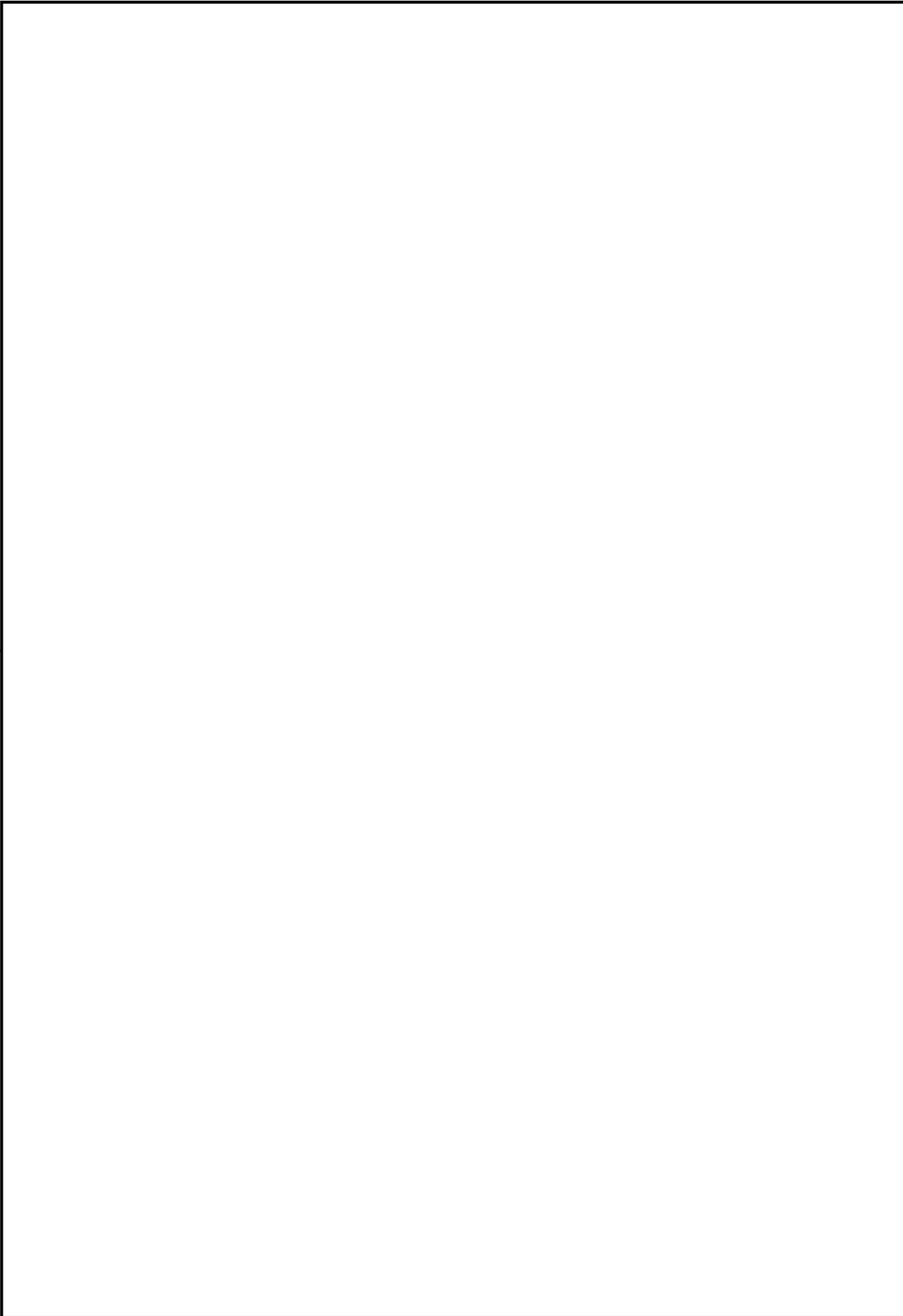
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(U) Third Party Programs

~~(S-CCO)~~ Until 1974, NSA's Third Party programs had been run by the deputy director, Louis Tordella. This highly centralized management arrangement worked as long as Third Parties remained relatively unimportant. By the time Tordella retired in 1974, this was no longer the case, and the new deputy, Benson Buffham, promptly changed the arrangement, naming a separate Third Party program manager (originally Robert Drake, the DDO, who wore it as a second hat). This effectively decentralized Third Party management outside of the deputy director's office and got more people involved in decision-making. It was a long-overdue reform.¹³²



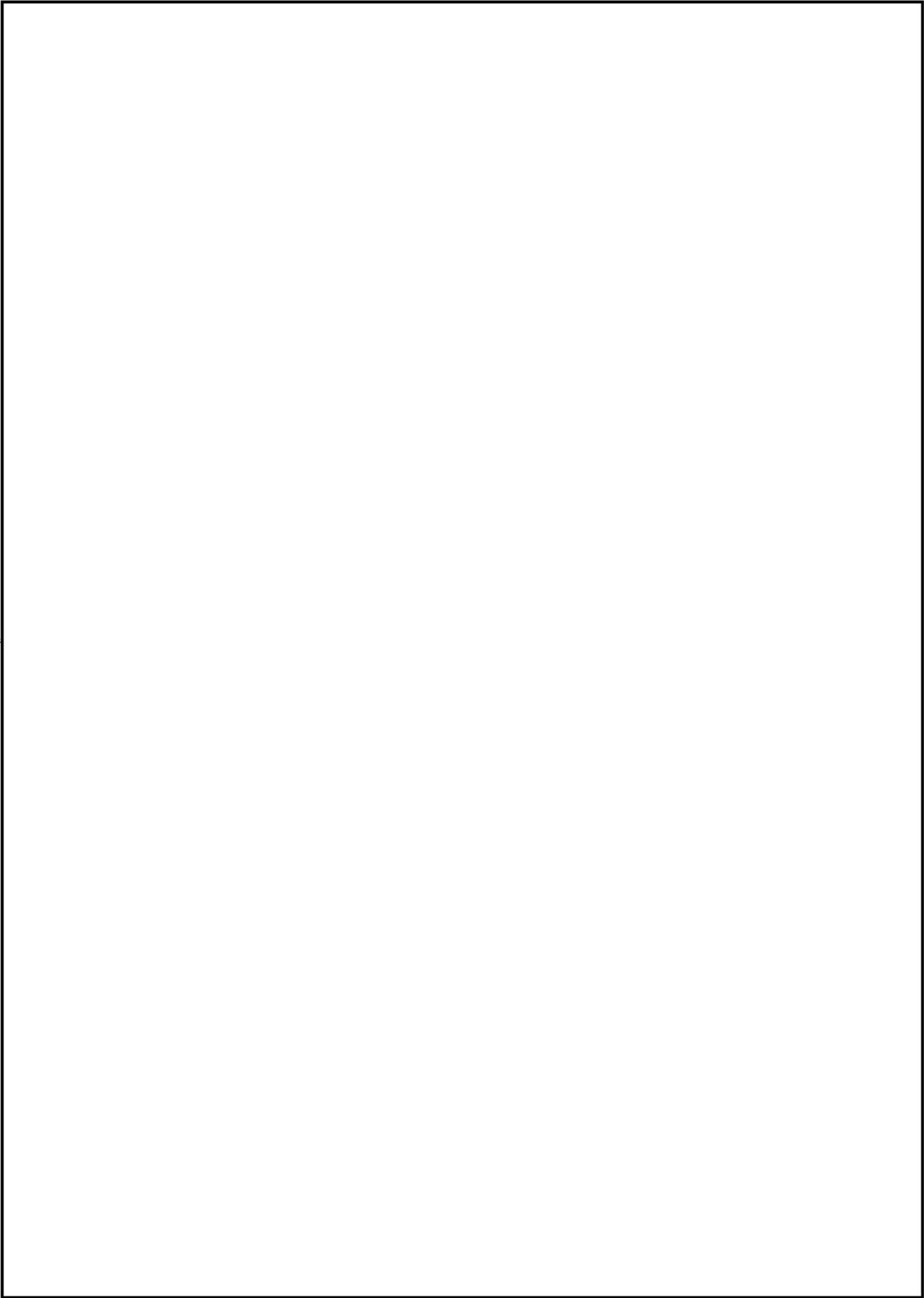
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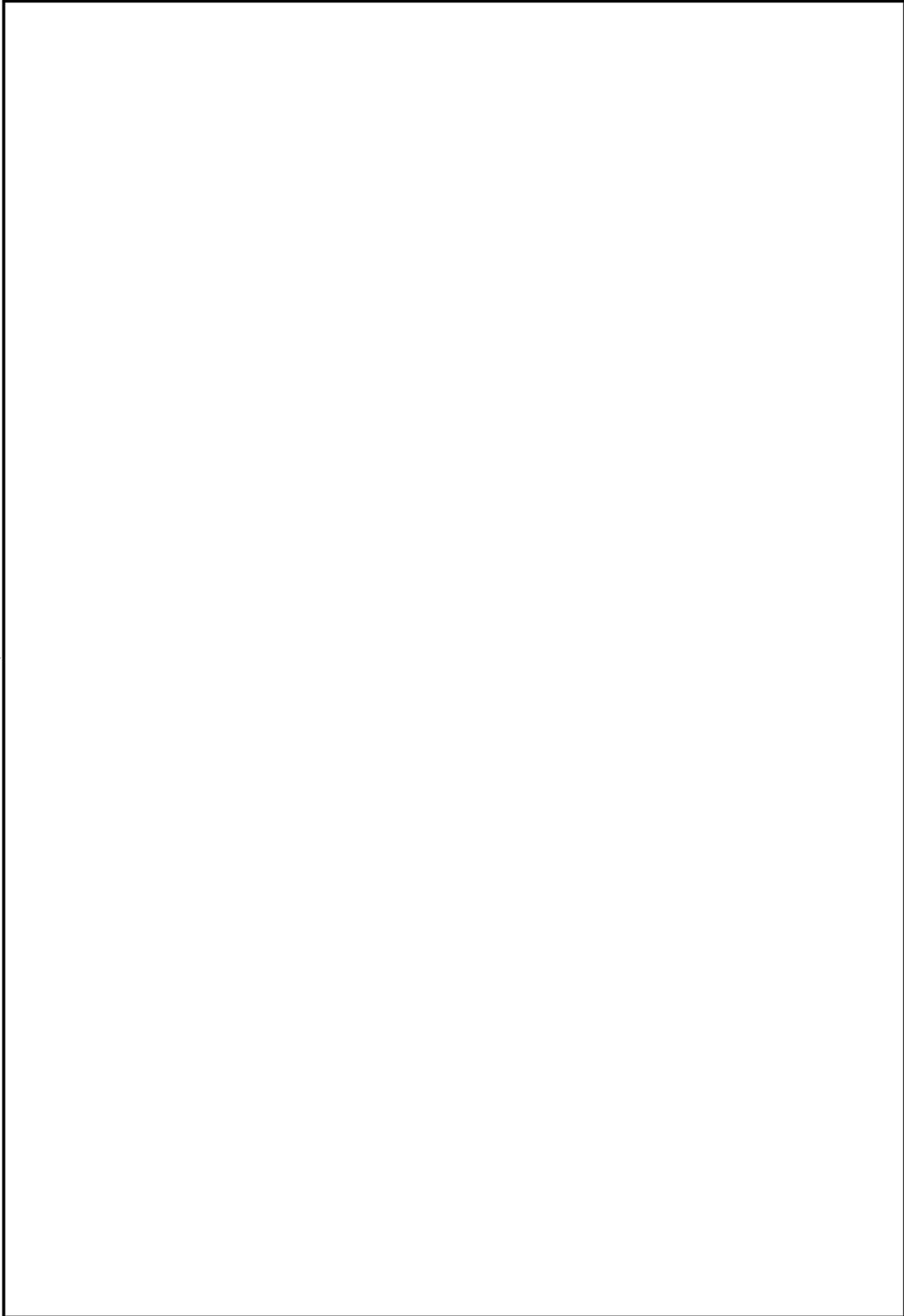
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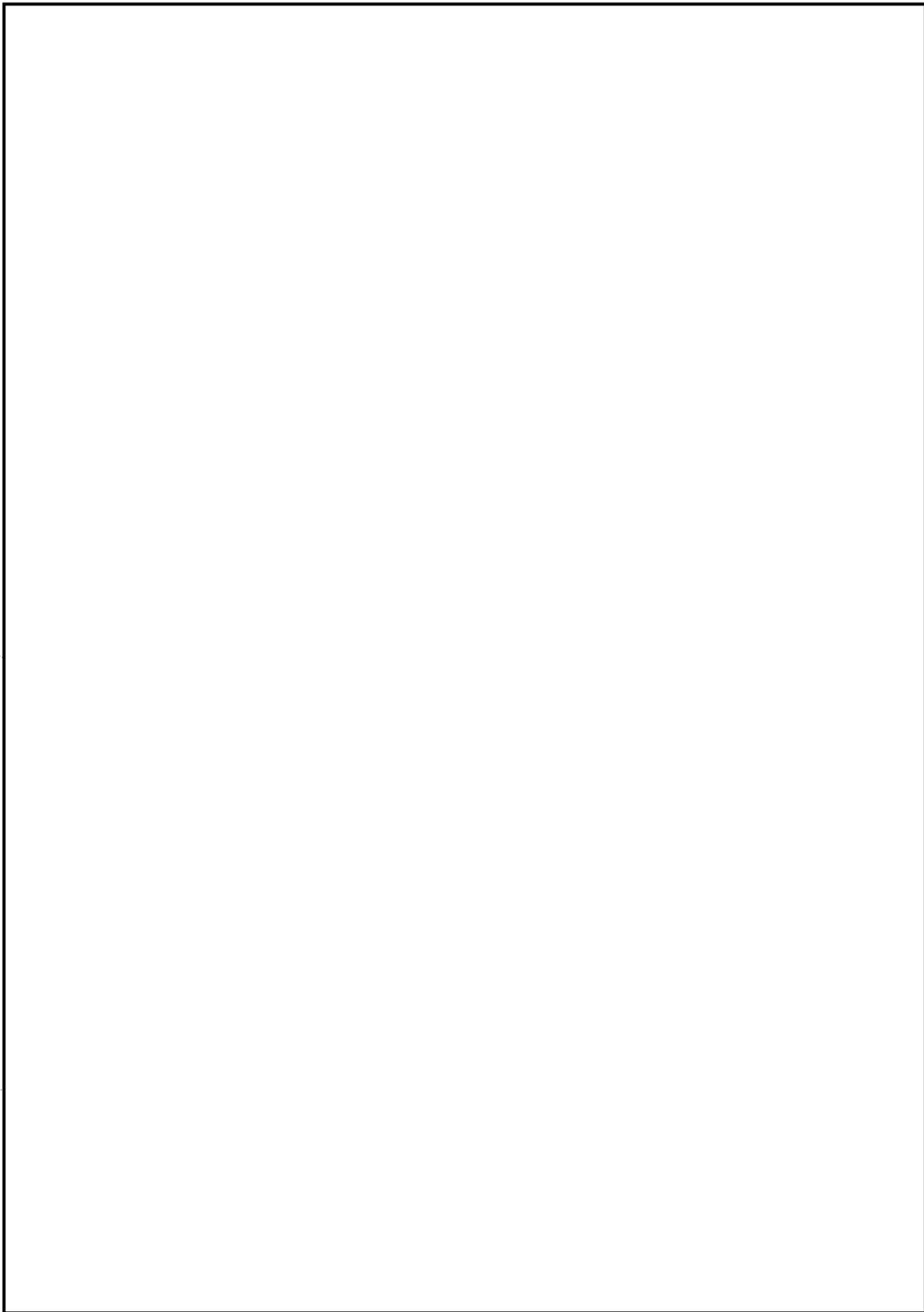
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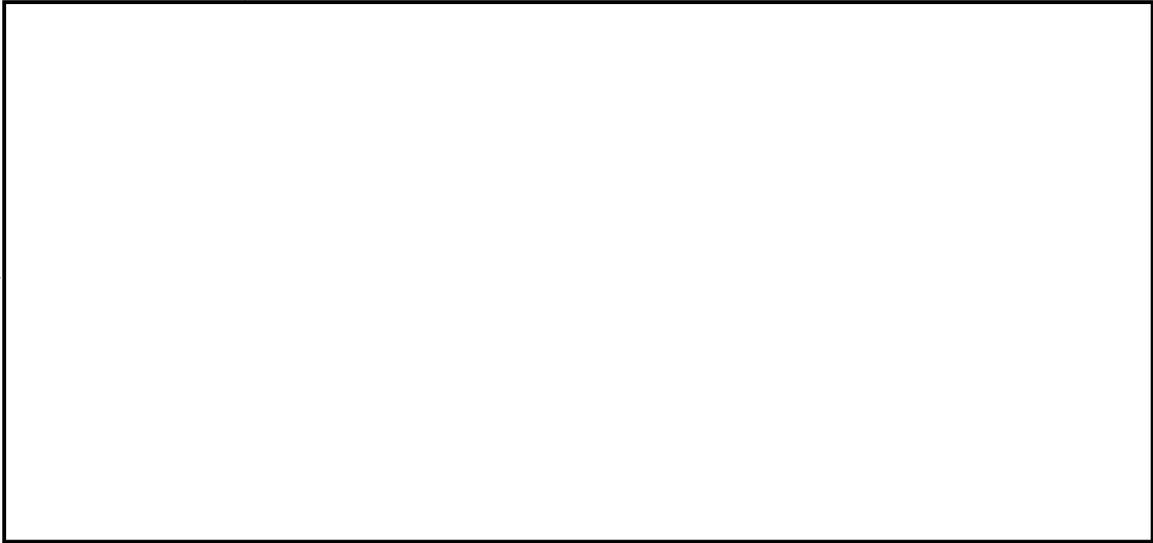


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Notes



2. (U) Strobe Talbot, *Endgame: The Inside Story of SALT II* (New York: Harper and Row, 1979), 19.
3. (U) *Ibid.*, 20.
4. (U) *Ibid.*, 21-40.
5. (U) *Ibid.*, 32-33.
6. (U) *Ibid.*, 30.



10. (U) *Ibid.*
11. (U) *Ibid.*
12. (U) *Ibid.*
13. (U) *Ibid.*
14. (U) *Ibid.*
15. (U) NSA Archives, acc nr 37849Z, G12-0504-1.



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19. (U) NSA Archives, 37849Z, G12-0504-1.

[Redacted]

21. (U) Ibid.

[Redacted]

25. (U) Ibid.

[Redacted]

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28. (U) NSA Archives, acc nr 30995Z, H0-0708-6.

[Redacted]

30. (U) Ibid.

31. (U) Ibid.

[Redacted]

35. (U) DDIR files, 96026, box 5, "Evaluation of Collection, Analysis and Distribution of Intelligence, 1973."

[Redacted]

38. (U) Interview, George Cotter, by Tom Johnson, December 1996, OH 7-96, NSA.

[Redacted]

41. (U) NSA Archives, acc nr 31441Z, H01-0307-1.

[Redacted]

44. (U) NSA Archives 42202Z, H03-0407-2.

45. (U) [Redacted] interview.

46. (U) Ibid.

[Redacted]

48. (U) [Redacted] interview.

49. (U) Ibid.

[Redacted]

52. (U) Ibid.

53. (U) Hermann interview.

[Redacted]

57. (U) NSA retired records, 44959, 80-302.

58. (U) Interview, Richard L. Bernard, by Tom Johnson, 4 June 1996, OH 18-96, NSA.

[Redacted]

60. (U) Bernard interview.

[Redacted]

62. (U) Bernard interview; NSA retired records, 44959, 80-302.

63. (U) Bernard interview; QMR, 1/79, in CCH Series X.

64. (U) Interview [Redacted] by Tom Johnson, 17 February 1997, OH 4-97, NSA; NSA Archives, acc nr 4308, G12-0511-2.

65. (U) NSA Archives, acc nr 18776, H19-0711-6.

66. (U) Interview [Redacted] by Tom Johnson and [Redacted] 20 April 1994, OH 23-94; Ch, A2 papers, NSA retired records, 96228.

67. (U) [Redacted] interview.

[Redacted]

69. (U) Ibid.

70. (U) Historical Study of NSA Telecommunications, Annual, 1973-75, "Evolution of SIGINT Communications Support 1949-Present," in CCH Series VI.A.1.10.

71. (U) QMR, 1/82, in CCH Series X.

72. (U) QMR, 77T.

73. (U) NSA Archives 31614, H01-0308-5, folder 2.

74. (U) NSA Archives, 31614, H01-0308-5, folder 2; QMR, 4/81, in CCH Series X. Historical Study of NSA Telecommunications.

75. (U) NSA Archives, acc nr 31614, H01-0308-5.

76. (U) Ibid.

77. (U) QMR 1/80, in CCH Series X.

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- 78. (U) Historical Study of NSA Telecommunications; NSG Command History, 1974, in CCH files.
- 79. (U) NSA Archives, acc nr 44898, H03-0702-3; 31614, H01-0308-5.
- 80. (U) NSA Archives, acc nr 44898, H03-0702-3.
- 81. (U) Interview, David Boak, 11 May 1998, by Tom Johnson, OH 19-98, NSA; Interview, Howard Rosenblum, by Robert D. Farley and Charles Baker, August 1991, OH 3-91, NSA.
- 82. (U) NSA Archives, acc nr 44989, H03-0702-3.
- 83. (U) QMR, 2/93, 82, in CCH Series X. Manuscript provided by [redacted] May 1998; Rosenblum interview.
- 84. (U) DDIR files, 96026, box 12, "PD-24." Interview, [redacted] by Tom Johnson, Charles Baker and [redacted] 16 December 1993, OH 29-93, NSA.
- 85. (U) Ibid.
- 86. (U) Ibid.
- 87. (U) Ibid.
- 88. (U) DDIR files, 96026, box 14, "Soviet Threat to U.S. Communications."
- 89. (U) [redacted] interview; Interview, Raymond Tate, by Tom Johnson, OH 5-98, NSA.
- 90. (U) [redacted] interview; DDIR files, 96026, box 14, "Embassy Telecommunications Security Assessments."
- [redacted]
- 92. (U) Ford Library, NSF, in CCH Series XVI.H, [redacted]
- 93. (U) DDIR files, 96026, box 12, "PD-24."
- 94. (U) DDIR files, 96026, box 10, "Director's Correspondence, January 1977"; Interview, Raymond L. Tate, by [redacted] and Tom Johnson, 10 April 1998, OH 35-96, NSA.
- [redacted]
- 96. (U) Ibid; Carter Library, NSF, in CCH Series XVII.I, "Soviet/Comsec Threat."
- [redacted]
- 98. (U) Carter Library, NSF, memo from Brzezinski to Mondale, 16 September 1977, in CCH Series XVII.I, "Soviet/Comsec Threat."
- 99. (U) DDIR files, 96026, box 14, "Schlesinger papers."
- [redacted]
- 102. (U) NSA Archives, acc nr 34420Z, H01-0109-6.
- 103. (U) NSA Archives, acc nr 32597, H01-0101-7.
- 104. (U) "Report of the Second Computer Group," May 1973, in CCH collection.
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- 106. (U) NSASAB report on technology for special purpose processors, in CCH Series XII.Z.

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- 107. (U) QMR, 2/93, in CCH Series X; Article in *Washington Post*, 6 October 1996, B6.
- 108. (U) "Report of the Second Computer Group"; Interview, Kermit H. Speierman, 16 January 1986, by Robert D. Farley, OH 2-86, NSA.
- 109. (U) DDIR files 96026, box 3, "Telecommunications Study"; box 4, "C/T Merger"; Memo fm Maj Gen John Morrison, August 1972, in CCH Series XII.D.
- 110. (U) QMR, 2/93, in CCH Series X.
- 111. (U) Speierman interview; Interview, Cecil J. Phillips, by Charles Baker and Tom Johnson, 8 July 1993, OH 23-93, NSA.
- 112. (U) Speierman interview; Phillips interview.
- 113. (U) [redacted] "The Platform Network Evolution," *Cryptologic Quarterly*, Winter 1991; Phillips interview; Speierman interview.
- 114. (U) CCH Series XII.H.23; Deputy Director for Intelligence, *Report on the Intelligence Community*, January 1978, 22, in CCH Series VI.C.1.23; Interview, Russell L. Parker, by Tom Johnson and Colin B. Burke, 30 November 1994, OH 52-94, NSA.
- 115. (U) QMR, 4/76, in CCH Series X.
- 116. (U) Ibid.
- 117. (U) NSA Archives, acc nr 37825, H03-0304-6.
- 118. (U) Ibid.
- 119. (U) NSA Archives, accn nr 27984, CBUH 31.
- 120. (U) Ibid; e-mail note from [redacted] NSA, 21 May 1998.
- 121. (U) NSA Archives, acc nr 31441Z, H01-0307-1.
- 122. (U) "White Paper on Australia," by [redacted] 18 December 1981, in William Black papers, NSA retired records.
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- 125. (U) [redacted] memo, Black papers.
- [redacted]
- 127. (U) Toohey and Pinwill, 181.
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- 130. (U) Interview [redacted] by Tom Johnson, 3 August 1997, OH 10-97, NSA.

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132. (U) CCH Series XII.H.58.3; [Redacted] *NSA's Involvement in U.S. Foreign SIGINT Relationships* (Fort Meade: NSA, 1995), 89.

133. (U) NSA Archives, acc nr 33249Z, H18-0708-2 [Redacted] *NSA's Involvement*, 89.

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135. (U) Ibid.

136. (U) [Redacted] *NSA's Involvement*, "93-4.

137. (U) Ibid., 94-100.

138. (U) Carter Library, NSF, Memo, Bert Lance (OMB) to Stansfield Turner (DCI), 6 June 1977, in CCH Series XVI.

139. (U) Interview, [Redacted] by Tom Johnson, 25 June 1997.

[Redacted]

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144. (U) NSA Archives, acc nr 33263, G220-0405-2.

145. (U) Interview, Eugene Becker, by Tom Johnson, 14 May and 13 June 1996, OH 11-96, NSA.

146. (U) Interview [Redacted] by Charles Baker and Tom Johnson, 23 December 1992, OH 8-92, NSA.

147. (U) USIB memo, 15 September 1976, in CCH collection; State cable, 4 April 1980, in CCH collection.

[Redacted]

150. (U) Ibid.

[Redacted]

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(U) Chapter 18

The Middle East and the Yom Kippur War



(U) BACKGROUND TO WAR

(U) The Middle East War of 1967 ended as World War I had ended – that is, in a most unsatisfactory way. Arab nations were humbled and bitter, while triumphant Israel had finally gained the additional territory it needed to make its precarious borders “defensible.” Palestinian refugees invaded neighboring countries and became a thorn in the side of all who wished to forget about the Arab-Israeli problem. In short, nothing had been solved, and the situation was made to order for another war.

(U) In the aftermath of 1967 the United Nations Security Council passed resolution 242, which served thereafter as the formal basis for peace. Its basic premise was the “inadmissibility of acquiring territory by war,” and it established an important quid pro quo. If the states of the Mideast agreed to recognize Israel’s right to exist and its territorial integrity, Israel would in turn withdraw from the occupied territories. This was coupled with the principle of navigation through international waterways (including, of course, the Suez Canal and Straits of Tiran) and the repatriation of refugees.

(U) As a general proposition this was recognized by most contending parties (Syria being the noted exception). But all parties interpreted the seemingly solid prose to fit their own cases. Arab states, for instance, assumed that the resolution required total withdrawal, while Israel contended that it only meant withdrawal to “defensible borders.” This would not, in the Israeli view, include withdrawal from the West Bank (and certainly not Jerusalem). On the Arab side the most divisive issue was the refugee problem, which beset all the states bordering Israel to some degree. Israel felt that the Arab states should accept all refugees within their borders; the Arab states wanted to return them all.¹

(U) In the years following the war, political developments changed the face of the dispute. In one year, 1969, revolutions resulted in the overthrow of three moderately pro-Western governments: Libya, Sudan, and Somalia. Of these the most significant was the advent of Muḥammad Gaddhafi in Libya. Gaddhafi became the first sponsor of “state-sponsored terrorism,” that most unwelcome development of the Mideast situation. Gaddhafi was only twenty-seven at the time – clearly the Middle East would contend with him for a long time to come.

(U) In the same year, Egypt's Gamel Abdel Nasser, unrepentant of his disastrous sojourn to war in 1967, announced that he would begin a "war of attrition" which would include shelling the Israeli positions on the Bar Lev Line in the Sinai. This elicited a predictable Israeli response, and for several years artillery duels raged in the desert.

(U) But the most difficult problem remained the refugees. The two largest groups were in Lebanon and Jordan, and in the Jordanian camps, the Palestinian political and military organization advanced to the point where it had become an independent power within the state of Jordan. In 1970, George Habash's Popular Front for the Liberation of Palestine (PFLP) hijacked four commercial airplanes filled with tourists to a remote air strip near Amman, demanding a massive release of Arabs imprisoned in various capitals. His harsh treatment of the hostages brought worldwide condemnation, and the obstreperous behavior of his minions within the camps in Jordan brought clashes between his forces and the Jordanian Army. Nasser stepped in to negotiate a cease-fire, but the strain was too much, and he died suddenly of a heart attack. Ultimately the PFLP blew up the planes, European governments freed seven Arab prisoners, and the guerrillas released 300 hostages and dispersed the rest to refugee camps in and around Amman.²

(U) British trained, the Jordanian army of King Hussein was small but effective. On September 17 it moved against the Palestinian camps, and the U.S. responded with an intensified military buildup in the eastern Mediterranean to insure that Hussein kept his hold on his throne. Syria attacked Jordan from the north, but withdrew before U.S. intervention was necessary. The refugees were driven out, and decamped for Lebanon, thus transferring the central refugee problem to that country. The embittered Palestinians formed the Black September terrorist movement (after the September date of their ouster from Jordan).³

(U) In Egypt, the completely unexpected rise of Anwar Sadat, one of the original group that ejected the ruling monarchy in 1956, injected new dimensions to the Mideast situation. Sadat was at once more democratic, more intelligent, and more skilled in military matters, than Nasser had been. Thought to be a temporary figurehead, he quickly maneuvered politically to cut down his rivals. He also maneuvered his forces toward the inevitable future clash with Israel, but in new and unpredictable ways, and with less fanfare and rhetoric. Once he had secured his power base in Egypt, he ejected the Soviet advisors on whom Nasser had relied and began negotiating with the West for military aid. It was shaping up as a diplomatic revolution in the Middle East.⁴

(U) The early 1970s were the heyday of international Mideast terrorism. The PLO, the PFLP, and various other warring factions contended for press attention. In 1972 the PLO attacked the Olympic Village in Munich. They also targeted a trainload of emigrants from the USSR entering Austria and helped assassinate the U.S. ambassador in Khartoum.⁵



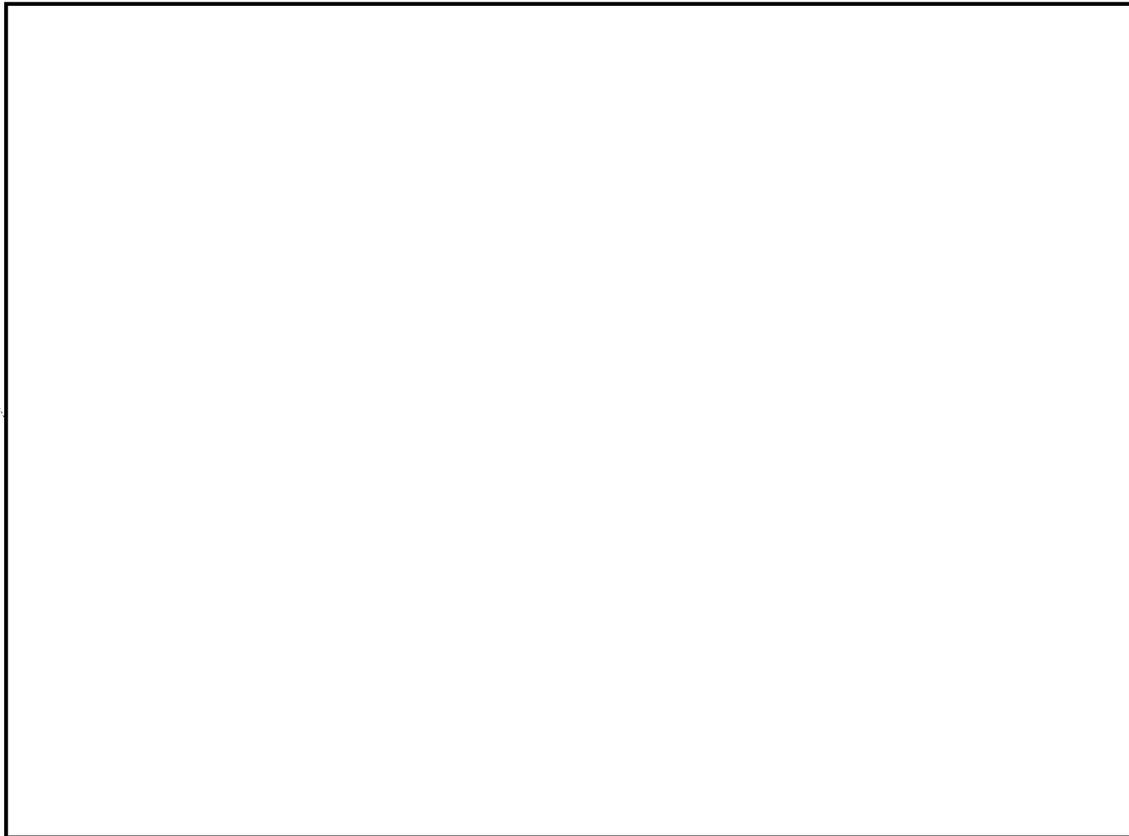
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(U) Anwar Sadat

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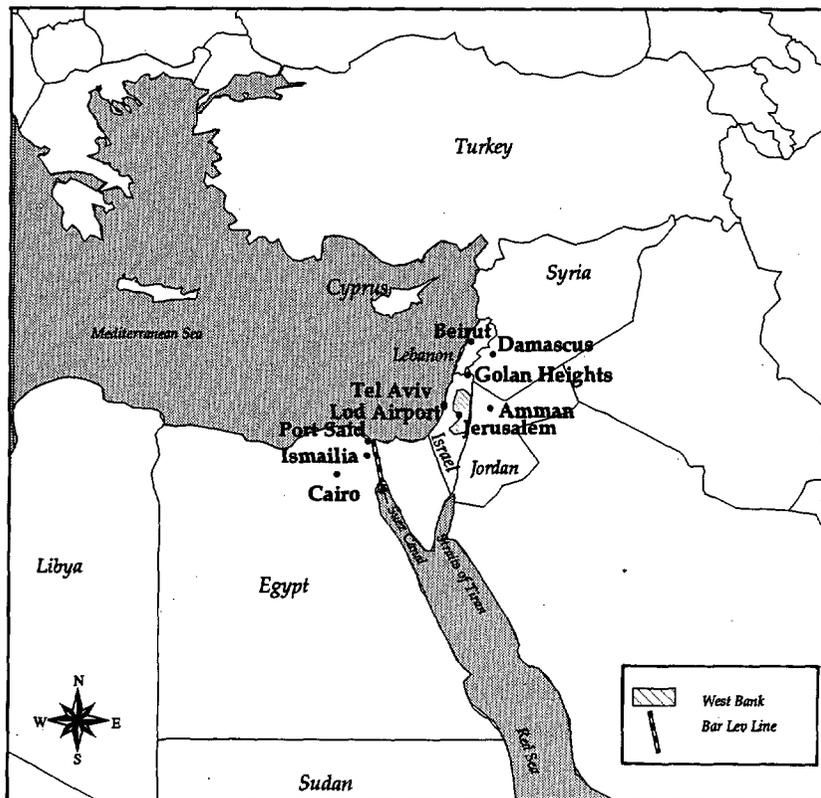
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(U) THE PREPARATIONS

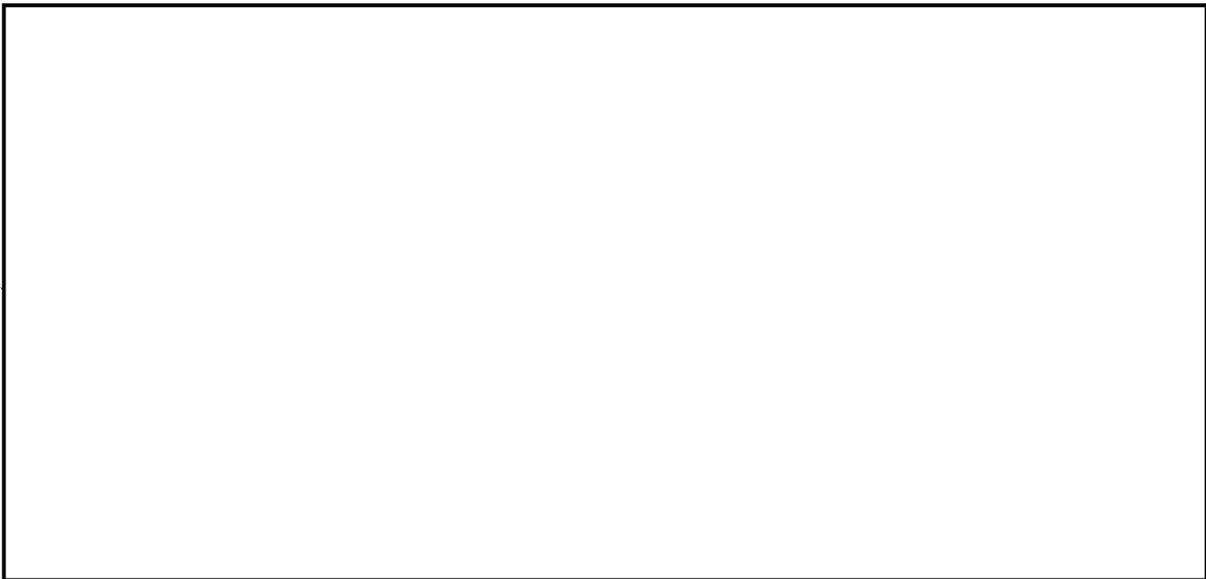
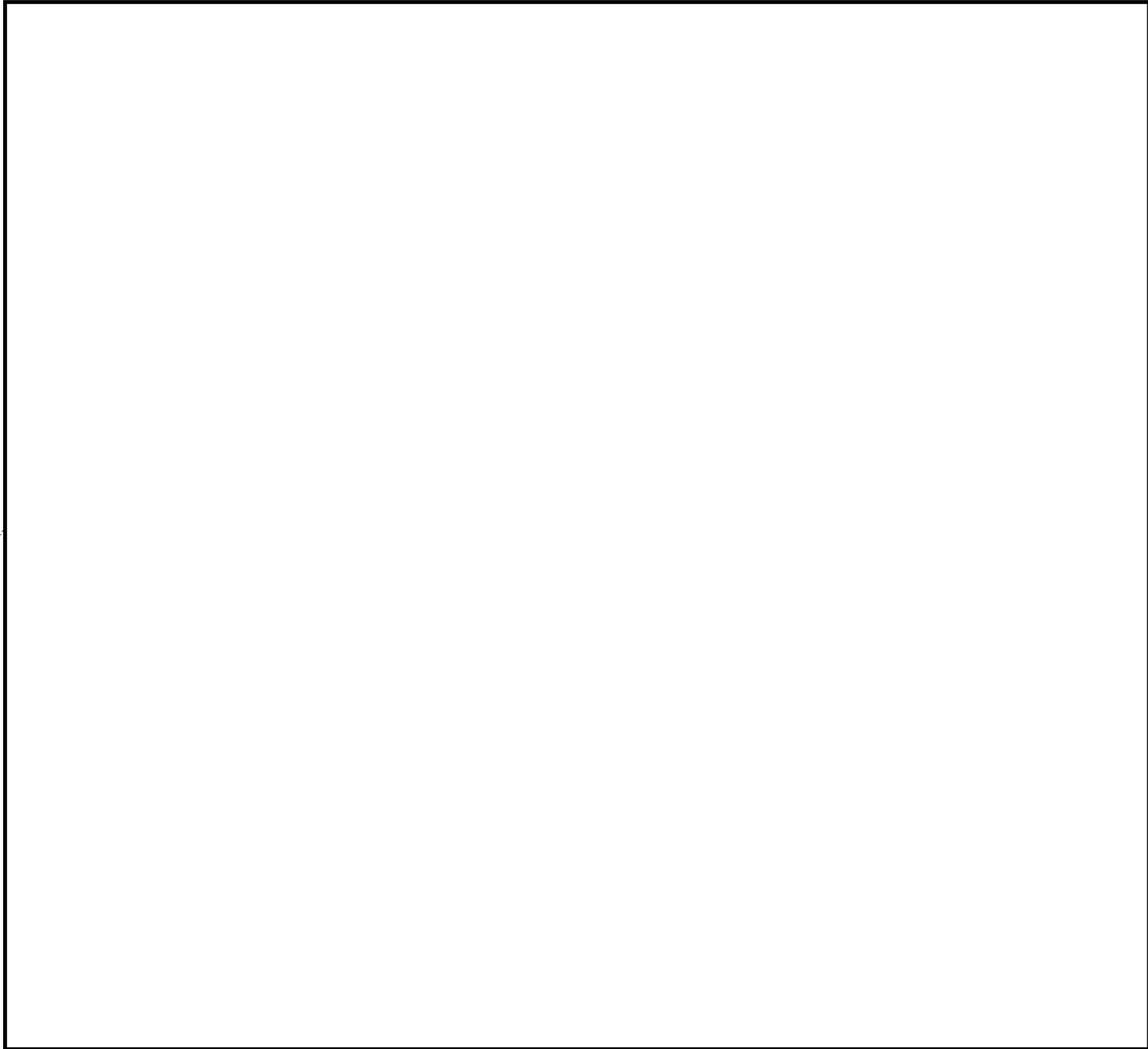
(U) Sadat and his allies in Syria and Jordan decided on a preemptive war at a meeting in Cairo in September of 1973. They agreed to launch simultaneous attacks on Israeli forces in the Sinai and Golan Heights, while Jordan, lacking a missile defense capability, would hang back in a defensive posture in the early stages. They did not at the time set a precise date, but agreed that they would launch their initial attack during the Yom Kippur observances in early October.⁸

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(U) Middle East in 1973





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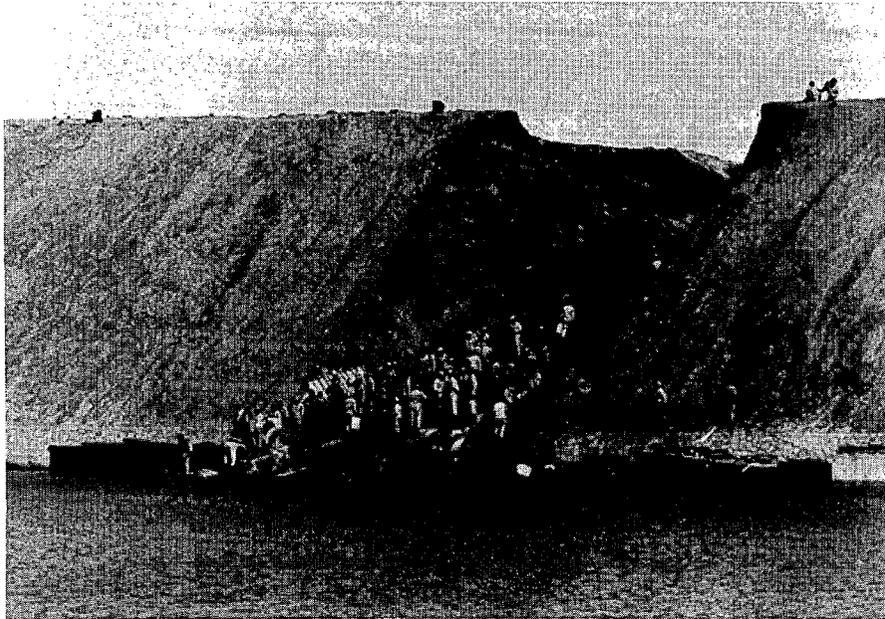


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~~TOP SECRET UMBRA~~**(U) THE ATTACK**

(U) Unlike previous offensives by Arab states, this one was well coordinated. Egyptian troops sprang against the Bar Lev Line in the Sinai, throwing back the 600 Israeli troops and sweeping into the desert beyond with two armies. They came armed with SAMs, and Israel did not enjoy its customary air superiority in the early going. Soon the Egyptians had advanced ten kilometers into the Sinai, but then they slowed, apparently not anticipating such a rapid advance. It appeared that they had made no follow-up plans for such a breakthrough. To the north, meanwhile, Syria charged the Golan Heights with tanks and threw the surprised Israelis back.¹⁸



(U) Egyptian soldiers attack through the Bar Lev Line.

(U) The Israeli mobilization had only just begun that morning, but it was made swifter by the fact that it was Yom Kippur, and everyone who was needed for defense could be found in the synagogues. Israel concentrated its initial defense on the Golan Heights, fearful of the consequences of failure so close to population and industrial centers. The northern front was soon stabilized; then Israel turned its attention to the Sinai. Intelligence located a weak point in the center of the peninsula, at the point where the two

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Egyptian armies joined, and Israel launched a thrust through the center which dominated the second week of the war. At the end of the week, Israeli troops had reached the Suez Canal and, amid heavy casualties, crossed it.

(U) At the beginning of the second week the United States, fearful of an Israeli defeat, began a huge arms resupply, flying in planeload after planeload. At the same time, the Soviet Union signaled its continued support for the Arab cause with its own resupply operation. In retaliation for the U.S. position, OPEC, at the urging of Sadat, imposed an oil embargo on the United States and any European country that appeared excessively pro-Israel. (Only the Netherlands was singled out.) The Yom Kippur War thus launched the first great oil crisis in American history.¹⁹

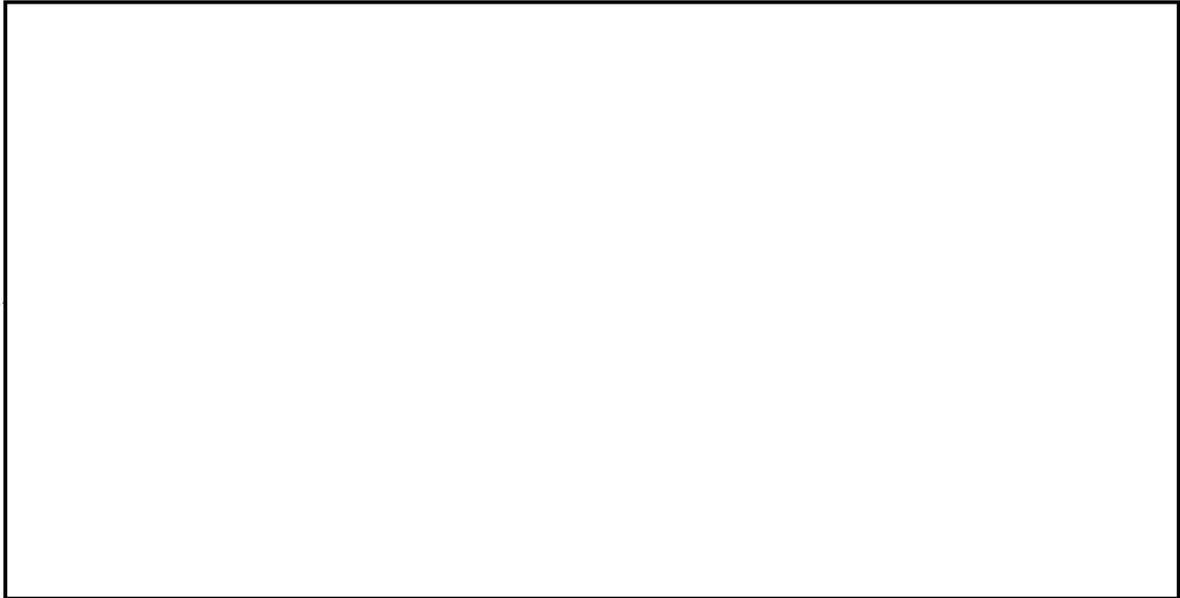


(U) Week three was the crunch point. Israel had exploited its penetration of Egyptian lines, and the week began with both Egyptian and Syrian forces in serious trouble. Both the U.S. and the USSR, fearing a major superpower conflict, groped desperately for a cease-fire. The Nixon administration was in complete chaos – Vice President Agnew had

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just resigned in disgrace, and Nixon had fired special Watergate prosecutor Archibald Cox, throwing the entire government into constitutional crisis. In the midst of this, National Security Advisor Henry Kissinger flew to Moscow and hammered out a temporary fix with Brezhnev, including a cease-fire in place, reaffirmation of UN Resolution 242, and immediate diplomatic negotiations among the contending parties.

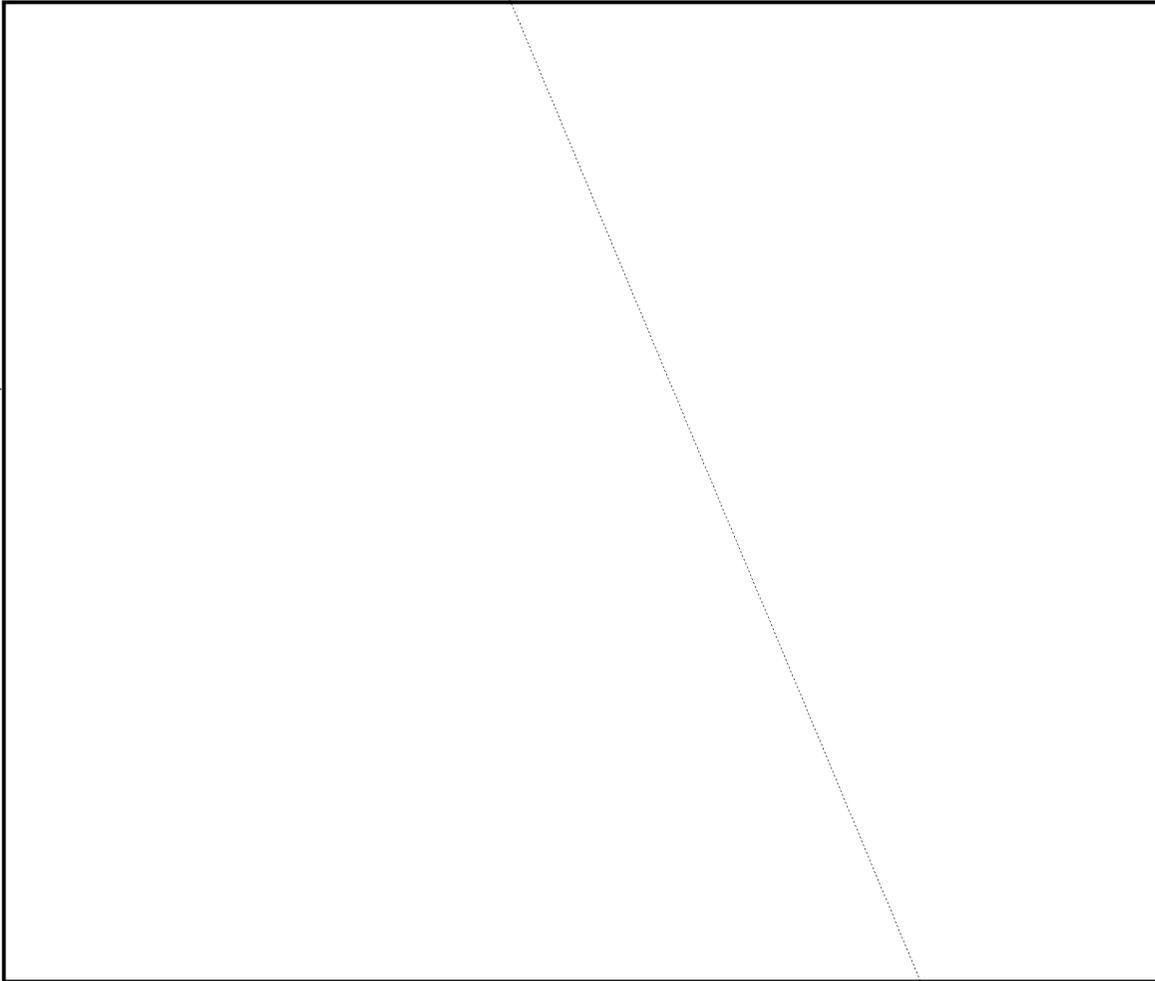


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(U) Ultimately the Egyptians got to keep some of their gains in the Sinai, the Israelis were pressured into pulling their troops from the western side of the Canal, and they also had to give up portions of Syria captured from the Assad government. Israel came out of the experience convinced that they had been jobbed, but Sadat was so pleased with it that he helped Kissinger persuade Faysal of Saudi Arabia to drop the oil embargo. The compromise outcome of the Yom Kippur War also got the peace process started at long last, and Egypt eventually won the entire Sinai through negotiation. Sadat finished the process of converting from a Soviet to an American alliance, thus completing a diplomatic revolution in the Middle East in which Washington, rather than Moscow, became Egypt's closest ally.²⁴

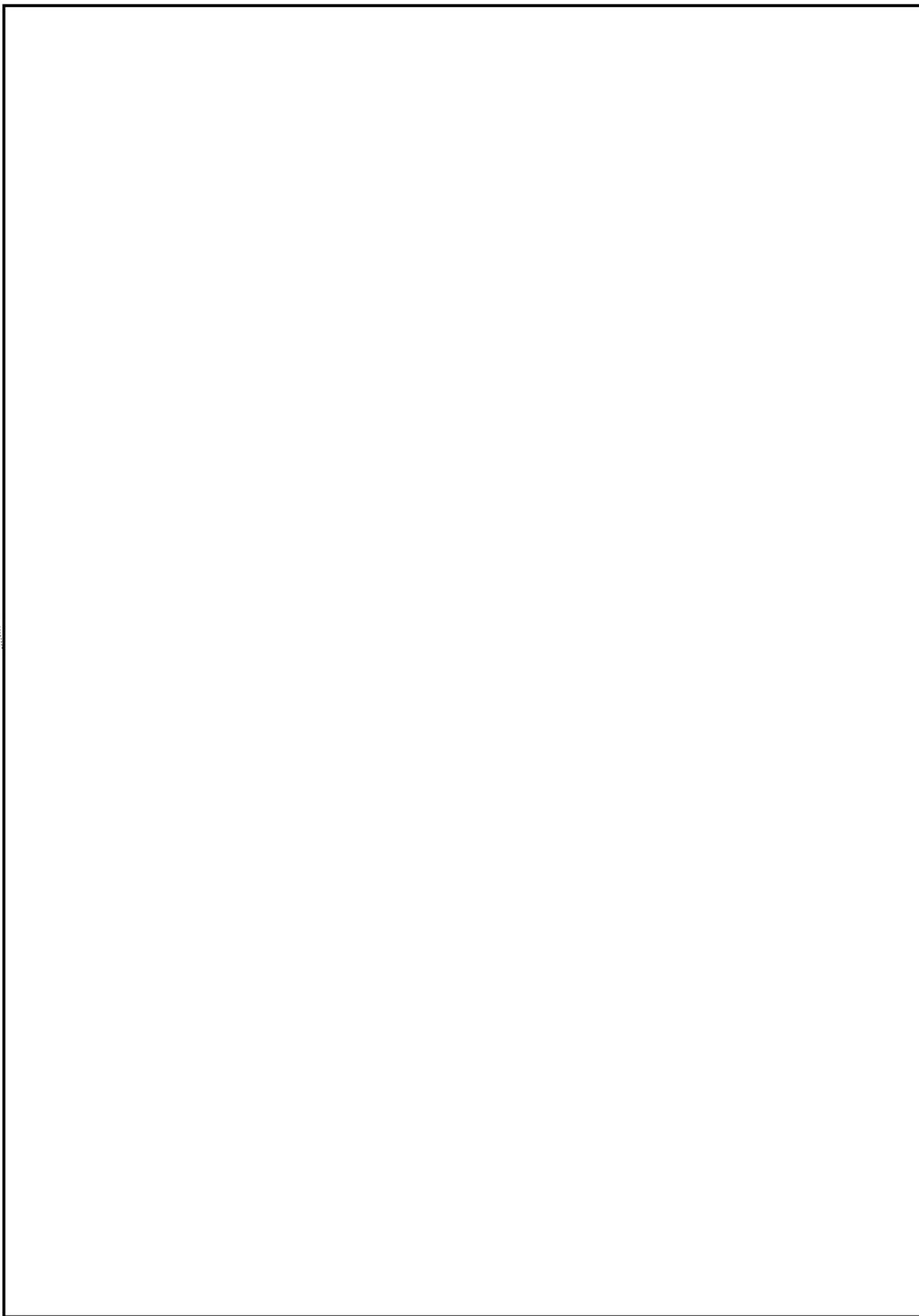
(U) THE POSTMORTEMS



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(U) Self-delusion was a strong factor in the 1973 debacle. U.S. intelligence had concluded that Arab military armies possessed questionable prowess. "There was . . . a fairly widespread notion based largely (though perhaps not entirely) on past performances that many Arabs, as Arabs, simply weren't up to the demands of modern warfare. . . ." It was supposed that the Arabs themselves understood this and would thus never think of attacking impregnable Israeli forces. Then there was the problem of reinforced consensus. The Israelis were confident that war was not imminent. Their followers within the U.S. intelligence community, wanting to look smart, parroted the Israeli view, and as one agency after another weighed in with its conclusion that war was unlikely, those assessments themselves became the footnotes for new assessments. Moreover, each agency assembled its own microscopic piece, in the manner of assembling a Chevrolet, without stepping back to look at the whole.³⁰

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Notes

- 1. (U) Arthur Goldschmidt, *A Concise History of the Middle East* (Boulder, Colorado: Westview Press, 1979), 283.
- 2. (U) Goldschmidt, *Concise History*, 289.
- 3. (U) Steven L. Spiegel, *The Soviet-American Competition in the Middle East* (Lexington, Mass: Lexington Books, 1988), 196-203.
- 4. (U) Peter Mansfield, *A History of the Middle East* (New York: Viking, 1991), 292; Goldschmidt, *Concise History*, 292-93.
- 5. (U) Goldschmidt, *Concise History*, 293.



- 8. (U) Goldschmidt, *Concise History*, 300.



- 10. (U) Ibid.

- 11. (U) Telephone interview, [redacted] by Tom Johnson, 17 September 1994; Interview, [redacted] by Tom Johnson, 3 October 1994, OH 44-94, NSA; Interview, [redacted] by Tom Johnson, 4 October 1994, OH 50-94, NSA; Interview, [redacted] by Robert L. Benson, 26 March 1976, NSA.

- 12. (U) [redacted] interview.

- 13. (U) *On Watch: Profiles from the National Security Agency's Past Forty Years* (Fort Meade: NSA, 1986), 75-79.



- 15. (U) [redacted] interview.



- 18. (U) Goldschmidt, *Concise History*, 301.

- 19. (U) Ibid., 302-03.



- 21. (U) Ibid.



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24. (U) Ibid.



27. (U) Ford Library, NSF, in CCH Series XVI.H., "Mid East."



CIA assessment, December 1973.

DIA intelligence summary for October 3, 1973.

CIA assessment.

31. (U) Allen interview.



(U) Chapter 19

The Rebirth of Intelligence during the Carter Administration

(U) The return of the Democrats to power in 1977 had ominous implications for intelligence. After eight years lost in the wilderness, the Democratic politicians were eager to get into the White House and fix the "Watergate mess." This would include a thorough housecleaning of a supposedly out of control intelligence establishment. And indeed Jimmy Carter started down that road. But as so often happens, things did not work out that way, and the decade ended with a very different fate for the intelligence community and for NSA.

(U) THE INMAN ERA

(U) The first event that changed the fate of NSA was the appointment of a new director. General Lew Allen departed in July 1977 as a hero to those in NSA who understood what he had achieved in dealing with Congress in 1975. He was rewarded with a fourth star and command of Air Force Systems Command. He would soon become the Air Force chief of staff, the first NSA director to be so honored. His replacement was an unknown admiral named Bobby Inman.

(U) Inman came from the obscurity of an east Texas town, the son a gas station owner. He went to school at the University of Texas in Austin, majored in history, and did not quite know what to do when he graduated. He tried law school, but dropped out, then taught grammar school for a year. In the course of events he joined the Naval Reserve and during the Korean War left schoolteaching to enter the Navy as an ensign. He never returned.¹

(U) Bobby Inman was one of life's outsiders. He competed for promotions in a system that rewarded Annapolis school ties, which he did not have. He was a restricted line officer when it was well known that only seagoing line officers could gain a star. He spent his entire career in intelligence, a kiss of death at promotion time.



(U) Admiral Bobby R. Inman

~~(S-CCO)~~ His early career carried him through a variety of intelligence duties, including a three-year stint as a SIGINT analyst at NSA [redacted]

[redacted] In the early 1970s he became executive assistant to the vice chief of Naval Operations, Admiral Bruce Holloway. The vice-CNO recognized Inman's talents, and in 1974 rewarded him with his first star, as director of the Office of Naval Intelligence.²

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~~(FOUO)~~ Inman came to this position just prior to the Church and Pike Committee hearings in 1975. The poisonous atmosphere could, and did, destroy careers, but in the cases of both Allen and Inman, it enhanced their standing. Inman worked very closely with Congress and first established his close ties with the legislative branch. His exceptional performance also came to the attention of the White House and President Ford. Thus in 1976, when the Defense Department needed a new lineup at DIA, Inman was picked as vice-director. This earned him a quick promotion from rear admiral to vice admiral. The objections of the naval establishment could be heard in the halls but did not hold up against Inman's connections and his acknowledged brilliance. To Inman, though, even this extraordinary accomplishment was not quite what he wanted. He had always wanted to be director of NSA, which he regarded as the most powerful military job in the intelligence community.³

~~(FOUO)~~ As he sat "languishing" at DIA, a revolution was about to send him to the job he coveted. The 1976 changeover at DIA had sent the director, Lieutenant General Eugene Tighe, packing. (He was reduced in rank and sent to be the director of intelligence at SAC, a subordinate position that clearly indicated loss of favor.) A new administration wanted to rehabilitate Tighe. In the maneuverings that saved Tighe's career, it became necessary to put Inman somewhere else. That "somewhere else" became DIRNSA.⁴

(U) Inman brought to the job some extraordinary talents. He was known as a brilliant workaholic with a photographic memory. *Washington Post* investigative journalist Bob Woodward once said of him: "Inman's reviews are extraordinary, almost hyperbolic. Nearly everyone who knows him mentions a piercing intellect, honesty, unusual memory for details and prodigious capacity for work. In his Washington years Inman rose each day but Sunday at 4 a.m., his first hours absorbed in reading and private thoughts." Another writer, Joseph Persico, wrote that "If Inman had a hearing at nine o'clock in the morning, he'd be up at four prepping for it. He'd read the answers to maybe a hundred hypothetical questions. He'd essentially memorize the answers. Then he'd go before the committee and take whatever they threw at him, without referring to a note."⁵

(U) His brilliance enabled him to take on things that no other DIRNSA had been capable of. His staff had trouble keeping up with him, and missteps or misinformation was feared because Inman would remember the facts that his staff so laboriously collected. Being in the same room with him was an experience that no one would ever forget. He appeared perpetually calm, but in reality was about as stable as high voltage across an air gap.

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(U) Inman's management style was unique. Rather than simply representing the Agency to the outside world as previous directors (even Ralph Canine) had chosen to do, Inman got involved in the technical details of the business. He was the first and only director to become so schooled in the minutiae of cryptology.

~~(FOUO)~~ One of his first actions was to take hold of the personnel system. He understood that NSA was actually managed by a collection of powerful civilian czars under the long-serving deputy director Louis Tordella (who had been replaced by Benson Buffham in 1974, on his retirement). This smacked to Inman of a certain collegiality which reduced the real authority of the director. Being an outsider his entire career, he determined to change the system. So one of his first acts was to create a career development panel which was to identify the next generation of top NSA managers to replace the World War II generation that was still in power. The panel named for Inman a collection of GS 13-15 "fast burners" whom they expected to take the reins of senior management in the future. Inman then decreed that this group of up-and-coming leaders would be rotated from job to job. One benefit would be to give them wide experience; the other, unsaid, was to remove them from their own bases of power. If continued over a period of years, this would change the flavor of NSA and would centralize power within the directorate.⁶

~~(FOUO)~~ Inman also made the crucial decision to create a revolving deputy directorate. He felt that a long-serving deputy diluted the authority of the director, and he was determined to have no more Tordellas. Thus he sent Buffham off to SUSLO in 1978 and brought in Robert Drake. Only two years later he again changed deputies, naming Ann Caracristi the first woman deputy director. Both were acknowledged products of World War II - the postwar generation would get its chance, but not quite yet.⁷



(U) Ann Caracristi, the first woman deputy director of NSA

(U) Bobby Inman's views were strongly reinforced by a management study which he commissioned in 1978. A consulting firm, the Arthur H. Little Company, looked at NSA management from top to bottom and issued a scathing report. Calling the management style "paranoid," "untrustworthy," and "uncooperative," the company lit into the entrenched bureaucracies, each a sealed unit driven by the personality of its dominant "baron." In a cover letter to Inman, the authors wrote:

A second important concern involves the attitudinal outlook of much of the staff of the Agency. A pervasive defense mechanism seems to be a driving (as well as a cohesive) force. . . . Our concern is that the siege mentality affects not only the Agency as a whole, but also each of the subunits which must compete for visibility, resources, and control of programs and assets and even the individuals who must compete for the few promotions and for the really good jobs.

(U) The company also identified much managerial layering which it contended produced many levels of staffing, slowing decisions and diffusing responsibility. NSA also created many positions that had come to be regarded as "parking lots" for managers who no longer fit into the Agency's plans.⁸

~~(FOUO)~~ Inman also intervened in a personnel case that he regarded as one of his most difficult decisions. A young NSA linguist, who had just graduated from the Foreign Service Institute with a very high score in an exotic language, announced that he was homosexual. He also hired a lawyer, signaling that he would not go quietly despite the well-known prohibition against homosexuals at NSA. Inman's general counsel, Daniel Schwartz, advised him that they could lose the case in court and with such a loss would go much of the director's authority in personnel decisions. It was a tough call because homosexuality was often an avenue for entrapment by hostile foreign intelligence agents. The possibility of blackmail was always considered to be very high.

~~(FOUO)~~ Inman's decision was to let the young man stay on, but under stringent rules. He would have to admit his homosexuality to his entire family, personally (not in writing), so that there would be little likelihood of blackmail. He would have to avoid public lewdness and must refrain from violating state and local laws on the subject. He could not participate in public demonstrations relating to homosexuality in which he could be identified as an NSA employee. And, finally, he would have to submit to an annual polygraph. He accepted all four stipulations and was kept on.⁹

~~(S-CCO)~~ With his strong background in intelligence in general and SIGINT in particular, Inman was inclined to jump into the technical details of managing the system. As soon as he became director, he took control of the CCP, informing his program manager that he wanted to review all CCP change requests. He became personally involved in the planning mechanism that Lew Allen had set up to staff major initiatives, taking on such projects as Bauded Signals Upgrade, the remoting program, and overhead collection, among many others.¹⁰ These tasks had formerly been reserved for the deputy director; under Inman they became the province of the director himself.

~~(FOUO)~~ The net result was a serious weakening of the upper level staff at NSA. Many senior managers chose to resign rather than compete with Inman for authority. But it was temporary – no other director could continue down that road.¹¹

~~(FOUO)~~ One more of Inman's eccentricities deserves mention – his profound distaste for human intelligence and covert actions and his discomfort with economic intelligence. He trusted technical intelligence – SIGINT and photography – and disliked the spy business, which he regarded as somehow “unclean.” While director of ONI, Inman had closed a Navy HUMINT outfit called Task Force 157. While at NSA, he became involved in a dispute with Commerce Secretary Juanita Kreps over the provision of economic intelligence. The problem with this was similar to HUMINT and covert actions – the possibility of misuse.¹² Inman leaned strongly toward “clean” methods and uses of intelligence. It was an attitude that had endeared him to Congress, which also viewed these things askance.

(U) THE CARTER WHITE HOUSE

~~(S-CCO)~~ Inman's term as director overlapped almost perfectly the administration of Jimmy Carter. Carter brought to the White House an almost paranoid distrust of the intelligence establishment. DCI George Bush later commented on his transition briefings with the incoming president that “beneath his surface cool, he harbored a deep antipathy to the CIA.”¹³ The consensus was summed up by intelligence historian John Ranelagh:

Carter had run against the CIA and Washington; he was an outsider, suspicious of Washington sophistication, and so he stood fast against the corrupting compromises that informed people have to make. . . . He did not understand the need for secret intelligence – a failing that contributed to the Iranian crisis. . . . He saw no real use for the CIA. He had a view of intelligence as order of battle – about detail. . . .¹⁴

His transition team peered unapprovingly at NSA, the home of vacuum cleaner collection and the suspected invader of individual privacy. They initially proposed a reorganization that would have placed the attorney general directly in NSA's chain of command. The “short leash” approach was soon abandoned, but the latent hostility remained. As a new president, Carter granted the attorney general interim authority to continue electronic surveillance of Americans who might be acting for a foreign power in the course of doing foreign intelligence work. But he also got a special coordinating committee working on draft legislation relating to NSA and the intelligence community.¹⁵

(U) Carter brought with him a new DCI, Admiral Stansfield Turner, whose suspicions of secret intelligence mirrored Carter's. They shared a proclivity toward an open society that was fundamentally antithetical to many intelligence operations and changed this view only under the press of events. But Turner was not a Carter administration insider. They had been Naval Academy classmates, but had barely known each other, and Turner

was only Carter's third choice for DCI. As events unfolded, Turner was to have less influence than might have been imagined for such a key official.¹⁶

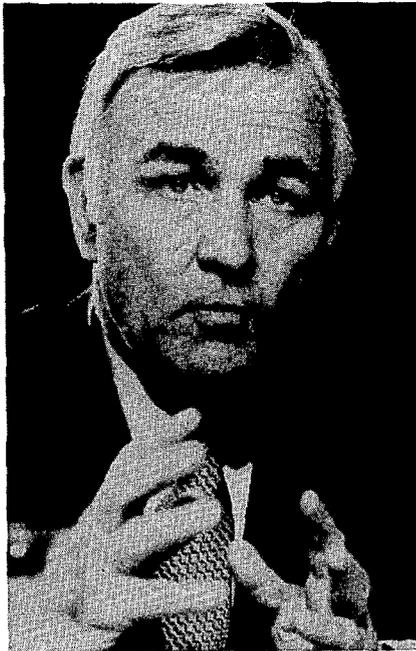
(U) The White House national security structure was dominated by Zbigniew Brzezinski, a strong national security advisor who picked up where Henry Kissinger had left off. Brzezinski proceeded to reduce Stansfield Turner's access to the president. Brzezinski would not permit a CIA briefer into the Oval Office, and when the president's Daily Brief was delivered from Langley, Brzezinski always put his own spin on the items that went to the president. As a result, Brzezinski and Turner did not enjoy a close relationship.¹⁷

(U) One thing that all three - Carter, Turner, and Brzezinski - had in common, however, was an affinity for "technical" intelligence. In his account of his own term as DCI, Turner stated that "Today, [technical intelligence] all but eclipses traditional, human methods of collecting intelligence. . . . technical systems had opened vast new opportunities for us to collect information regularly with a precision that no human spy network could ever offer. . . ." He created strident ill will within CIA by gutting the power of the DO and getting rid of 802 covert operations people. Turner's dictum was ". . . never send a spy when you can get the information you want by technical means."¹⁸



(U) President Carter and presidential adviser Hamilton Jordan

HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY



(U) Stansfield Turner



(U) Zbigniew Brzezinski with Secretary of State Cyrus Vance

~~(TS-TK)~~ In the technical field, two systems competed for favor. SIGINT, unchallenged since the days of Lyndon Johnson for its speed and accuracy, finally got a competitor. At Carter's first National Security Council meeting on January 22, 1977, [REDACTED]

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~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

[Redacted]

(FOUO) NSA was well situated to compete with PHOTINT. As Carter arrived in the White House, his new Situation Room chief was [Redacted] from NSA; [Redacted] named [Redacted] of NSA as his deputy. Although there was no formal link with NSA (each employee in the Situation Room responded to the White House rather than his or her home agency), the task of interpreting SIGINT was greatly simplified for NSA.²⁰

(S-CCO) [Redacted] commenting on his tenure in the White House, said: "I found that Carter and Brzezinski in particular were very much attuned to SIGINT. He [Brzezinski] used it and asked for it, and very much understood what he was seeing. . . ." ²¹ The Situation Room authored a separate series of intelligence reports that trickled into the Oval Office during the day. Heavily laced with SIGINT, they contributed Brzezinski's unique spin to national security topics. At times, [Redacted]

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[Redacted] these reports were almost entirely from NSA.²²

(S-CCO) Carter responded with frequent, handwritten comments on the reports themselves. Like Inman, he was a details man, and he asked detailed questions [Redacted]

[Redacted] One day the president called Inman directly to request that two names be deleted from a by-name product distribution list. He sometimes invaded the Situation Room to look at reports or just to talk. His interest in intelligence was, like Lyndon Johnson's, apparently insatiable and very much at odds with the public perception of an antiestablishment outsider determined to reduce the intelligence structure. He was definitely NSA's number one customer.²³

(U) THE WAR BETWEEN THE ADMIRALS

(FOUO) Below Carter and Brzezinski, a virtual war erupted between NSA and CIA. Turner began his tenure determined to reduce NSA's independence. One of his first actions as DCI was to ask Carter for control of NSA. The White House turned the matter over to the attorney general, Griffin Bell, for a recommendation. In the course of his investigation, Bell first encountered Bobby Inman, who gave him a disquisition on why NSA must remain in the Defense Department. According to Inman, when Turner showed up to brief Bell on why NSA should be resubordinated, Bell said, "Well, Stan, that's all very well, but Admiral Bobby Ray Inman convinced me this morning that he should work for Defense." Turner ascribed his defeat to a curious president. "Presidents want to have multiple sources of information, and the NSA is a particularly intriguing one."²⁴

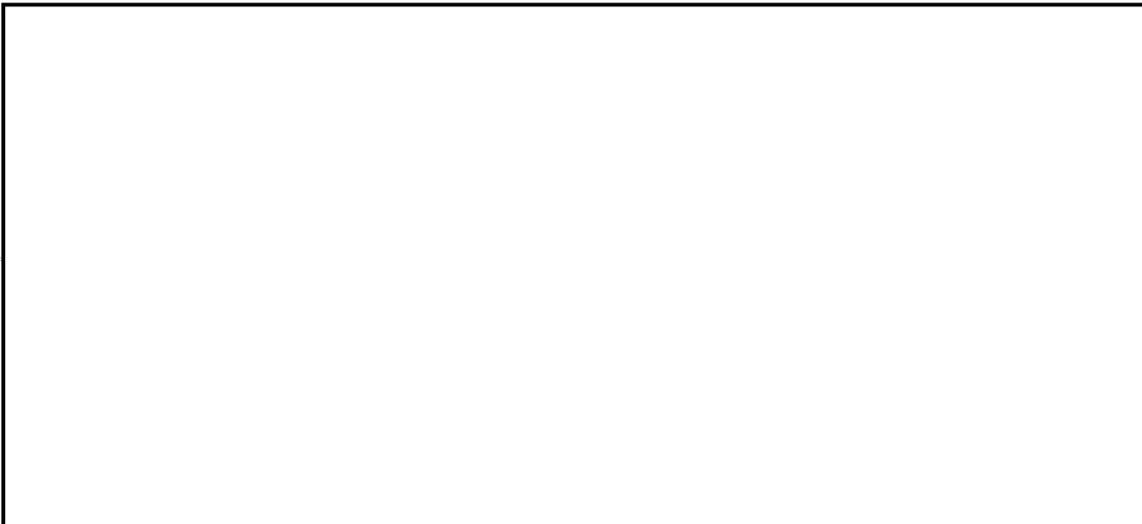
(S) "Distant" would not adequately describe the relationship between Inman and Turner. At about the same time as Turner's play to capture NSA, the two clashed about NSA's budget. The Carter administration proposed deep cuts in the intelligence budget in its first year, and Inman felt that Turner "rolled over" too easily on the issue. Subsequently, Inman dealt mostly with Turner's supporting cast, finding an especially

sunny relationship with the deputy DCI, Frank Carlucci. The Carter years also marked the peak of conflict between NSA and CIA over control of cryptologic assets, a conflict which resulted ultimately in the "Peace Treaty" of 1977 (see p. 224). The personal animus between the two admirals was exacerbated by their different Navy upbringing - Turner was an exclusive member of the "Annapolis club," while Inman, ever the outsider, owed no favors to this group of kingmakers.



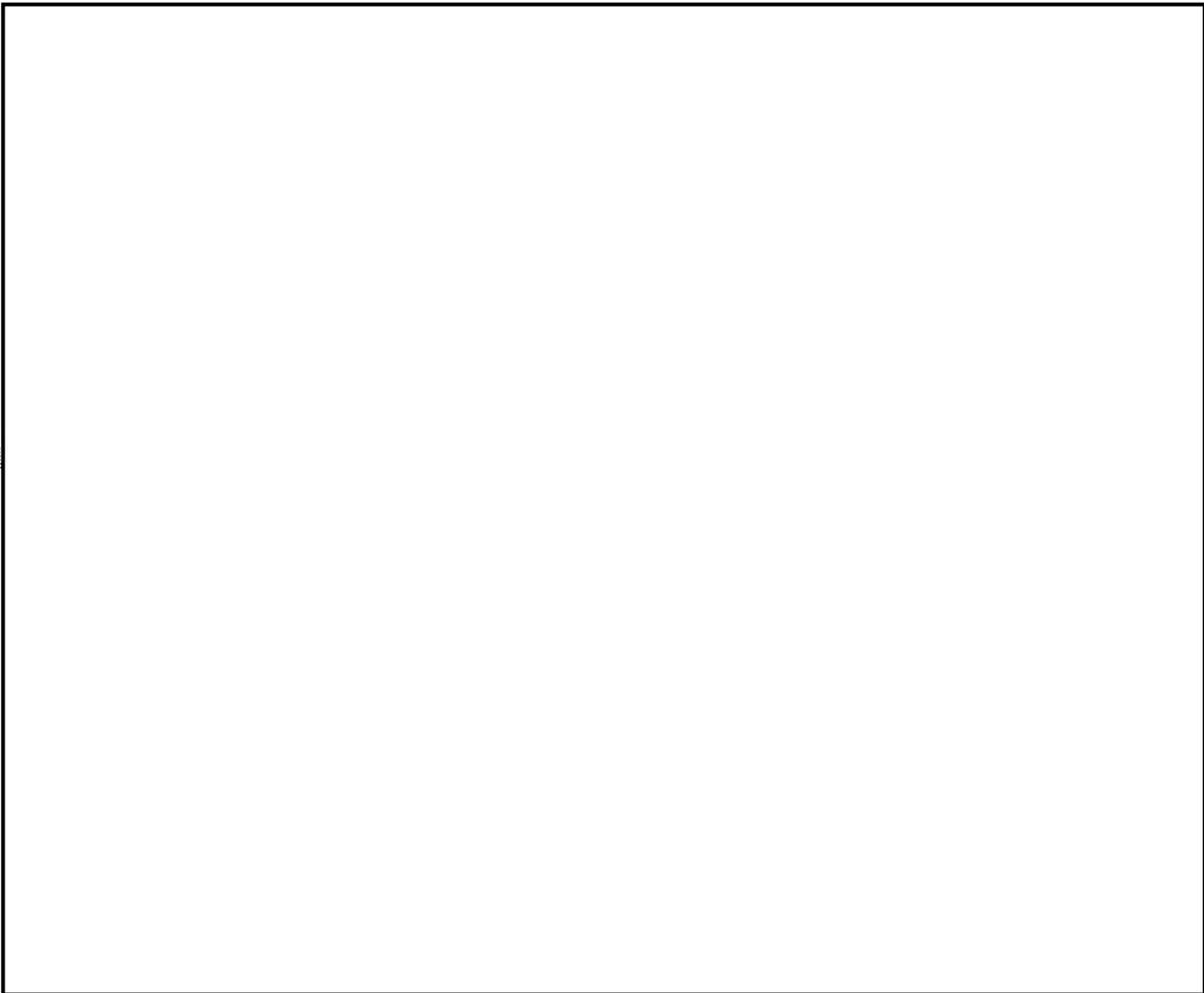
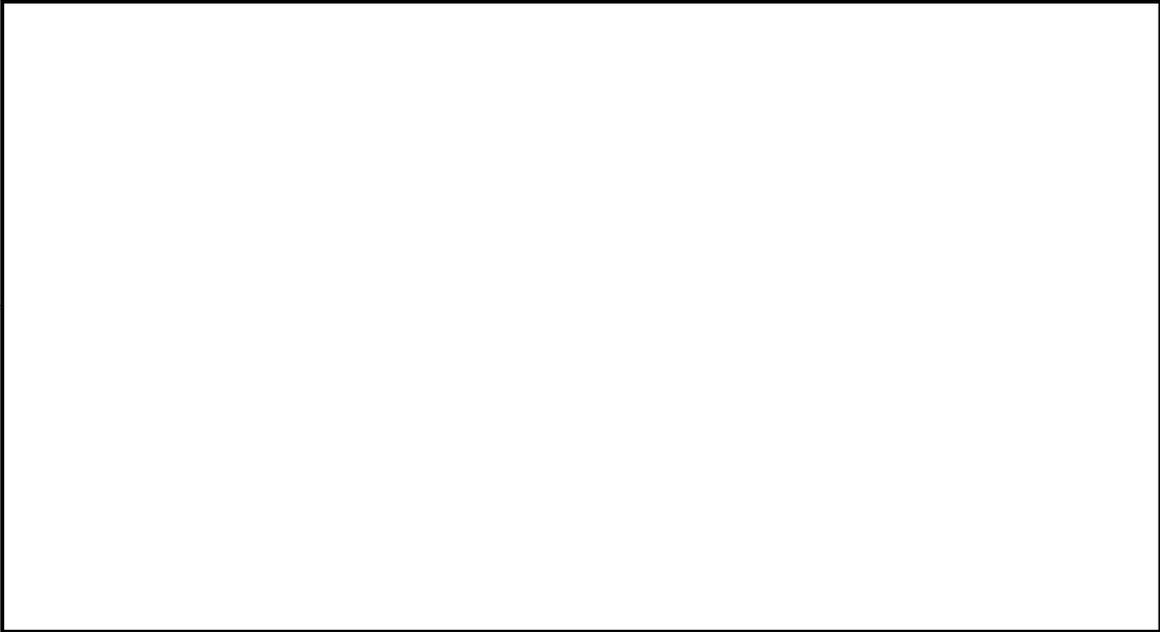
~~(FOUO)~~ President Carter was so concerned about this that he sent a delegation headed by Inman to tell the publisher of the *Times*, Arthur Sulzberger, what had happened. The upshot of this was an agreement between the Carter administration and the *Times* to have an administration point of contact on such matters whom journalists could check with if they suspected that national security issues were involved. The president named Inman as the contact man - this included all forms of intelligence, not just SIGINT.

~~(FOUO)~~ The system continued through the remainder of the Carter administration, and in general it worked well. The word got out to other publications, and soon all the leading newspapers and weekly news magazines had Inman's name and number. But news of the system also leaked to Turner, who felt that this should have been his role. It did not help the relationship between the two admirals.²⁵



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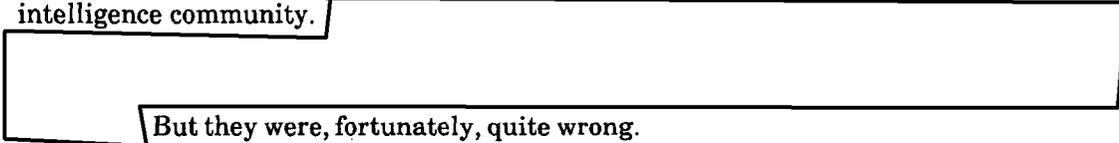
(U) THE NEW EXECUTIVE ORDER

~~(S)~~ Carter's people got right to work on a new directive for the intelligence community. What emerged was Executive Order 12036, the successor to Ford's directive (EO 11905). The new order retained much of the mechanism set up by Ford, including centralization of collection tasking within the DCI, and retention of the Intelligence Oversight Board. USIB was renamed NFIB, but little was changed beyond the name. The DCI was given tighter control of the intelligence budget, and new mechanisms were set up to effect that control. But the tone of the executive order was more punitive, and much of its language dealt with specific restrictions on the intelligence community. Reflecting the prevailing suspicion about secrecy and overclassification, the order reduced the length of time that a document could remain classified from thirty to twenty years. (NSA managed to slip an exception into the order for "foreign government information," thus exempting material provided by the UKUSA partners. This material continued under the old thirty-year rule.)³²

~~(FOUO)~~ As for the draft legislation for the intelligence community (which included a congressional charter for NSA), Jimmy Carter's ardor soon cooled. What had looked good from Atlanta did not look so good to a sitting president. In a memo to a White House staffer, the president commented: "Be sure not to approve Charter provisions which are excessively detailed, specific or an intrusion into my duties and responsibilities. JC"³³ Congress continued to tinker with the drafts throughout the Carter years, but it had lost the sponsorship of the head of the Democratic party, and the proposed legislation ultimately went nowhere.

(U) PANAMA

~~(S-CCO)~~ Jimmy Carter arrived at the White House determined to negotiate a permanent resolution to the mess in Panama. The issue did not resonate with the intelligence community.



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(U) The Panama problem began with the terms under which the United States constructed and operated the canal, the highly one-sided Hay-Bunau-Varilla Treaty of 1903. This document granted the United States virtually unimpeded occupation of the

Panama Canal Zone in perpetuity. This was an arrangement fit for a dominant colonial power, but there was an achilles heel. The American public was well known to have a conscience, and the Panamanians played to it.³⁴

(U) Trouble began under Lyndon Johnson in the 1960s. Panamanian nationalists began agitating for a better deal, and in 1967 mobs entered the Zone and precipitated bloody riots that the U.S. had to suppress with force. Following this fiasco, the Johnson administration agreed to negotiations to change the provisions of the treaty. But Johnson was preoccupied with the war in Vietnam, and Panama lacked the power to press its case.

(U) In 1968, a messianic officer of the Guardia Nacional named Omar Torrijos overthrew the left-leaning civilian government of Arnulfo Arias. Torrijos immediately took up the struggling negotiations with the United States as a personal call, and he guided his nation through relations with four American presidents (Johnson, Nixon, Ford, and Carter). Employing secret threats, bald intimidation, and diplomatic maneuvering that would make Machiavelli blush, Torrijos had, by 1977, placed the United States in a most uncomfortable position. Carter arrived in Washington determined to rid the United States of the festering sore of Panama.



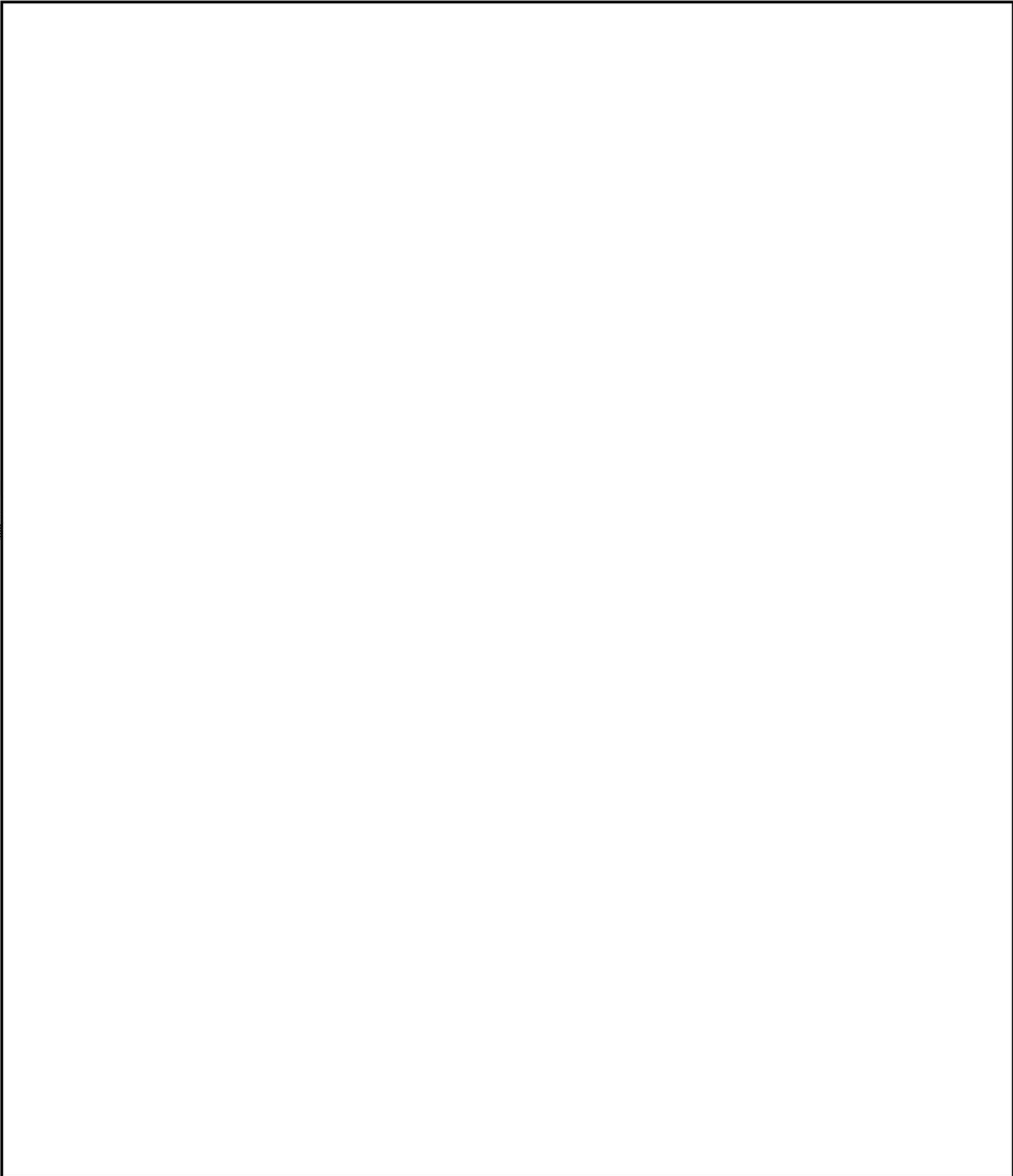
(U) President Carter and Omar Torrijos

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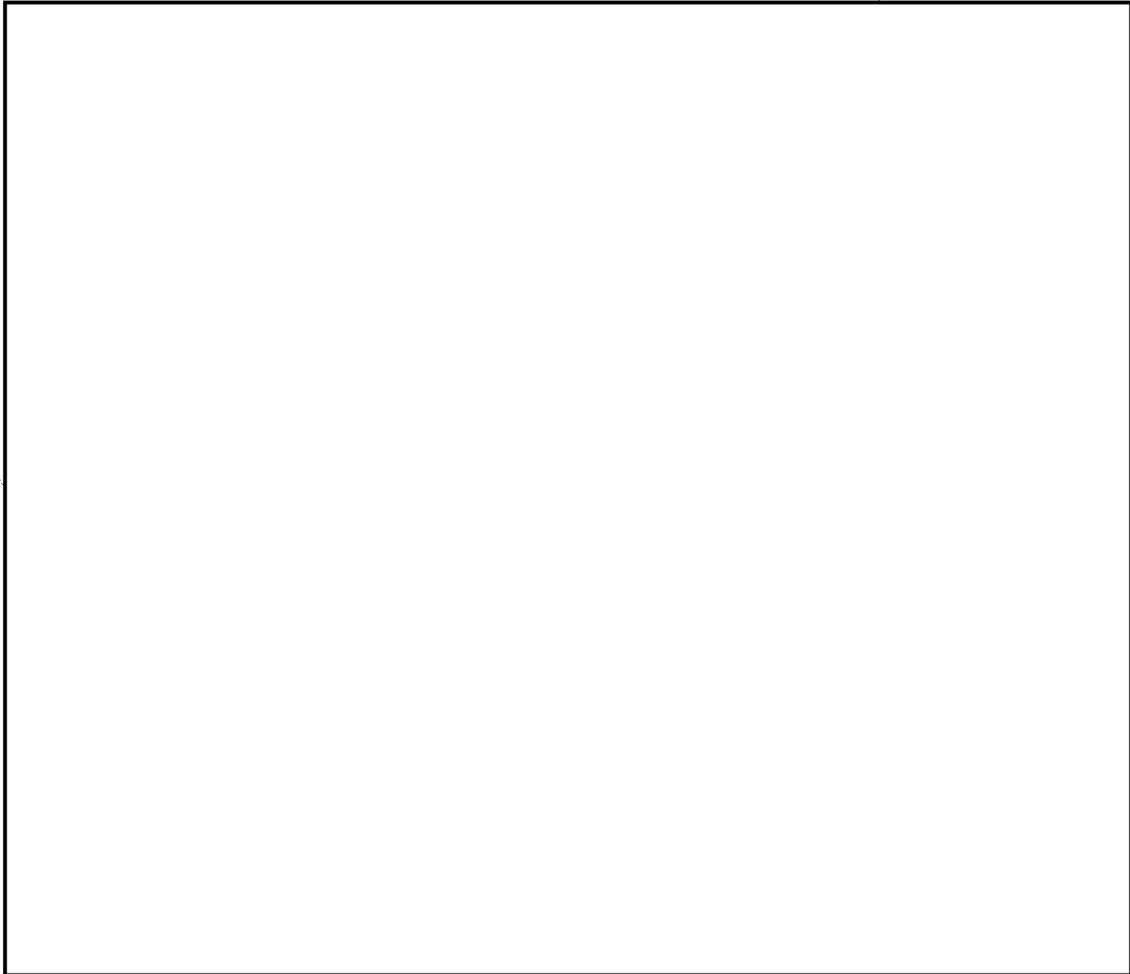
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(U) SALT II

(U) The SALT I treaty of 1971, coupled with the Vladivostok Accords of 1974, helped turn NSA's sources back onto the Soviet problem. But SALT I was just a beginning. Both sides specifically averred that a more comprehensive treaty would be negotiated.

(U) The Carter administration brought a completely new look to strategic arms negotiations. Carter placed the issue in the context of his dovish views on the arms race and human rights, and he began his administration with the declaration that he would scrap the Vladivostok Accords and go for deep cuts in overall levels. Given the charge, his negotiators fashioned a proposal that would bring the overall level of launchers from 2,400 apiece to something between 1,800 and 2,100. Rather than the 1,320 MIRVed launchers permitted by the accords, Carter would try for a limit of between 1,100 and 1,200. The original Carter proposals contained myriad details relating to strategic bombers, shorter range missiles, and mobile missile development, all of which leaned toward a smaller strategic force.³⁷

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(U) The proposals fell flat initially, owing to Carter's use of open diplomacy. When Secretary of State Cyrus Vance went to Moscow in the spring of 1977 to begin negotiations, he announced the American position in advance to the press. Given Carter's known position on strategic arms, the Soviets might not have been surprised by the position, but they viewed the new administration's propensity to conduct diplomacy through the press with incomprehension. The negotiations broke down.³⁸

(U) More progress was made later in the year, and, under the cloak of a less public negotiating system, the two sides neared agreement on a comprehensive treaty. But the process of placing limits on specific strategic arms resulted in a much more detailed draft treaty. As the two sides grew closer to agreement, they found it necessary to spell out everything, and the result was a thirty-one-page document resembling a legal agreement. It became a nightmare for the intelligence agencies expected to verify its terms.

~~(S-CCO)~~ How, for instance, would verification determine how many warheads a MIRVed missile carried? Photography could not see into the missile silo [redacted]

[redacted] When the Soviets began deploying unMIRVed missiles to missile fields near Derazhnya and Pervomaysk, the U.S. contended that all missiles in the field should count as MIRVs. When the Soviets countered that the MIRVed missiles could be distinguished by a unique domed antenna distinguishable from a photographic satellite, [redacted]

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~~(TSC)~~ There were similar rules defining types of missiles, depending largely on range and payload, and these depended on SIGINT for verification. Telemetry from missile tests was vital to determine both facts and, on occasion, indicated that new missile capability might exceed the limits in the draft treaty. The same pertained to defining whether a missile was a new type (prohibited in the draft treaty) or simply a modification of an older type (permitted). [redacted]

~~(S-CCO)~~ The arguments were not confined to missiles but also pervaded bombers, submarines, and cruise missiles. Would the Backfire bomber, employed in a theater role by the Soviets, be counted in the strategic mix? [redacted]

(S) Telemetry was critical to verification. The U.S. first began intercepting evidence of Soviet telemetry encryption capability as early as 1974. The USSR always employed this

selectively, encrypting telemetry on certain missile testing programs, but not others. The [redacted] for instance, was most heavily covered by telemetry encryption, and this encryption hindered SALT verification.⁴²

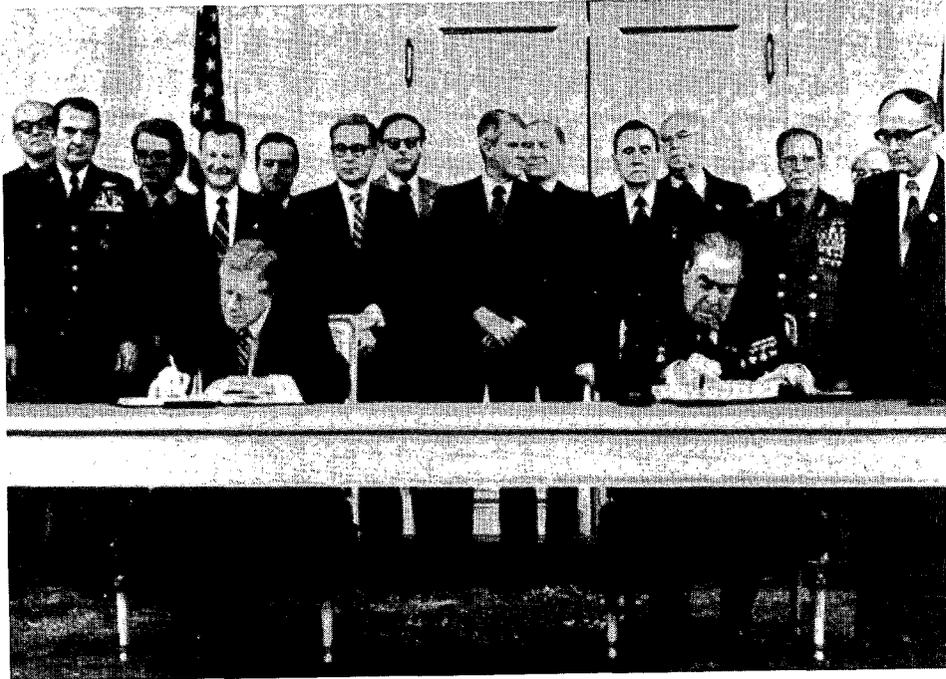
(C) In 1978 the Soviets first began encrypting reentry telemetry on the [redacted]. This was a direct threat to verification, and it raised the temperature. In Washington, NSA was concerned about telemetry encryption but opposed permitting the negotiators to discuss specifics on the grounds that this would reveal U.S. SIGINT capabilities. But the urgency of the [redacted] encryption problem forced American negotiators to bring this to the table, and it was eventually resolved. The two sides agreed to language that would bar "the encryption or encoding of crucial missile test information. . . ." as long as such a practice would hinder verification.⁴³

~~(S-CCO)~~ The issue of mobile missiles was a hot SALT-II topic. The U.S. pushed for a ban on them, even as the Soviets were testing their SS-X-20 mobile missile system. The first SS-20 site became operational in 1977. [redacted]

[redacted] The missile did not appear in the treaty because its range kept it out of the ICBM category. An SS-16 program, which would have converted the SS-20 into an ICBM by adding a third stage, was scrapped in 1977, thus ending a potentially contentious issue. [redacted]

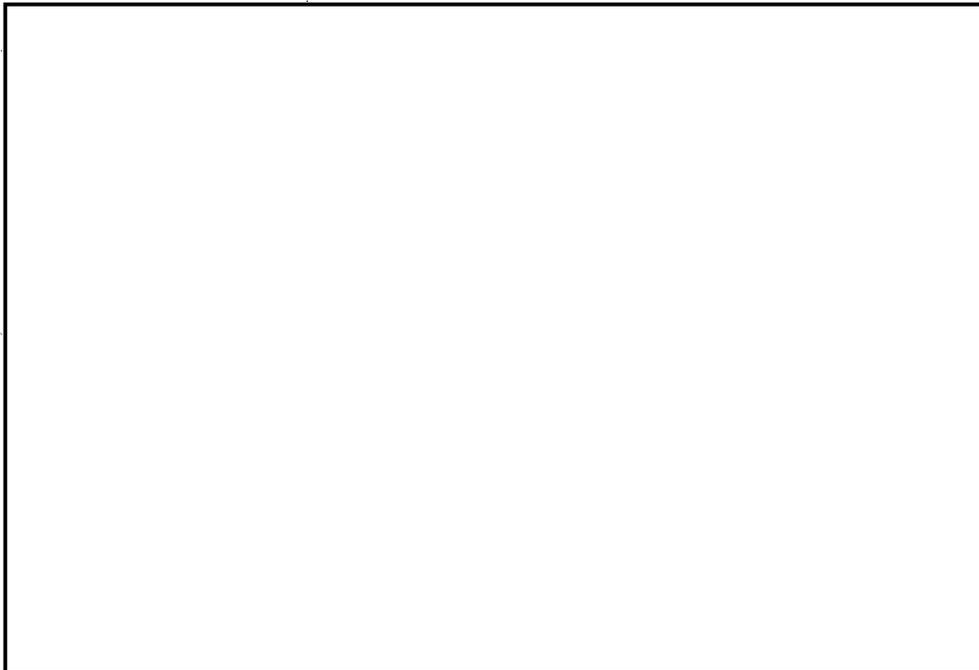
~~(S-CCO)~~ SALT II was signed and ready for ratification in May 1979. It was one of the most complex treaties the U.S. ever negotiated, and many of the clauses required verification. [redacted]

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(U) The signing of the SALT II Treaty

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(U) HF MODERNIZATION

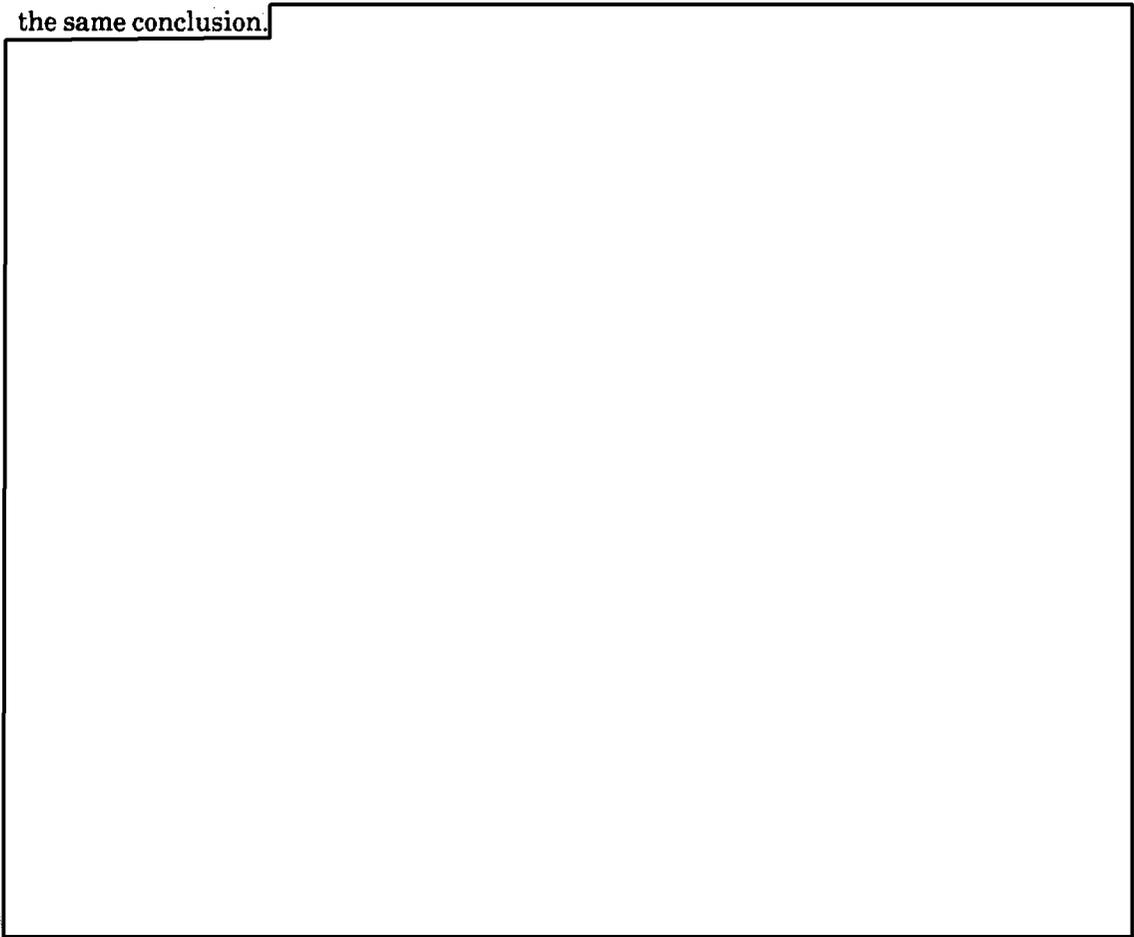
~~(S-CCO)~~ With the increasing focus on the collection of exotic signals using high-tech means, high frequency collection was threatened with irrelevance. Every budget cycle became a time for reappraisal of the SIGINT system, and the Cassandras predicted the "demise of HF." A 1978 study articulated the perception:

The very term 'HF' seems to carry with it a connotation of antiquity and of old age, of something not very much used anymore and not of much importance. . . . Newer systems are available, and they are used extensively



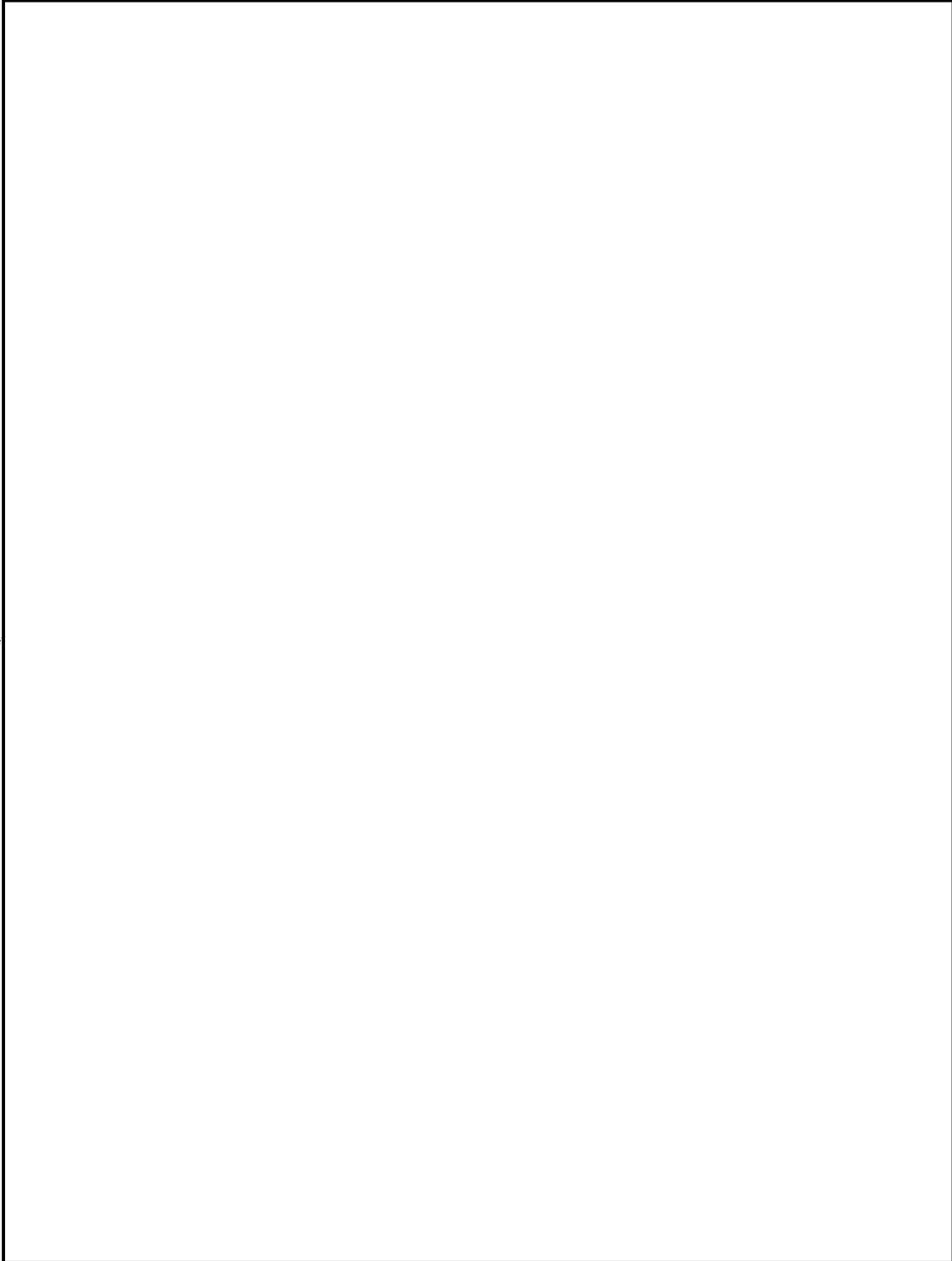
(U) The HF Studies

~~(S-CCO)~~ NSA did four major studies of the HF system in the 1970s, and each came to the same conclusion.



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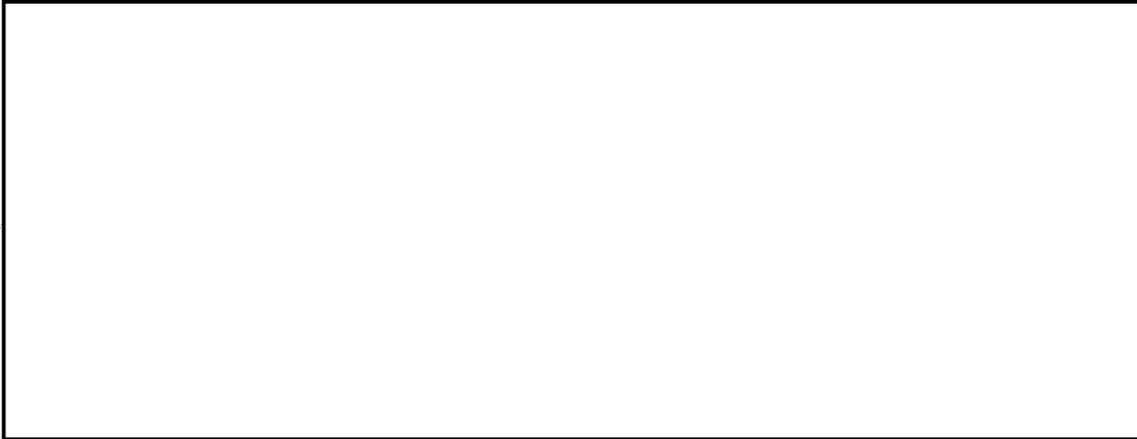


~~(S-CCO)~~ When Inman arrived in 1977, he was confronted with a system in a state of partial change. Pushed by the Clements cuts, NSA had thrown its lot in with HF remoting as a principal solution to the money problem. But the grand system envisioned during the

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early years of Lew Allen had been contorted by events and further budget cuts till it scarcely resembled the design of its creators.



~~(C)~~ The whole problem was made worse by strict DoD accounting requirements that demanded that costs be amortized within a rigid time schedule. This meant, in practice, that the proposal had to show quick manpower reductions. Remoting was a very expensive proposition, and NSA found many options foreclosed by the need to recoup costs in a short period of time.

(U) Inman Comes In

~~(S-CCO)~~ On arriving at NSA in July 1977, one of the new director's first actions was to get involved in HF planning. Writing to the ongoing [redacted] study group, he turned all the rules on their heads. Henceforth, the main objectives would not be to save money, but to improve timeliness and maximize target coverage. "In this regard," Inman wrote, "manpower is not our principal concern. We will not justify programs solely on people savings." In one sentence, he had revolutionized the process and redirected the committee.⁵³

~~(S-CCO)~~ Inman viewed the exercise with new eyes. He understood the planning options as a modernization of the system to improve the product. Modernization could come in many forms, remoting being only one of them (and the most expensive option in the short run). Planning would consider people factors, including the desirability of the location selected for the people who would have to staff the systems. The study group would have to consider the military and civilian mix, recruitment, career progression, cost of living, and other factors that had not before been part of the equation. Site selection and staffing would not be a function of SCA-proprietary aims.⁵⁴



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~~(S-CCO)~~

The authors still wrote breathlessly about constructing a single grand Central Collection Operations Facility, with major target centers, centralized systems management, and problem centers. It produced little original thinking.⁵⁵

~~(S-CCO)~~ By 1978, under the influence of Inman, this had all changed. The director told the group to begin a station-by-station evaluation of options, all the way from no change through site modernization, partial remoting, or full remoting. For each station the group must develop three options: preferred, practical, and minimally acceptable. Target improvement would be the driving force, while manpower requirements would be just one of several considerations. The panel must consider support to military operations and would have to complete a ranking of site tenure based on geopolitical factors. The SCAs would be pulled into the process so that NSA would have their inputs up front.⁵⁶

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(U) When the panel looked at individual sites, the obsolescence became palpable. The R-390 was still the workhorse receiver, but it had become so old (the first models went to the field in the late 1950s) that the internal parts had become worn, and it could no longer be accurately frequency calibrated. Its vacuum tubes caused heat buildup, causing instability and receiver drift (not to mention air conditioning problems in tropical climes).

~~(S-CCO)~~ Operators were still using what amounted to electronic typewriters (in an IATS configuration), despite the increasing prevalence of personal computers that could reduce the workload and increase the accuracy of the copy. They were still searching for targets manually, even while automated frequency scanning and signal recognition equipment was available. Operations in an HF collection site closely resembled those of thirty years before. The committee concluded that "the operator positions are the key to the collection/field processing problem area. . . . To obtain any degree of improvement to both quality and timeliness, the operator positions must be modernized first."⁵⁷

(U) Other equipment was in a similar state. Tape recorders, though possessing new labels, were still products of post-World War II technology. Reporting was a manpower-intensive exercise with a long paper trail and little automation. Much of the equipment on the operations floors was tube technology, and even much of the semiconductor equipment had germanium transistors which were impossible to repair or replace. In the communications area, NSA was still using versions of the Teletype Corporation Model 28,

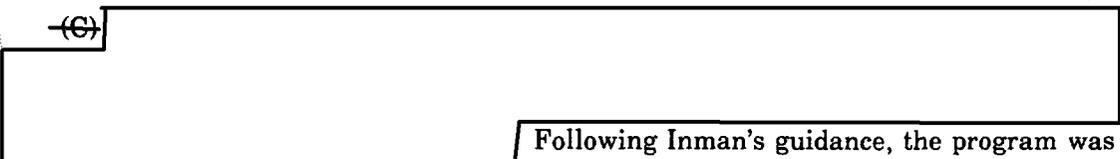
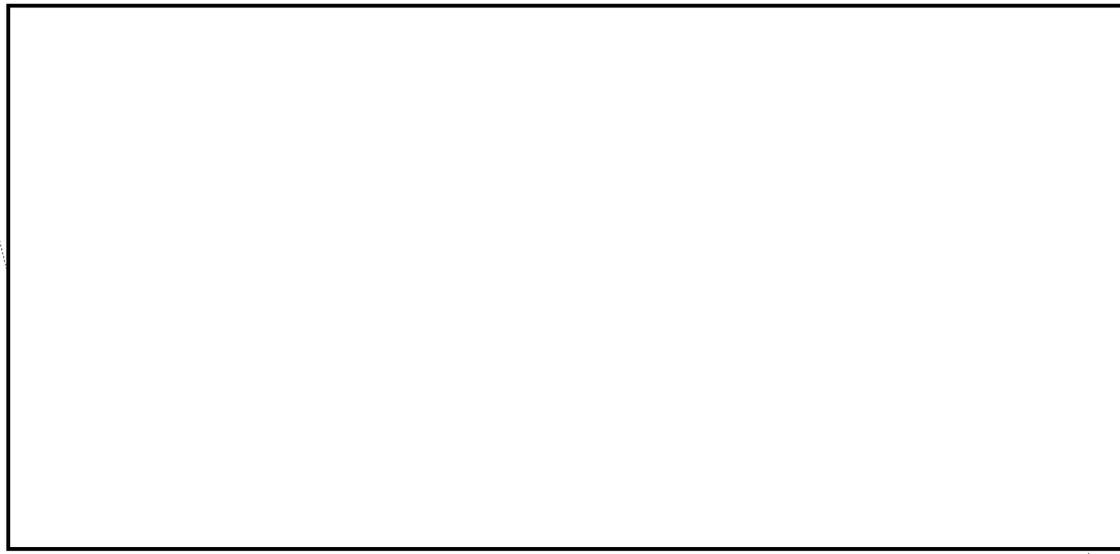
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an ancient, clattering, wheezing machine that reminded one of World War II IBM punch card equipment. Teletype had stopped producing them, and cannibalization was the only solution to repair problems.

(U) Outside the operations building, many sites were still surrounded by rhombic antenna fields. Highly accurate in their day, they had long been outmoded by CDAA technology, and the group concluded that every rhombic antenna field should be pulled down.

(C) The committee decided that the R-390 must be replaced with a solid state, digitally tuned receiver. Field sites must have automated signals acquisition systems and be upgraded with banded signals processors being planned under the BSU project. There was a need for improved reports generation and transmission systems. Collection positions must have the capability to automatically extract and log data in machine format.⁵⁸



Following Inman's guidance, the program was not justified on the basis of manpower savings, and it did not contain the complex amortization schedules of previous plans. The justification, simply, was a more effective cryptologic system.⁶⁰

(U) Kunia

(C) One of Inman's planning guidelines was to consider personnel factors in shaping the system. He was concerned about the prospect of moving large numbers of military people to the high-cost Washington area. His thinking may have been influenced by clamorous SCA protests over the looming centralization at Fort Meade. Only weeks before Inman became director, USAFSS had proposed that NSA consider alternative locations for

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the remote operation facility (ROF). Perhaps two locations would be better - a primary ROF and an alternate (ALTROF), to enhance survivability (and incidentally to answer fears of a tour in the Washington area).⁶¹

~~(C)~~ The modernization panel estimated that about 3,000 people would be needed for the ROF under Alternative 2. Before they recommended a location, they surveyed both the military and civilian populations. The idea of actually assessing the reaction of the work force before acting reversed the selection process used in 1951 to decide on the Fort Meade location. Then, a virtual revolt by the civilian component doomed the original selection, Fort Knox.

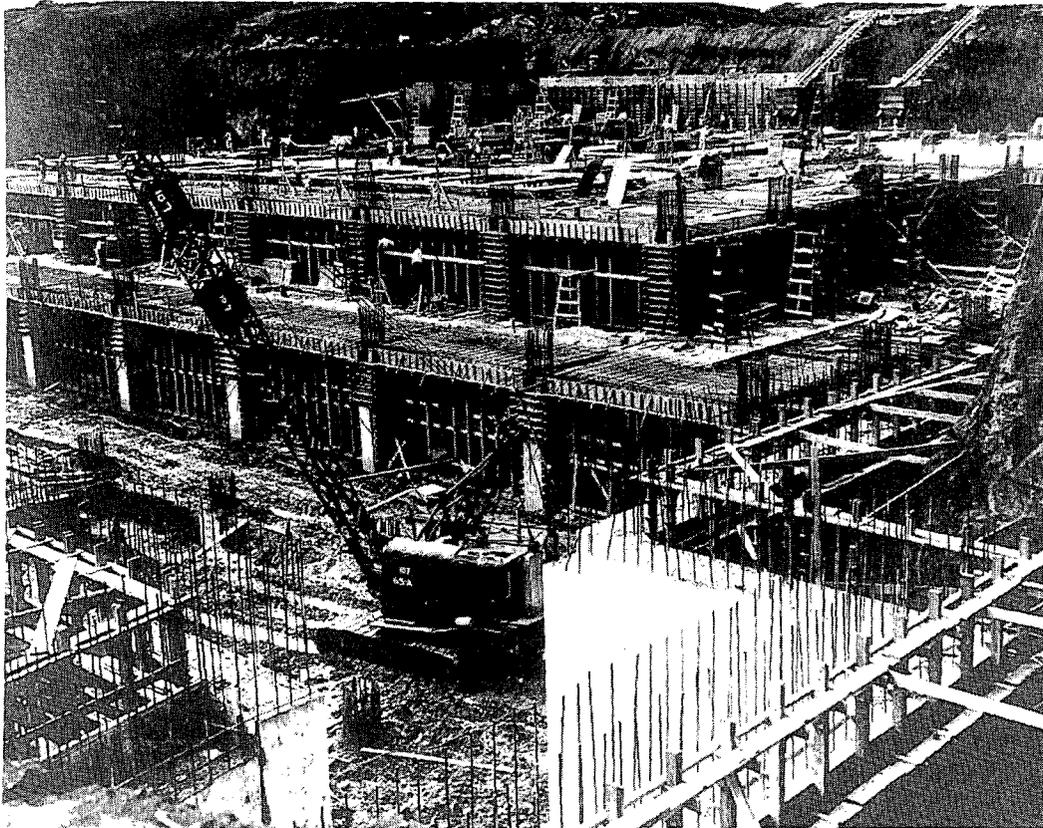
(U) Military attitudes toward duty at Fort Meade were unambiguous. They opposed it. The panel summarized in a single sentence the prevailing mood: "Many SCA enlisted members, who find job satisfaction high and Service life to their liking in the field, reflect a marked apprehension toward life at NSA/CSS." Topping the list of negatives was the cost of living, which was significant for enlisted members who would be dragged home from overseas. But this was by no means the sum of it. They objected to being submerged in a civilian-dominant organization offering lower status and fewer managerial opportunities. Many SCA officers feared that closeness to NSA would mean loss of service associations. And a tour at Fort Meade was not regarded as good for anyone's career. It was too far off the path to military advancement, and for enlisted collectors, analysts, and linguists, it represented a loss of skill proficiency. Not doing their primary job much of the time (that is, field site-peculiar jobs) would mean slipping down the proficiency ladder and, ultimately, slower promotions. The study revealed that of the 300 people certified in the collection field from 1967 to 1978, only twenty-nine had been military.⁶²

~~(FOUO)~~ As if this were not enough, a severe space crunch at Fort Meade virtually sealed the fate of NSA as the location for most of the 3,000 people who would have to be added to the population. Alternative 2 would require 161,000 more square feet, and the committee noted the reluctance of Congress to approve military construction money for the National Capital Area.⁶³

~~(FOUO)~~ The USAFSS study of the previous year had turned up an interesting proposal. When NSA had tasked USAFSS with identifying locations for an ALTROF, PACOM had suggested that NSA look at Kunia, an underground command and control facility that had fallen into disuse. The Navy proposed to get rid of it, and PACOM hoped to find a buyer. Perhaps the NSA ALTROF would be just the thing. Inman liked the idea, and requested that the panel consider establishing a major collection and analysis facility at Kunia.⁶⁴

(U) The committee considered three options for an ALTROF: Kunia; Goodfellow AFB, Texas; and Fort Monmouth, New Jersey. Of the three, Fort Monmouth was quickly discarded as a possibility. It received only about a one-third approval rating from both

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(U) Kunia under construction, 1943

civilian and military survey participants, while its negatives were commensurately high. The post was shabby, military housing and barracks would need significant upgrades to meet NSA's more exacting standards, and its civilian facilities were regarded as entirely too close to the high crime New York-New Jersey megalopolis. In cost it ranked below Fort Meade and Hawaii, but above Texas. More than \$20 million in military construction would be required.

(U) Goodfellow ranked lowest in cost of living and was well liked by the military. But civilians did not want to move to West Texas - this was almost the Fort Knox option replayed. Moreover, military construction costs would be the highest of the three options: over \$22 million.⁶⁵

~~(S-CCO)~~ Despite being in the highest cost area, Kunia proved the most popular choice by far - almost three-quarters of the survey participants wanted that option. For the military, available base housing would insulate them against financial crises, and for the civilians, the Hawaiian lifestyle was viewed as worth the cost. It had the lowest negatives in the survey - only 10 percent. For NSA, Kunia represented by far the cheapest alternative - only [redacted] million to convert what were almost ready-made facilities. In sum, Kunia offered

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- International gold flow avoidance
- A U.S. rotational base
- Proximity to CINCPAC

- [Redacted]
- [Redacted]

(S-CCO)

[Redacted]

This would involve a large shift of NSA civilians, as well as SCA military bodies. Kunia would be a triservice operation, with Army as host (since it was on Army land). It was a visionary restructuring of the [Redacted] collection problem.⁶⁶

(U) Kunia was an enormous three-story bunker of 248,000 square feet, located under a thirty-four-acre pineapple field in central Oahu. It was at historic Schofield Barracks, which was a setting for James Jones's novel *From Here to Eternity*. Its construction was almost an accident of history. In the days following the Japanese attack on Pearl Harbor, the War Department, fearing a second attack, set out to build a hardened underground facility on Oahu for the construction of folded-wing fighter aircraft. The Army Corps of Engineers designed and built a large factory with four-foot-thick reinforced concrete walls and ceiling, covered with, and hidden by, the pineapple field. There were no interior walls; the ceiling was supported by load-bearing columns. But facilities such as that take time in the building, and it was not finished until 1944. By then the Japanese carrier fleet was virtually destroyed, and an air attack was no longer feared. Fighters were being built at Ford's Island, and the facility at Kunia was never used for the purpose intended.⁶⁷

(U) At the end of the war, the Army Air Corps owned the underground white elephant. Kunia was kept in reserve status until 1953, when it was turned over to the Navy, which turned it into a warehouse for the storage of ammunition and torpedoes. Finally, in the late 1950s the Navy converted it into an underground command and control facility for the Pacific Fleet. It was hardened for CBR (chemical, biological, and radiological) attack, including strengthening the already-formidable walls and constructing decontamination centers. It was during this period of Kunia's existence that the interior walls went up.

(U) In 1976 the operations center was moved to another location, and Kunia was again up for bids. The General Services Administration requested that the Navy maintain the facility while they looked for a new occupant. It had been "on the market" for only a year when NSA first expressed interest.⁶⁸

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[Redacted]

(U) Kunia would consist of all three SCAs, each operating a completely separate field site. This would preserve service-unique command and control, and it represented a compromise in how to get the services to work together in close quarters.

~~(S-CCO)~~ Kunia also incorporated some unique operational concepts. From the beginning it was regarded as an extension of B2, [Redacted]

[Redacted] For the first time, a field site would have on-line access to the B [Redacted] database through remote terminals. Kunia would also have an interlocking relationship with [Redacted]

[Redacted]

[Redacted]

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~~(S-CCO)~~ Approval for a quick reaction program was announced in January 1980. An initial station would be up and running by the end of the year. In the QRC phase, the Air Force agreed to rehab the third floor for triservice use. [Redacted]

[Redacted] The people came partly from pipeline diversions from the now-shuttered BROF operation. Kunia was opened on schedule in December 1980.⁷²

(U) Conventional Signals Upgrade

~~(C-CCO)~~ By 1980, "HF modernization" had become "conventional signals upgrade (CSU)." R6 designed a complete field site overhaul, based on the problems that had been surfaced in the HF modernization study groups. The bedrock of the new system would be personal computers on position. According to the R6 design, "Modernization of site SIGINT systems is virtually synonymous with computerization of them." And modernization was not restricted to HF field sites - all existing conventional sites were included in the upgrades.⁷³

~~(FOUO)~~ The revamping would begin with the microprocessor to be integrated into each position. Recognizing that it took at least five years to field a system, but that microprocessors had a half-life of months, R6 decided, logically enough, to specify computer standards - actual system selection would take place at the time of the buy, which would be off-the-shelf commercial products.

~~(C)~~ As for HF receivers, the R-390 was out, and the Racal 6790 digital receiver was in. Automated signals acquisition equipment would be integrated into the collection systems. Everything would be modernized based on microprocessor technology - mission management, special identification techniques, signal recording, processing and reporting. As for Morse collection, NSA continued to pursue the holy grail of an automatic Morse translator, without much success.

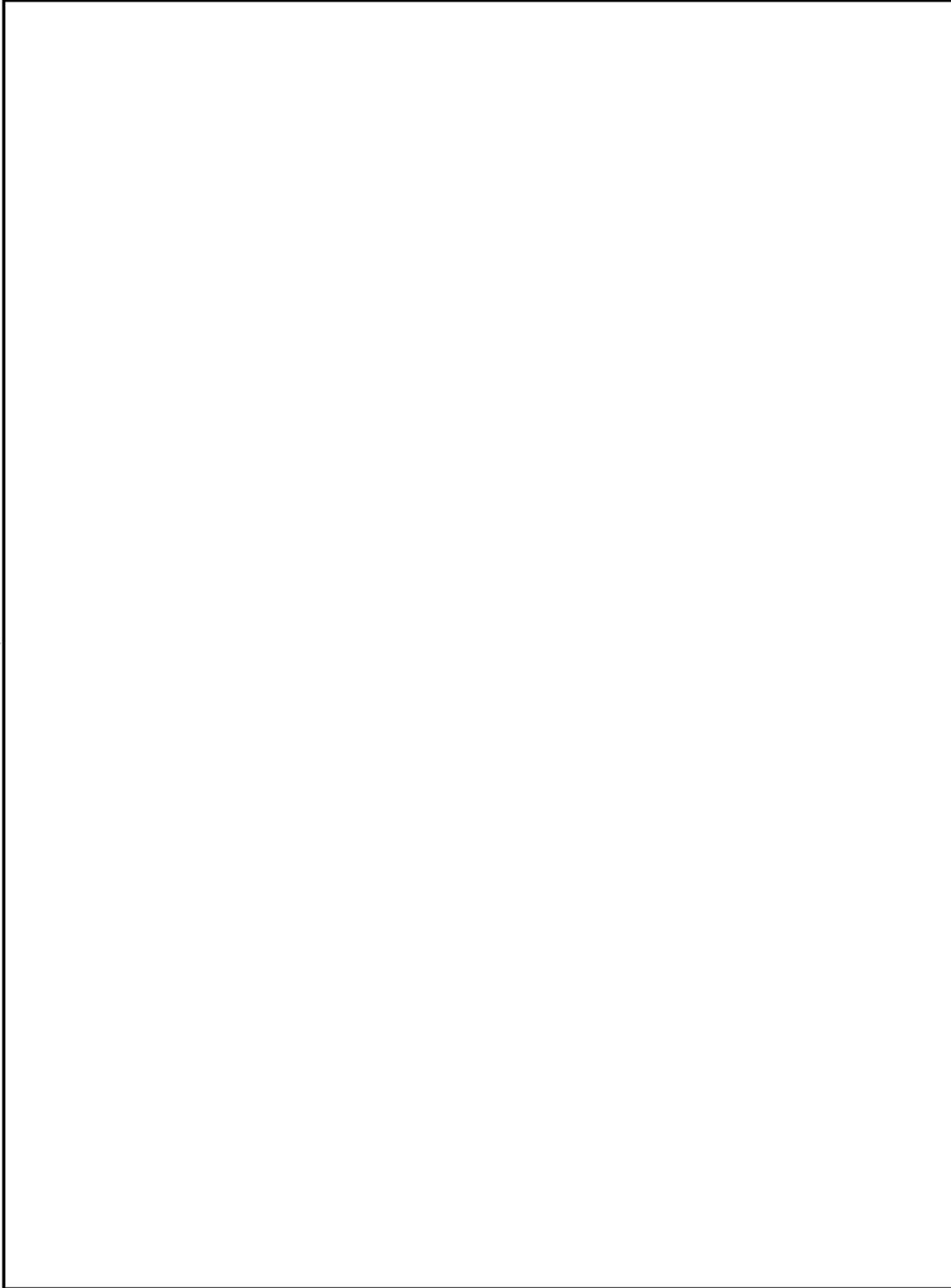
~~(C-CCO)~~ Conventional signals upgrade quietly integrated a parallel project into its design. Bauded signals upgrade subsystems appeared as part of the new equipment mix. It was a logical marriage of the conventional signals system with a decidedly unconventional project.⁷⁴

(U) BAUDED SIGNALS UPGRADE



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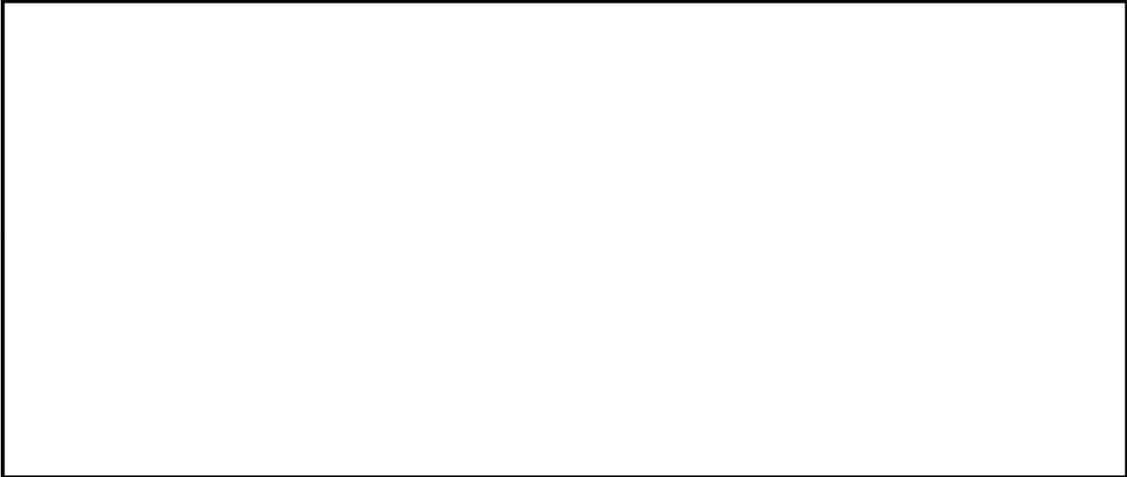
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(U) *The Perry Study*

~~(TS-CCO)~~ In 1976, NSA brought together the highest powered group ever to study the cryptanalytic process. Chaired by future Secretary of Defense Dr. William Perry, it included many of the finest minds in post-World War II cryptology (see Table 16). After a thorough assessment of the state of the art, the Perry Committee issued a report that was a shocker, even considering the prevailing optimism of the time.



(U) Dr. William Perry

~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

(U) Table 16
The Perry Committee⁸⁰

Dr. William Perry, Chairman	President, ESL Incorporated
Mr. Edward L. Glaser	Systems Development Corporation
Mr. Arthur H. Hausman	President, Ampex Corporation
Mr. Oliver R. Kirby	Vice President for Operations, E Systems
Mr. Arthur J. Levenson	Retired Chief of A Group
Dr. John Martin	Acting Assistant to Secretary of the Air Force for Research and Development
Dr. Lloyd R. Welch	Department of Electrical Engineering, University of Southern California

During World War II, the U.S. and the U.K. achieved spectacular success in cryptanalysis which had a profound impact on the execution of the war. We stand today on the threshold of a cryptanalytic success of comparable magnitude. . . . No one can guarantee that we will 'break' any specific machine of the new generation, but we do not see the problem as being more difficult - relatively speaking - than the one posed [redacted] thirty-seven years ago by ENIGMA.⁸¹

[redacted]

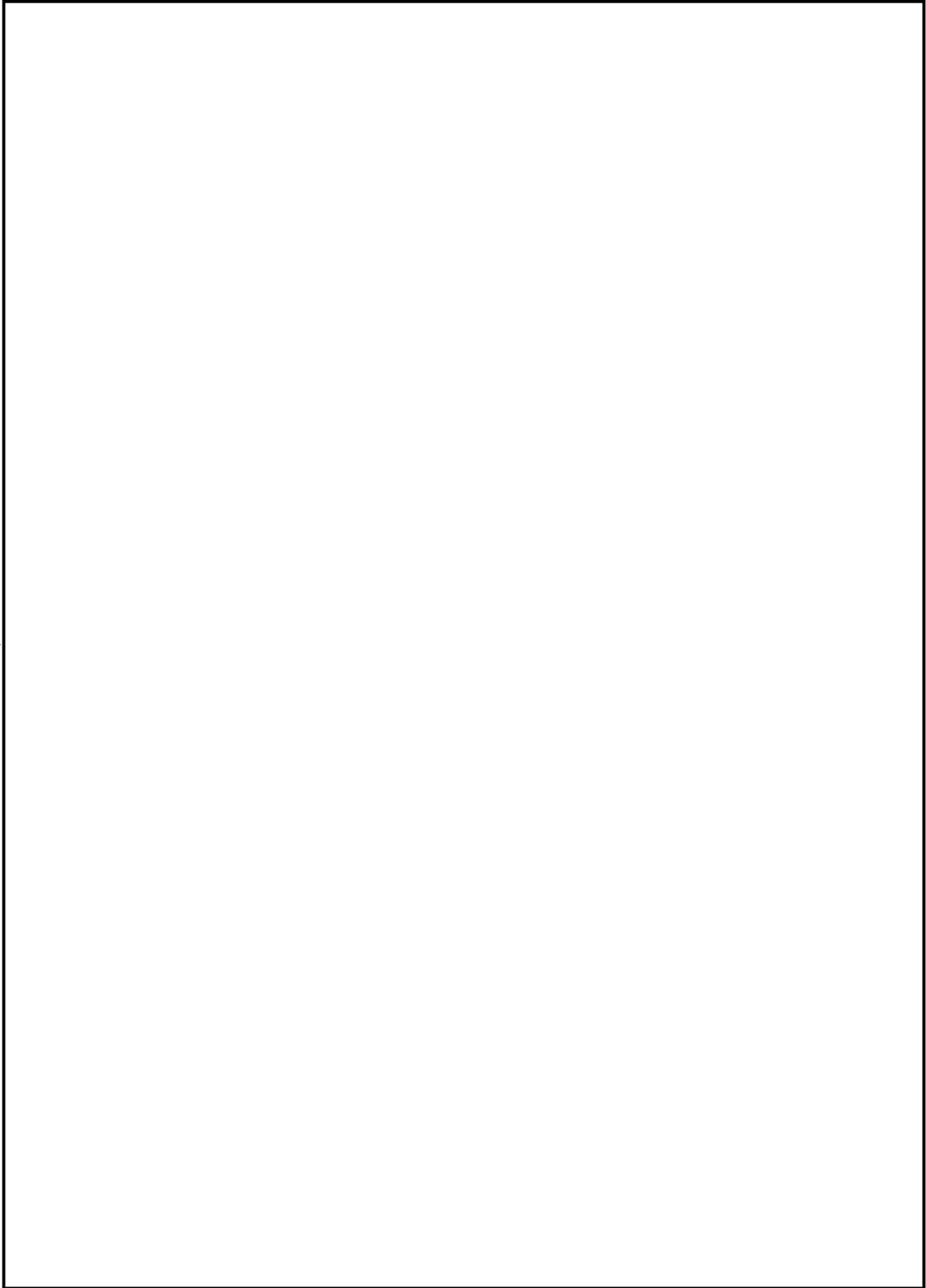
~~(TS-CCO)~~ Cryptanalytic resources had not kept pace with these developments. [redacted]

[redacted]

The solution, of course, was more resources. Perry recommended that NSA stoke the resource box up to the level that had preceded the Vietnam War. He also requested more collection, more computers, and the purchase of a Cray I for long-term cryptanalysis. [redacted]

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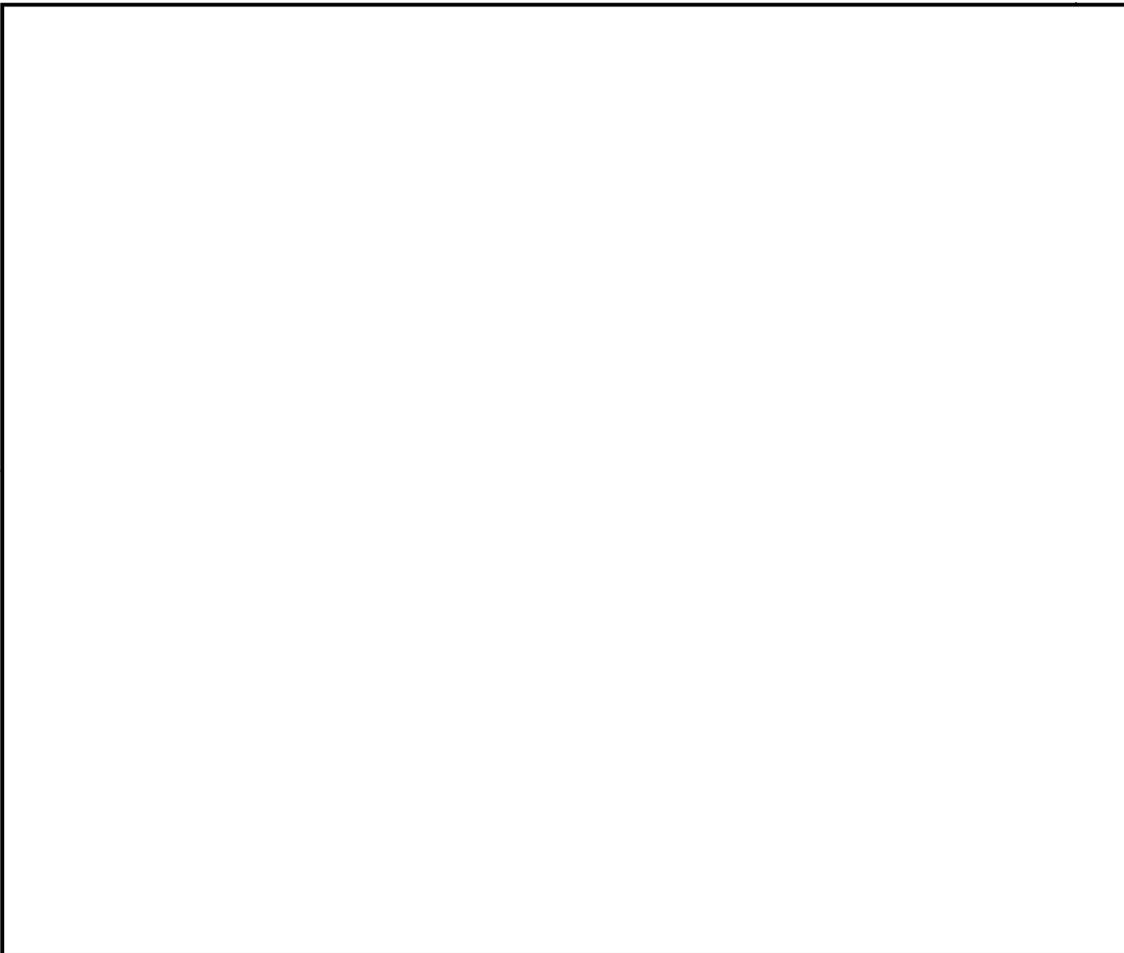
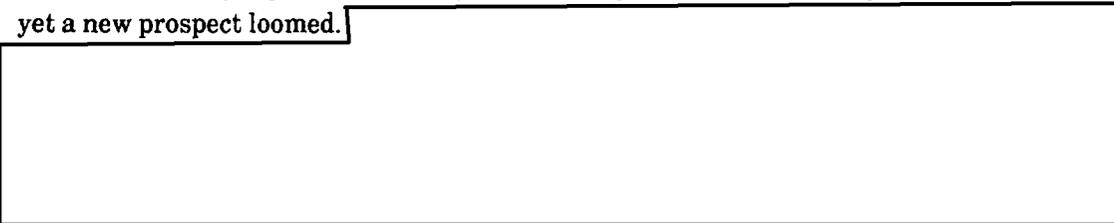
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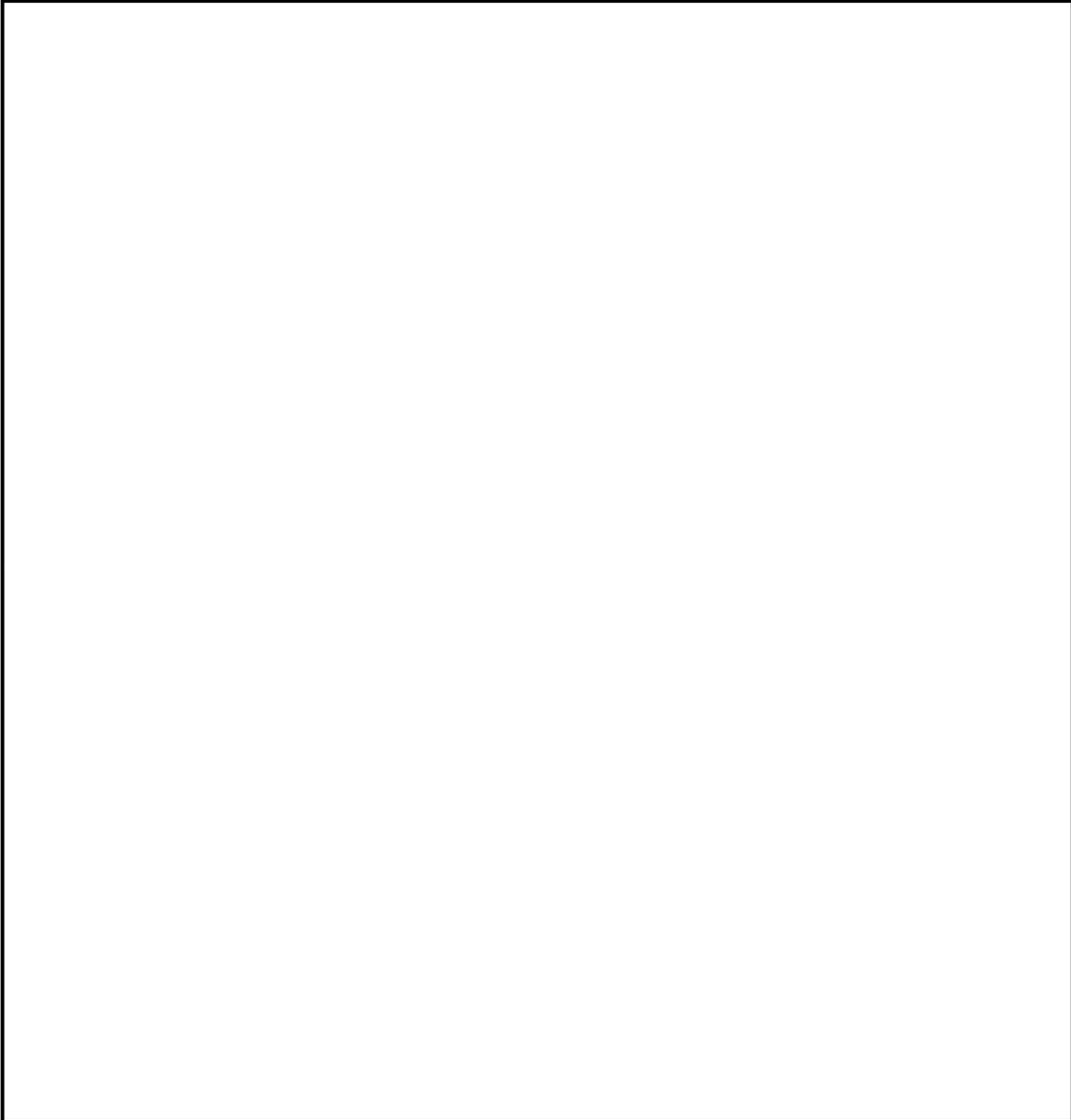


(U) The Wagner Study

~~(TS-CCO)~~ The homework on the [redacted] problem culminated in 1978 in a report issued by a panel chaired by Marlin Wagner, an R Group engineer. By this time yet a new prospect loomed. [redacted]



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(U) Bauded Signals Upgrade - the Project

~~(S-CCO)~~ The Wagner study drove NSA into a revolutionary development program, which became known simply as Bauded Signals Upgrade (BSU). The principle, as articulated by James Boone, NSA's deputy director for research, was "plan for success." Rather than await a breakthrough and then be faced with the time-consuming planning, design, and acquisition process [redacted] assume success and begin development immediately. Boone briefed the idea to Inman, who bought it.

~~(S-CCO)~~ Inman decided to place the project outside the regular chain of command, and he created a project management office. However, to retain operational security, it looked

like just another division, R84. The new chief, John P. (Jack) Devine, did not report to the chief of R8 [redacted] - he answered to James Boone, chief of R, and, on many matters, directly to Inman.⁹¹

~~(S-CCO)~~ The new office started very small - with just three people - but it got bigger, [redacted] Devine brought in strong DDO representation - his deputy was [redacted] from the cryptanalysis world, and the next person hired was [redacted] from DDO. Devine established a close link with CSU, which was headed by [redacted] in R6. The interplay between the two was an important aspect of the entire program.

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(U) Jack Devine

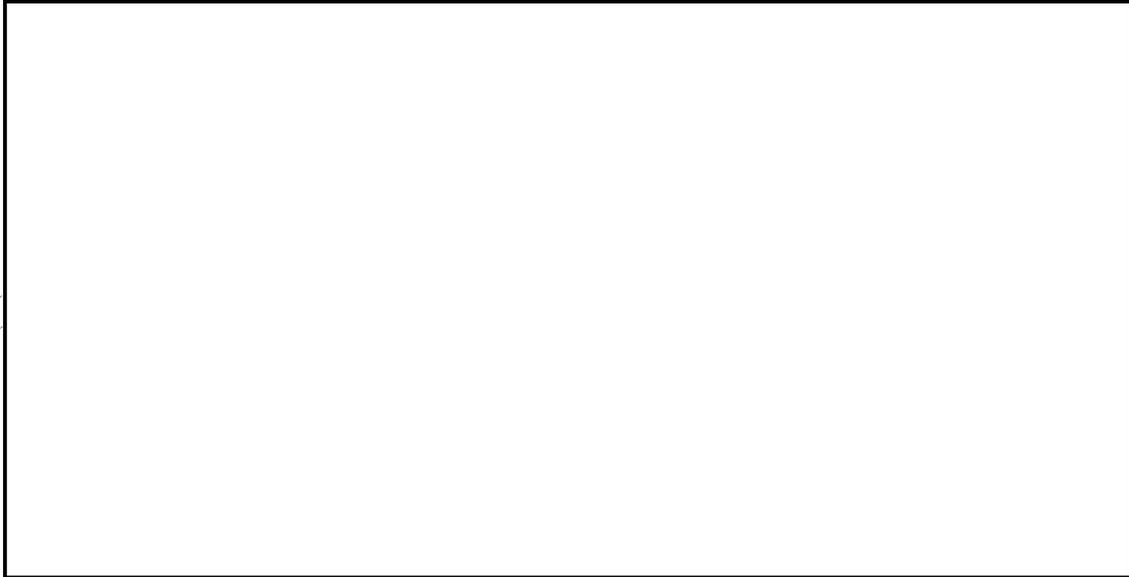
~~(S-CCO)~~ BSU had more push behind it than any program in NSA's history. Inman concluded that the project could not be funded within the existing budget - what was needed was a supplemental allocation. He secured the funding [redacted] dollars by going to see Secretary of Defense Harold Brown and explaining the potential. Brown got the money and spread it out through the DoD budget so that it did not appear in the CCP. He informed the president and the DCI.⁹²

~~(S-CCO)~~ Inman's personal involvement was critical to its success. He personally chaired the formative meetings and approved all resources requests himself. At one point he asked Devine how he would spend [redacted]

[redacted]

~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

~~(S-CCO)~~ Security was a nightmare for such a large project. BSU grew so big that Devine eventually had to bring some of the staff members of the two intelligence committees into the picture, [redacted] The SCAs needed to be brought in, and Devine suggested that each provide a representative to the PMO. (ESC and NSG did; INSCOM did not). But the SCA command structure was not told the whole story, to minimize the number of people who knew the core secret.⁹³



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~~(TS-CCO)~~ So was it money down the drain? Devine himself estimated that only 5 percent of the total, that which was used to purchase certain special-purpose processors, was wasted. The rest was used to modernize a system that was turned to other collection and exploitation tasks, now fully modernized to attack the most modern communications. The digitization, the remoting, the diagnostic systems, all proved a lifesaver for the cryptologic system and served it well through the end of the Cold War and beyond. As for management, most observers felt that BSU was the best-managed project in NSA's history. Still, it was technically true that, in the words of one NSA senior official, "The operation was successful, but the patient died."⁹⁶

(U) THE THIRD WORLD SITUATION

~~(TS-CCO)~~ In 1979 Inman appointed a panel to assess G Group cryptanalysis. Chaired by Arthur Hausman, president of Ampex Corporation, it contained many of the same people who had comprised the Perry Committee. Their conclusion: G Group cryptanalysis was at an all-time peak.⁹⁷



[REDACTED]

~~(TS-CCO)~~ Hausman's panel saw troubling trends that threatened this remarkable record. Overall cryptanalytic resources had declined over the years, and many important cryptanalysts had retired without effective replacement.

[REDACTED]

and an infusion of cash would be needed to move into the next decade.

[REDACTED]

Public cryptography was already producing technology that had been available only to the specialist in past decades.

[REDACTED]

NSA relied too heavily on commercial organizations for the acquisition of sensitive cryptanalytic machines.⁹⁹



(U) Arthur Hausman

~~(TS-CCO)~~ But help was on the way, in a project called [REDACTED] The idea was to develop a special-purpose device [REDACTED] Its application would be so wide that it would be a quasi-general-purpose machine.

[REDACTED]

(U) THE PEACE TREATY WITH CIA

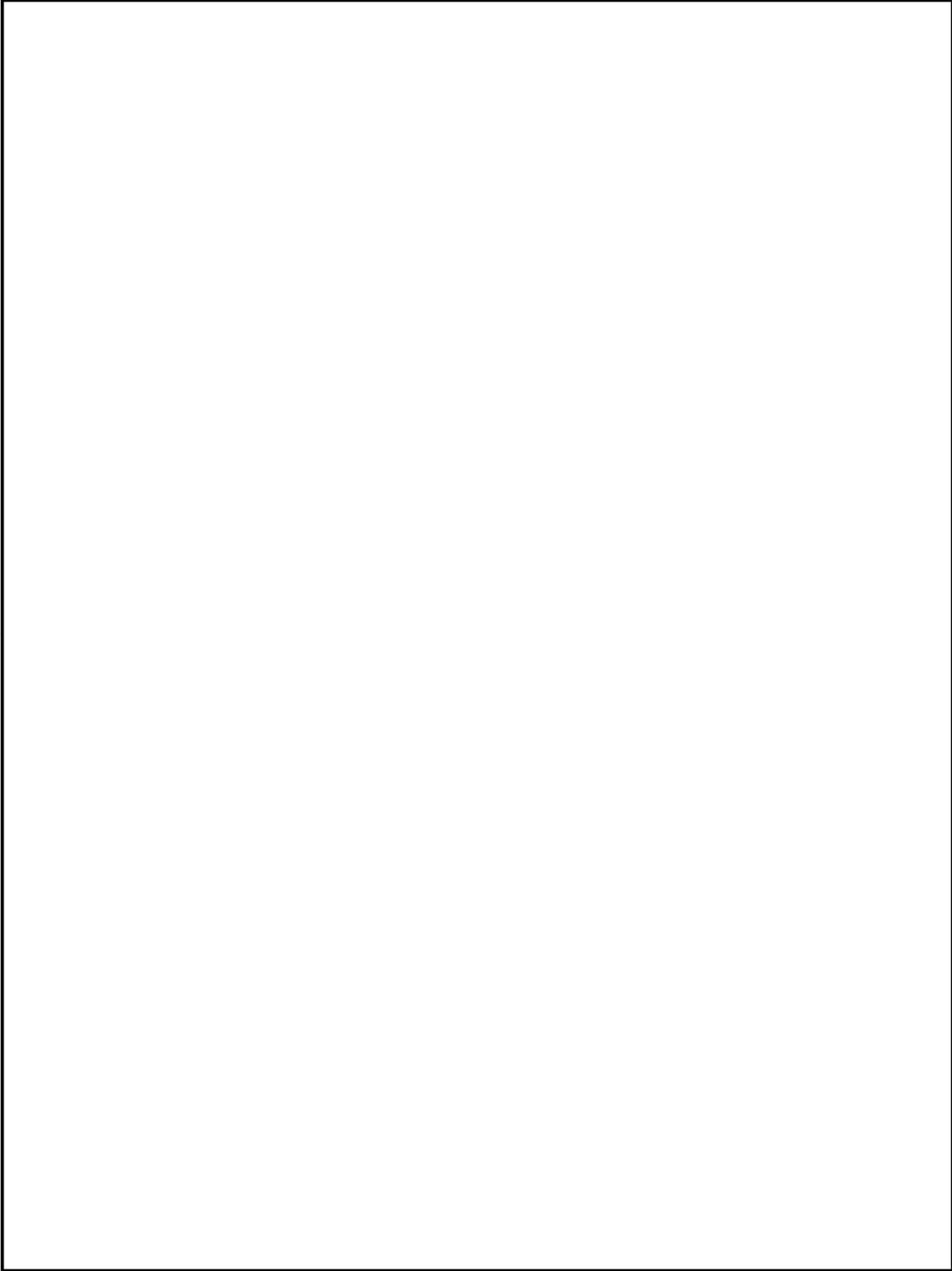
~~(TS-CCO-TK)~~ When Admiral Inman became the director in 1977, NSA and CIA had operated parallel, and in some cases rival, SIGINT systems for a quarter of a century. Jurisdictional disputes had been acrimonious at times, the most serious occurring in the late 1950s between Canine (NSA) and Dulles (CIA). After that, a period of relative peace settled in. Major disputes,

[REDACTED] were resolved by uneasy compromises and activities nosed over into partial quiescence. In large measure this "era of good feeling" was a product of the diplomatic skill of Louis Tordella, whose term as deputy director spanned the entire time (1958-1974). Veterans of battles with CIA seemed content to let the relationship stabilize, but a

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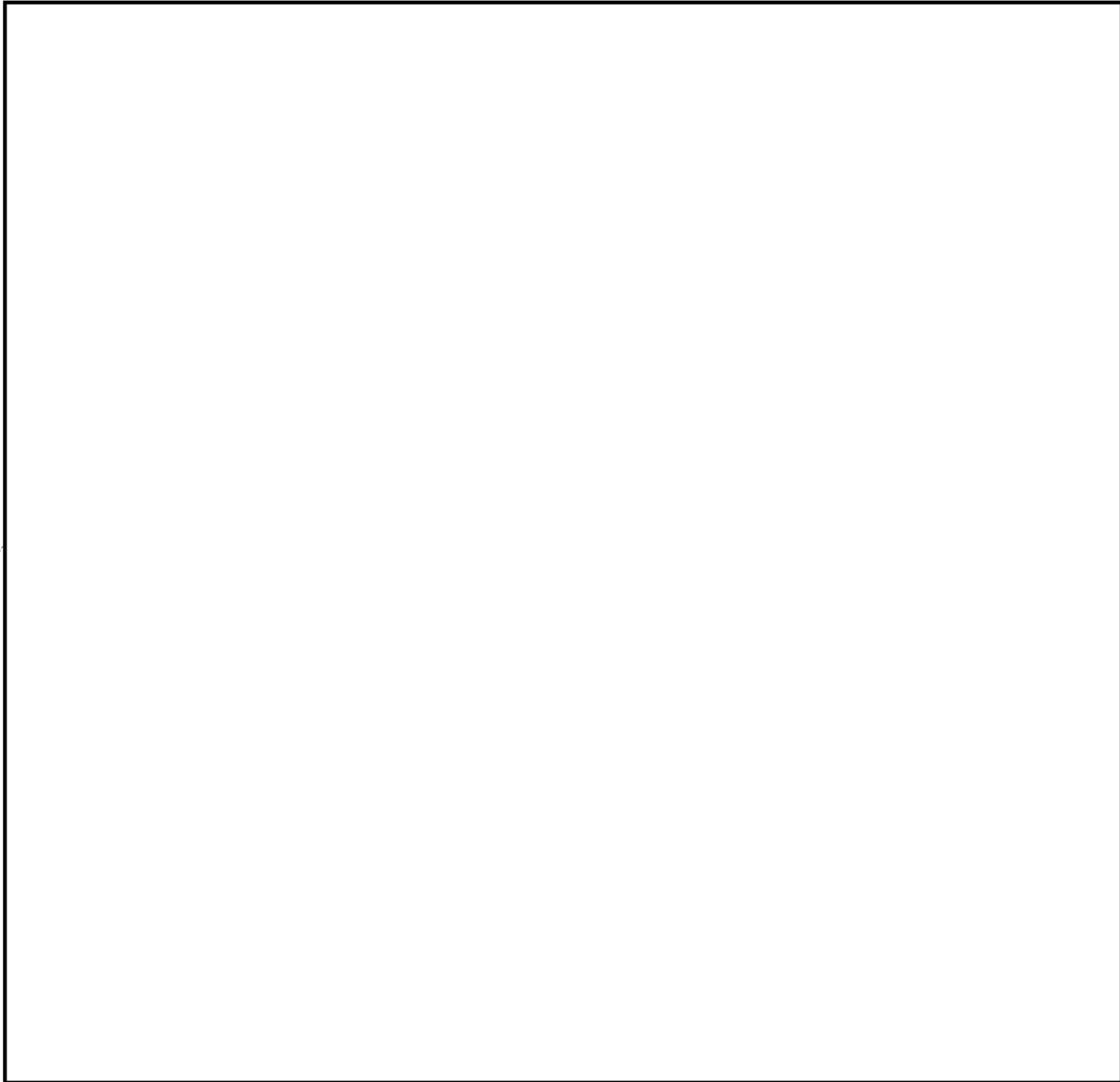
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generation of "young Turks" at NSA was determined to renew the battles and gain more ground for NSA.



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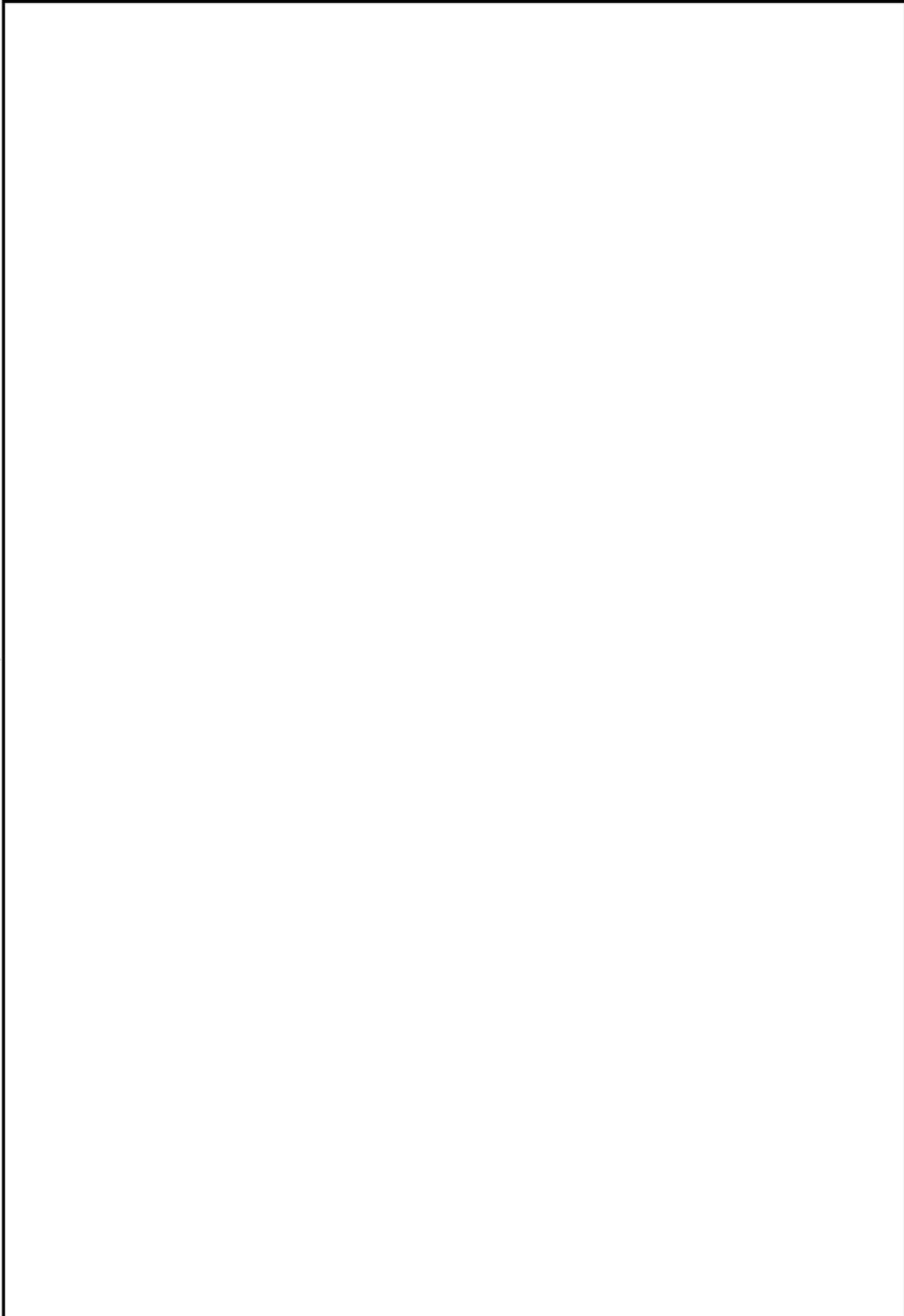


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~~(S)~~ An outsider looking at the jury-rigged SIGINT system of the federal government might have suspected insanity. Rather, it appears to have been a product of opportunity. As one CIA wag observed, it resulted from the "first agency" rule - that is, "the first agency to get there gets the mission." House Appropriations Committee investigators also noted a cultural gulf between the urbane and worldly-wise CIA and the technologically focused NSA. CIA had been established to be small and flexible and relied heavily on covert funds for which they owed no effective accounting. Thus Langley could react very quickly to developing events, moving into hot spots with covert collection and expanding intelligence relationships with the countries affected. NSA [redacted] was encumbered by restrictions laid down by Congress on all DoD activities. The cultural differences had a profound effect on the way things operated. Noted a HAC staffer in 1976, "While NSA is bureaucratic . . . , CIA is very autocratic. It has not felt a need to explain to outsiders what it is doing." ¹⁰⁶ This attitude did not stand CIA in good stead when, in 1976, it had to explain why it was operating a parallel SIGINT system.

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(U) *The HAC Investigation and the Negotiation of a Peace Treaty*

(U) The matter of cryptologic integration had bumped along for years with patched together compromises - an issue here, an issue there. It appeared doomed to more of the same over a longer period of time until, in the spring of 1976, it was brought to a head and,

~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

in a single swift stroke, resolved in favor of NSA. This happened in the unlikely forum of the House Appropriations Committee.

(U) The HAC had been looking at the intelligence budget where, it appeared, major economies could be achieved by consolidating NSA and CIA SIGINT operations. The staff chief, Charles Snodgrass, had little experience in intelligence - his expertise was agriculture. But in 1976 he was taking great interest in intelligence, and he seemed to harbor a visceral distrust of CIA.

~~(S-CCO)~~ In the very early spring of 1976, Snodgrass interrogated both agencies and at the end of the process issued a report that was devastating to CIA interests. Contending that money could be saved by placing NSA in charge of both SIGINT organizations, he rejected every explanation and contention to the contrary that Langley advanced.

[redacted]

"In regard to the overall question as to whether the CIA SIGINT activities should be transferred to NSA, the Investigative Staff is not impressed with the answers given by the DCI. . . ."

[redacted]

Regarding NSA as a perceived military organization, Snodgrass pointed to [redacted] places where NSA civilians were doing the job.

[redacted]

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~~(TS-CCO)~~ The HAC report, issued in April, demanded consolidation of SIGINT programs into a single entity within NSA's national SIGINT program. Only a few exceptions appeared to Snodgrass to be worthy of consideration, [redacted]

[redacted] The two agencies answered the report separately, implying serious disagreement. For NSA, Lew Allen was willing to accept most CIA SIGINT operations under the NSA umbrella, but he suggested that certain ones,

[redacted] remain under Langley control (but under the national SIGINT system). On the extremely contentious [redacted]

[redacted] issues, he proposed leaving them under CIA supervision but increasing NSA representation and operational control.

[Redacted]

OGA

Allen's boss, Deputy Secretary of Defense Robert Ellsworth, sensed a kill, and pressed home the point. At Defense, they were not going to let the moment slip away.¹¹⁴

~~(S-CCO)~~ The result was the Knoche-Allen letter of January 17, 1977. (Henry Knoche, Bush's deputy, was effectively running CIA, as the Carter people had made it known that they regarded Bush as too political and did not intend to let him stay on.) This short, seven-page document set up the basis for a resolution. It drew CIA SIGINT assets firmly into the national SIGINT system run by NSA.

[Redacted]

Much of the funding would roll over to the CCP.

~~(S-CCO)~~ But the Knoche-Allen letter did not bring all the issues to closure.

[Redacted]

And in each instance where the two sides could not agree, the DCI would decide. The DCI was hardly passive on these issues. And that was where the matter stood when Admiral Bobby Inman became DIRNSA in July of 1977.¹¹⁵

[Large Redacted Block]

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(U) The Peace Treaty

(S-CCO) The "Peace Treaty," [redacted] was signed by the two agencies on August 26, 1977. Much of the language related to rather dull aspects of how programs were to be managed and funding to be apportioned, but the central principle was that all SIGINT assets would, with rare exceptions, be centrally managed by NSA. Third Party programs were meticulously worked out country by country [redacted]

(FOUO) The formulation of the Peace Treaty resulted from a unique set of circumstances. But for the advent of Charles Snodgrass in the House Appropriations Committee investigative staff, it could hardly have gotten started. And even then, it could have run aground but for the timely ascension of Admiral Bobby Inman at NSA. The Peace Treaty owed much to his negotiating savvy and political connections. He cultivated Snodgrass, other key congressional figures, and contacts within the National Security Council. His connections were unassailable, and behind his negotiating strategy was always the mailed fist of White House or congressional intervention - once again, on the side of NSA.

(S) The Peace Treaty brought an end to much of the sniping that had been going on between the two agencies since their birth. In NSA's view it was vindication; from CIA's standpoint it was surrender on the SIGINT front. A memo from two NSC staffers to Brzezinski called it a good working arrangement whose effects would be beneficial only if the two agencies cooperated on its implementation. The transition to the new arrangement was in fact painful and bumpy. [redacted]

[redacted] The working out depended on the good will of both sides, rather than on a piece of paper. As the years moved, the long-term benefits became clearer, but even in 1977 the light could be seen at the end of the tunnel.¹¹⁸

(U) PUBLIC CRYPTOGRAPHY

(U) Modern cryptography has, since its earliest days, been associated with governments. Amateurs there were, like Edgar Allan Poe, who dabbled in the art, and it has held a certain public fascination from the earliest days. But the discipline requires resources, and only governments could marshal the resources necessary to do the job seriously. By the end of World War II, American cryptology had become inextricably intertwined with the Army and Navy's codebreaking efforts at Arlington Hall and Nebraska Avenue. But this picture would begin changing soon after the war.

(U) Modern *public* cryptography originated with a Bell Laboratories scientist, Claude Shannon, whose mathematics research led him to develop a new branch of mathematics called information theory. A 1948 paper by Shannon brought the new discipline into the

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public domain, and from that time on, cryptography became a recognized academic pursuit.¹¹⁹

(U) Public cryptography had no market in those days. So when IBM researcher Horst Feistel developed a line of key generators to be embedded in IBM computers, called Lucifer, there was no immediate use for it. But in 1971 Lloyd's Bank of London contacted IBM to ask about the possibility of securing transactions from a cash dispensing terminal. Feistel sent Lucifer to Lloyd's. IBM then formed a group, headed by Walter Tuchman, to develop the idea of encrypting banking transactions.

~~(FOUO)~~ While IBM was developing a market for public cryptography, computers were becoming more common within the government. The 1965 Brooks Act gave the National Bureau of Standards (NBS) authority to establish standards for the purchase and use of computers by the federal government. Three years later, Dr. Ruth Davis at NBS began to look into the issue of encrypting government computer transactions and concluded that it was necessary to develop a government-wide encryption standard. She went to NSA for help. NBS, it was decided, would use the *Federal Register* to solicit the commercial sector for an encryption algorithm. NSA would evaluate the quality, and if nothing acceptable appeared, would devise one itself.¹²⁰

~~(FOUO)~~ In 1973 NBS solicited private industry for a data encryption standard (DES). The first offerings were disappointing, so NSA began working on its own algorithm. Then Howard Rosenblum, deputy director for research and engineering, discovered that Walter Tuchman of IBM was working on a modification to Lucifer for general use. NSA gave Tuchman a clearance and brought him in to work jointly with the Agency on his Lucifer modification.

~~(S-CCO)~~ The decision to get involved with NBS was hardly unanimous.

[Redacted]

This argued the opposite case - that, as Frank Rowlett had contended since World War II, in the long run it was more important to secure one's own communications than to exploit those of the enemy.¹²¹

~~(FOUO)~~ Once that decision had been made, the debate turned to the issue of minimizing the damage. Narrowing the encryption problem to a single, influential algorithm might drive out competitors, and that would reduce the field that NSA had to be concerned about.

[Redacted]

they compromised on a 56-bit key.¹²²

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~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

(FOUO) The relationship between NSA and NBS was very close. NSA scientists working the problem crossed back and forth between the two agencies, and NSA unquestionably exercised an influential role in the algorithm. Thus, when DES became official in July 1977, a debate erupted in the academic community over the security of the standard. Scientists charged that NSA had secretly pressured NBS into adopting a nonsecure algorithm. Not only did they contend that the key length was to NSA's liking, they also alleged that the Agency had built a "trap door" into the system that would allow cryptographers at Fort Meade to read it at will. In 1976 David Kahn, the leading non-governmental authority on cryptography, lent academic support to this view. Kahn's allegations were repeated by writers and scientists worldwide. The issue became so charged that a Senate committee in 1977 looked into the allegations. The hearings resulted in a "clean bill of health" for NSA, but it hardly quieted the academic uproar.¹²³

(U) To calm the waters, NBS called a conference in August 1976. It solved nothing. Leading academic figures contended that the DES algorithm was so weak that it could be solved with fairly modest resources (on the order of \$9 million), while defenders pronounced it secure against virtually any attack feasible at the time. National Bureau of Standards ultimately promised that the DES algorithm would be reevaluated every five years.¹²⁴

(U) The problem was, in large part, one of timing. During the Church and Pike Committee hearings, NSA had been tarred with the same brush that smeared CIA and FBI, and the exculpatory conclusions of the Church Committee were lost in a sea of fine print. What the public remembered were the sensational allegations of journalist Tad Szulc [redacted] Whether NSA was an apolitical collector of foreign intelligence information or truly a governmental "Big Brother" had not yet been adjudicated in the public mind. The concern for individual privacy, largely an outgrowth of the Watergate period, exercised an important sway on the American public, and even Walter Mondale, with years of experience watching over intelligence agencies from his Senate perch, was consumed by this issue when he was Carter's vice president. Any endeavor that would make NSA out as an inspector of private American communications would play negatively. The DES controversy was one of those issues.

(U) In 1976 a related chain of events began which was to flow together with the DES controversy. In that year Martin Hellman of Stanford, one of the world's leading practitioners of the cryptographic arts, and his graduate student, Whitfield Diffie, published "New Directions in Cryptography" in the November issue of *IEEE Transactions on Information Theory*. It contained the first public exposition of what was to become known as public key cryptography. In the Hellman-Diffie scheme, it would be possible for individual communicants to have their own private key and to communicate securely with others without a preset key. All that was necessary was to possess a publicly available key and a private key which could be unlocked only with permission. This revolutionary concept freed cryptography from the burdensome periodic exchange of key with a set list of

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correspondents and permitted anyone with the same equipment to communicate with complete privacy.¹²⁵

~~(S)~~ This was the public face of the issue. But like public key cryptography itself, it contained a private story that was much more complex. Hellman, it turned out, had been one of the leading opponents of DES, for the very reason that he distrusted NSA's hand in the algorithm. He had obtained a National Science Foundation (NSF) grant to work on the project. It turned out that there was no legal prohibition against a governmental entity funding private research into cryptography, despite the possibility that such research would break the governmental monopoly on leading edge techniques. And in fact, Hellman and Diffie

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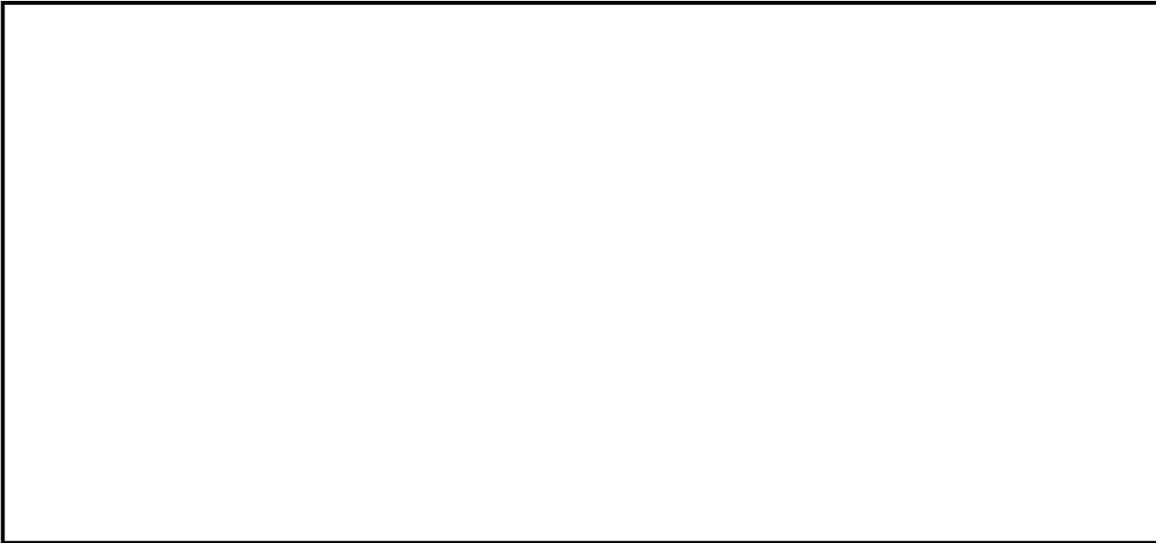
(U) In April 1977 David Boak and Cecil Corry of NSA visited Dr. John Pasta, director of NSF's division of mathematical and computer research, to discuss the issue. Since the early 1970s there had been sporadic contact between NSA and NSF, and NSF had agreed to permit a certain amount of NSA "assistance" on these types of projects, but only to examine grant proposals on their technical merits rather than to institute a formal coordination process. Pasta, believing that academic freedom was at stake, held fast to the NSF position and refused to permit NSA to exercise any sort of control over future grants.¹²⁷

~~(FOUO)~~ The difficulties with NSF did not end with the Hellman imbroglio. In 1977 Ronald Rivest of MIT published an NSF-funded paper expanding the public key cryptography idea. He postulated a method of exchanging public and private keys, protecting the private key based on the known fact that large integers are extremely difficult to factor. The new RSA technique (named after its inventors, Rivest, Shamir, and Adleman) depended on finding very large prime numbers, upwards of 100 digits long, a technique that was later adopted for STU-III key exchange.

[REDACTED]

Since the technique had been jointly funded by NSF and the Office of Naval Research, NSA's new director, Admiral Bobby Inman, visited the director of ONR to secure a commitment that ONR would get NSA's coordination on all such future grant proposals.¹²⁸

[REDACTED]



~~(FOUO)~~ NSA hunted diligently for a way to stop cryptography from going public. One proposal was to use the International Traffic in Arms Regulation (ITAR) to put a stop to the publication of cryptographic material. ITAR, a regulation based on the 1954 Mutual Security Act, was intended to control the export of items that might affect U.S. security by establishing a Munitions List, including SIGINT and COMSEC equipment and cryptographic devices. Companies desiring to export items on the list would have to secure licenses. Within NSA the controversy centered on the academic use of cryptography, absent a specific intention to export the techniques. The legislation granted general exemptions in cases where the information was published and publicly available, but skirted First Amendment issues and focusing on commercial motivations.¹³¹

(U) This idea was pushed internally by one Joseph A. Meyer, but was just one of several techniques being considered. In July 1977, Meyer took matters into his own hands. The Institute of Electrical and Electronics Engineers would be holding a symposium on cryptography in Ithaca, New York. Concerned about the potential hemorrhage of cryptographic information, Meyer sent a letter to E. K. Gannet, staff secretary of the IEEE publications board, pointing out that cryptographic systems were covered by ITAR and contending that prior government approval would be necessary for the publication of many of the papers. The letter raised considerable commotion within IEEE, with scholars racing to secure legal opinions and wondering if the federal government might arrest them and impound the information.¹³²

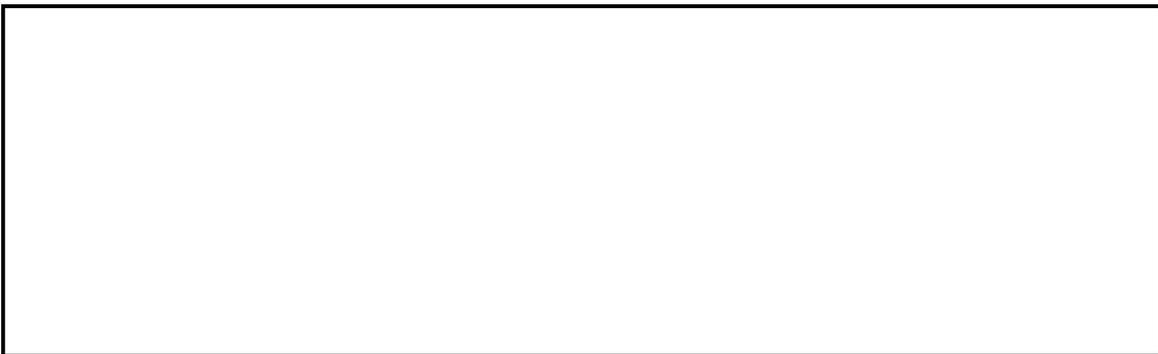
(U) The issue did not stop with IEEE. Someone notified the press, and journalist Deborah Shapley published the entire controversy in an issue of *Science* magazine. Although Meyer wrote the letter on plain bond paper, Shapley quickly discovered his association, and she claimed that NSA was harassing scientists and impeding research into public cryptography. In her view, the lack of direct traceability constituted smuggling NSA's official view covertly to academia, with plausible deniability. Congressional reaction was swift, and the Senate decided to hold hearings on the issues.¹³³

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(U) The Meyer letter was dispatched, recalled Inman ruefully, on virtually the same date that he became director. It presented him with his first public controversy, only days into his new administration.

~~(FOUO)~~ Inman began cautiously enough with that all-purpose bureaucratic solution, the study committee. That fall and winter he had two groups, NSASAB and a committee of NSA seniors, looking at public cryptography and proposing options. To this extremely complex issue the board of seniors proposed three alternatives:

- a. Do nothing. This school of thought, championed by G Group, held that any public discussion would heighten awareness of cryptographic problems and could lead to nations buying more secure crypto devices. This threat was especially acute in the Third World.
- b. Seek new legislation to impose additional government controls.
- c. Try nonlegislative means such as voluntary commercial and academic compliance.¹³⁴



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(U) Inman first chose the legislative solution. Daniel Silver, the head of NSA's legal team, circulated a draft of a new Cryptologic Information Protection Act. This proposed creating a new entity, the U.S. Cryptologic Board, which could restrict dissemination of sensitive cryptologic material for up to five years and would impose severe penalties (five years in prison, a \$10,000 fine) for violation.¹³⁵

(U) But Inman himself recognized the unlikelihood of getting Congress to act. NSA's proposed legislation would run against a strong movement in the opposite direction in both Congress and the White House, where the desire was to unshackle U.S. commerce from any sort of Pentagon-imposed restriction on trade. Even as the NSA seniors were recommending strengthening NSA's control over cryptography, President Carter was signing PD-24. This presidential directive divided cryptography in half. "National security cryptography," that which pertained to the protection of classified and unclassified information relating to national defense, would remain with NSA. But the directive also defined another sort of issue, "national interest" cryptography, which pertained to unclassified information which it was desirable to protect for other reasons (international currency exchange information, for instance). Protecting this type of

~~HANDLE VIA TALENT KEYHOLE COMINT CONTROL SYSTEMS JOINTLY~~

information and dealing with the private sector on such protection (for instance, on DES), would become part of the domain of the Commerce Department. The National Telecommunications and Information Administration (NTIA), within Commerce, would be responsible for dealing with the public. NTIA moved promptly to assert its authority in the area of cryptographic export policy and to deal with academia over cryptography. NSA mounted strong opposition to both moves.

~~(FOUO)~~ Daniel Silver's draft legislation was basically dead on arrival, and there is no evidence that it was ever seriously considered. But the war between NSA and Commerce was only beginning. Congressman L. Richardson Preyer, who had taken over Bella Abzug's House Subcommittee on Government Information and Individual Rights, led a series of hearings on NSA's "interference" in academia. Preyer worked under the direction of Congressman Jack Brooks, chairman of the full House Government Operations Committee, who was the most vocal sponsor of Commerce's encroachment on NSA's COMSEC turf. Bolstered by the testimony of David Kahn and George Davida, he was predictably critical of NSA's role in public cryptography. Inman, upset with the draft subcommittee report, went to Congressman Edward Boland, who chaired the HPSCI. Boland, agreeing with Inman's complaint, told Brooks that future matters of this sort, which affected national security and intelligence operations, should be coordinated in advance with his committee. This did not end the sniping between NSA and Brooks, but did give the Agency a powerful ally.¹³⁶

~~(FOUO)~~ Within the administration it was guerrilla warfare. The Carter people came to town temperamentally allied with Brooks and Preyer. Their bent was to loosen Pentagon control of anything, especially anything that might affect individual rights and academic freedom. But Inman was a tough infighter and got the Department of Defense to line up behind NSA's position in opposition to NTIA. Through four years of Carter, the matter dogged the White House and frustrated compromise between the Commerce position and the Pentagon determination to gain back its authority. By the time Dr. Frank Press, Carter's advisor on technology policy, was ready to adjudicate the dispute, the 1980 elections were upon the administration, and the solution was deferred to the incoming Reagan people. In the meantime, Inman had succeeded in dividing Congress and securing allies in the fight.¹³⁷

(U) Inman was convinced from the start that the legislative approach, even if successful, would have to be supplemented by some sort of jawboning with academia. Early in his administration, he decided to visit Berkeley, a center of opposition to any sort of government intervention, and a hotbed of raw suspicion since the early days of the Vietnam War. He found himself in a room with antiestablishment faculty members, and "for an hour it was a dialogue of the deaf." Then the vice chancellor of the University of California, Michael Heyman, spoke up. Just suppose, he said, the admiral is telling the truth and that national security is being jeopardized. How would you address the issue? Instantly the atmosphere changed, and the two sides (Inman on one side, the entire faculty on the other) began a rational discussion of compromises. This convinced him that he was on the right track, and he pursued this opening to the public.¹³⁸

(U) Inman followed this with a visit to Richard Atkinson, head of the National Science Foundation, to discuss the ideas that had emerged at Berkeley. The faculty had expressed a desire to get an "honest broker," one that both sides trusted, to sort through the issues and get to a compromise. Atkinson suggested that they approach the American Council on Education (ACE), and agreed that if ACE would agree to sponsor the effort, the National Science Foundation would fund it.¹³⁹

(U) This presented NSA with a historic opportunity to engage in a rational debate with the private sector, and it drove Inman to bring the issue to the attention of the American public. His forum was the annual meeting of the Armed Forces Communications Electronics Association in January 1979. It was the first public speech by an NSA director, and as Inman said at the outset, it was "a significant break with NSA tradition and policy." He then laid out the conflicting interests - academic freedom versus national security. He advocated a problem-solving dialogue, but also acknowledged that the government might on occasion have to impose restrictions on extremely sensitive technology to protect national security. "I believe that there are serious dangers to our broad national interests associated with uncontrolled dissemination of cryptologic information within the United States. It should be obvious that the National Security Agency would not continue to be in the signals intelligence business if it did not at least occasionally enjoy some cryptanalytic successes." On the other hand, the government might have to permit the free exchange of technology, taking action in only the most difficult cases. The important thing, he stressed, was to talk through these issues so that both sides understood what was at stake and could appreciate the position of the other side. And he articulated the long-range importance of the problem: "Ultimately these concerns are not those merely of a single government agency, NSA. They are of vital interest to every citizen of the United States, since they bear vitally on our national defense and the successful conduct of our foreign policy."¹⁴⁰

(U) The public opening was followed by a series of meetings, sponsored by ACE, to devise a forum to begin the dialogue. Some members (most notably George Davida) held out for a complete absence of any controls on academia, but the majority concluded that controls would be necessary when national security was involved. What emerged was a procedure for prior restraint, involving a board of five members, a minority of whom would be from NSA, to review publication proposals. Submissions would be voluntary, and the area of examination would be very limited. The proposal passed with the unlikely Yes vote of Martin Hellman, who had earlier been subjected to some private jawboning by Inman. He, along with others in academia, had come to believe that there was, indeed, a legitimate national security interest in what they were doing.¹⁴¹

(U) Prepublication review turned out to be less of a real than an imagined threat to First Amendment freedoms. The committee requested very few changes to proposals, and most of those were easily accomplished. In one case, NSA actually aided in lifting a secrecy order placed on a patent application. The submitter, Shamir of RSA fame, thanked NSA for its intervention. At the same time, NSA established its own program to fund research proposals into cryptography. Martin Hellman was one of the first applicants.¹⁴²

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(U) As for DES, the controversy quieted for a period of years. DES chips were being manufactured by several firms and had become a profitable business. In 1987, NSA proposed a more sophisticated algorithm, but the banking community, the prime user of DES, had a good deal of money invested in it and asked that no modifications be made for the time. By the early 1990s it had become the most widely used encryption algorithm in the world. Though its export was restricted, it was known to be widely used outside the United States. According to a March 1994 study, there were some 1,952 products developed and distributed in thirty-three countries.¹⁴³

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2. (U) Inman biography; Interview, Adm (USN, Ret.) Bobby R. Inman, 18 June 1997, by Tom Johnson, OH 9-97, NSA.
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4. (U) Inman interview.
5. (U) *Washington Post*, December 17, 1991, Sec. A, 1; Persico, *Casey*, 211.
6. (U) Inman interview.
7. (U) Inman interview.
8. (U) Arthur D. Little Study, 1978, in CCH Series XII.D.
9. (U) Inman interview.
10. (U) Interview, William T. Kvetkas, by Tom Johnson, July 10 and 11, August 6, 1996, OH 25-96, NSA.
11. (U) Personal interview with Milton Zaslow, June 1997.
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13. (U) Christopher Andrew, *For the President's Eyes Only: Secret Intelligence and the American Presidency from Washington to Bush* (New York: HarperCollins, 1994), 426.
14. (U) John Ranelagh, *The Agency: The Rise and Decline of the CIA* (New York: Simon and Schuster, 1986), 632.
15. (U) Carter Library, NSF, in CCH Series XVI.
16. (U) Ranelagh, *The Agency*; Andrew, *For the President's Eyes Only*, 428.
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18. (U) Adm Stansfield Turner, *Secrecy and Democracy: The CIA in Transition* (Boston: Houghton Mifflin, 1985); Ranelagh, *The Agency*, 639.
19. (U) Carter Library, NSF, in CCH Series XVI.

20. (U) Interview, [redacted] by Tom Johnson, 30 May 1997, OH 8-97, NSA.
21. (U) Interview, [redacted] by Tom Johnson, 24 January 1997, OH 2-97, NSA.
22. (U) Carter Library, NSF, in CCH Series XVII.I, "Sino-Viet Border."
23. (U) [redacted] interview; Inman interview; Carter Library, NSF, President's Daily Brief file.
24. (U) Inman interview; Turner, *Secrecy and Democracy*, 262-63; Interview, Michael A. Smith, by Tom Johnson and [redacted] 8 September 1997, OH 14-97, NSA.
25. (U) Inman interview.
26. (U) Ibid.
27. (U) CCH Series XIV.1; XII.H.28; Andrew, *For the President's Eyes Only*, 429.
28. (U) CCH Series VI.JJ.1.1; XII.H.14.1.
29. (U) CCH Series VI.JJ.1.1; Interview, Milton Zaslow, by Tom Johnson, 1 October 1996.
30. (U) CCH Series XII.H.14.1.
31. (U) Turner, *Secrecy and Democracy*, 254-57; ACOMP memo, 21 July 1981, in CCH Series XII.D; Bob Woodward, *Veil: The Secret Wars of the CIA 1981-1987* (New York: Simon and Schuster, 1987), 73.
32. (U) Ray S. Cline, *The CIA Under Reagan, Bush and Casey* (Washington, D.C.: Acropolis Books, 1981), 272; Interview, Meyer J. Levin, by Robert D. Farley and Tom Johnson, 14 January 1987, OH 2-87, NSA; Carter Library, NSF, in CCH Series XVI. I., "Intelligence Oversight."
33. (U) Carter Library, NSF, in CCH Series XVII.I., "Intelligence Oversight."
34. (U) The section on Panama is taken from a draft history by [redacted] in CCH files; unless otherwise cited, it is the source.
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41. (U) Talbot, *Endgame*.
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- 54. (U) HF Modernization Study, 1977, in CCH Series XII.D.
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- 67. (U) TKPMO files, "Kunia Facility Briefing" (undated).
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[Redacted]

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- 74. (U) Ibid.

[Redacted]

- 76. (U) Ibid.

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[Redacted]

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110. (U) Ibid; Interview, Eugene Becker, by Tom Johnson, 14 May and 13 June 1996, OH 11-96, NSA.
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113. (U) NSA Archives, 33249Z, G18-0706-2.
114. (U) Letter from Ellsworth to Bush, 2 November 1976, in CCH Series XII.D.
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126. (U) [redacted] "NSA Comes Out of the Closet," 10; [redacted] *Fifty Years of Mathematical Cryptanalysis*, 78.
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128. (U) [redacted] "NSA Comes Out of the Closet," 10; [redacted] *Fifty Years of Mathematical Cryptanalysis*, 80.
129. (U) Kahn, "Cryptology Goes Public," 154-55; [redacted] "NSA Comes Out of the Closet," 16.
130. (U) Kahn, "Cryptology Goes Public," 155; [redacted] "NSA Comes Out of the Closet," 16.
131. (U) [redacted] "NSA Comes Out of the Closet," 11; DDIR files, 96026, Box 4, Drake Notebook.
132. (U) Kahn, "Cryptology Goes Public," 155-56; [redacted] "NSA Comes Out of the Closet," 13.
133. (U) [redacted] "NSA Comes Out of the Closet," 12.
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142. (U) Boardman interview; Report of a Special Panel of the ACM U.S. Public Policy Committee (USACM), *Codes, Keys, and Conflicts: Issues in U.S. Crypto Policy* (New York: ACM, 1994).

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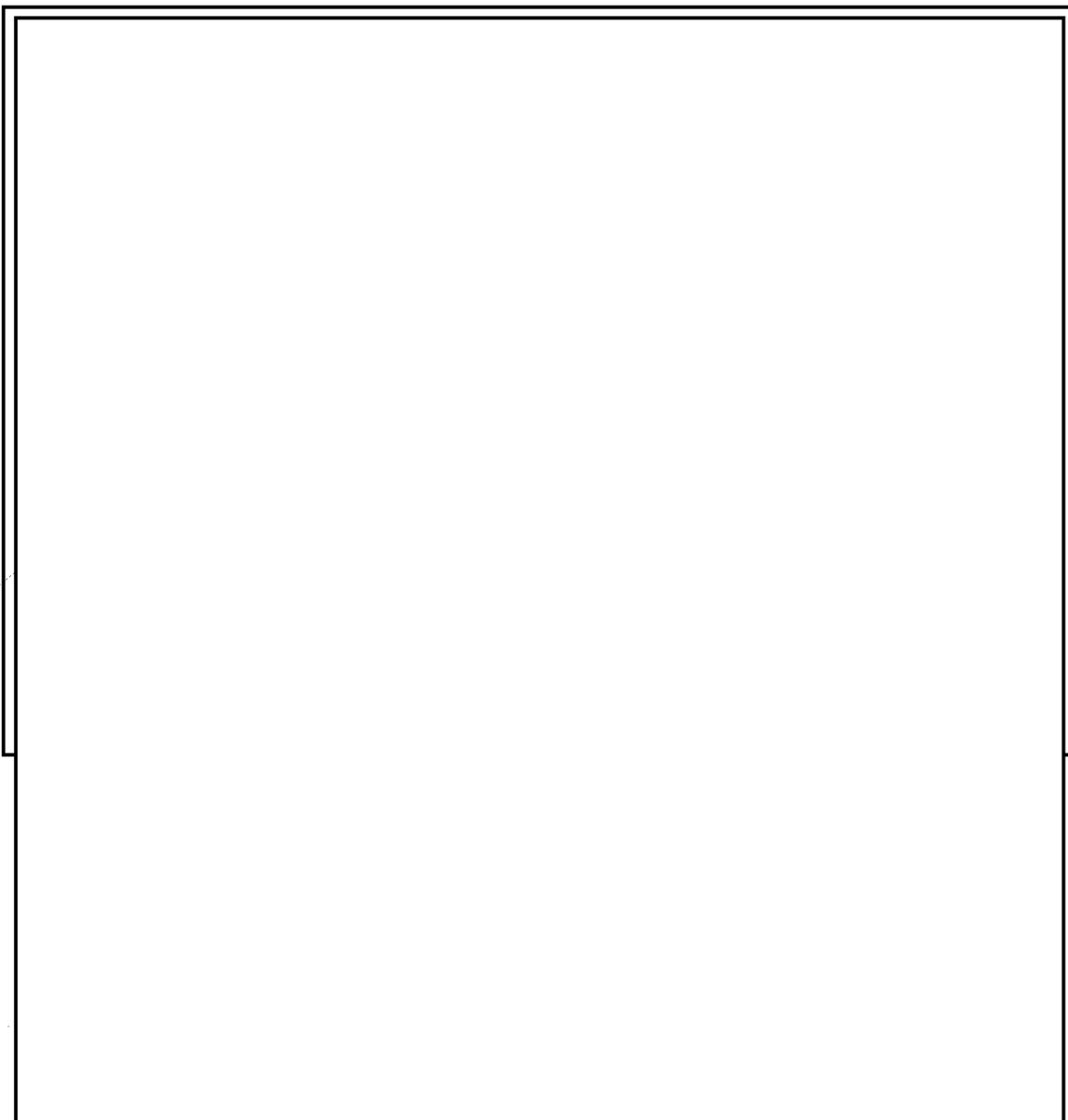
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(U) Chapter 20

The Foreign Policy Crises of the Carter Years

(U) Late in his administration, Jimmy Carter was dogged by a series of foreign policy crises that ultimately led to his defeat in 1980. In all of those crises there was a cryptologic component.

(U) THE IRANIAN REVOLUTION

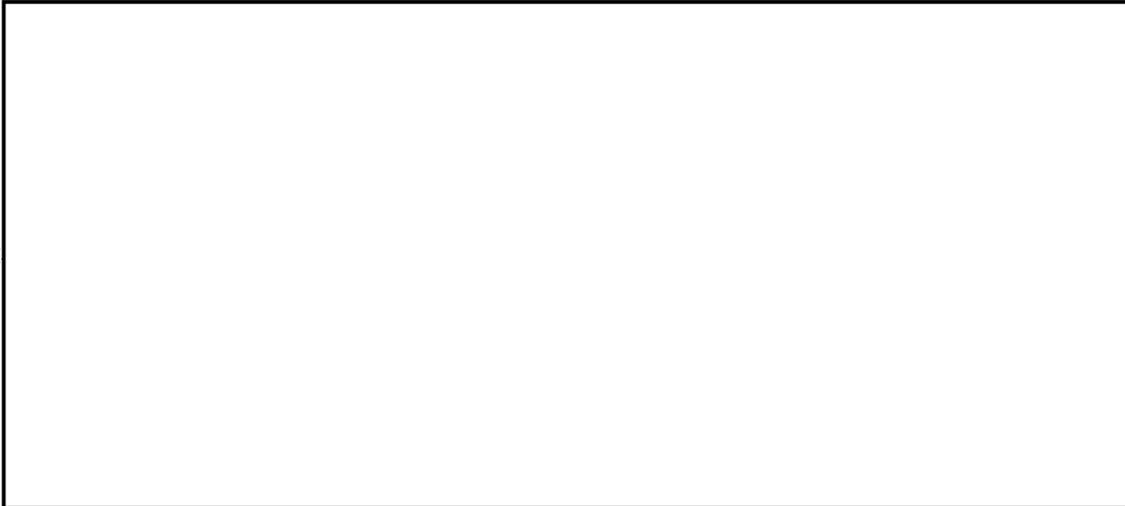


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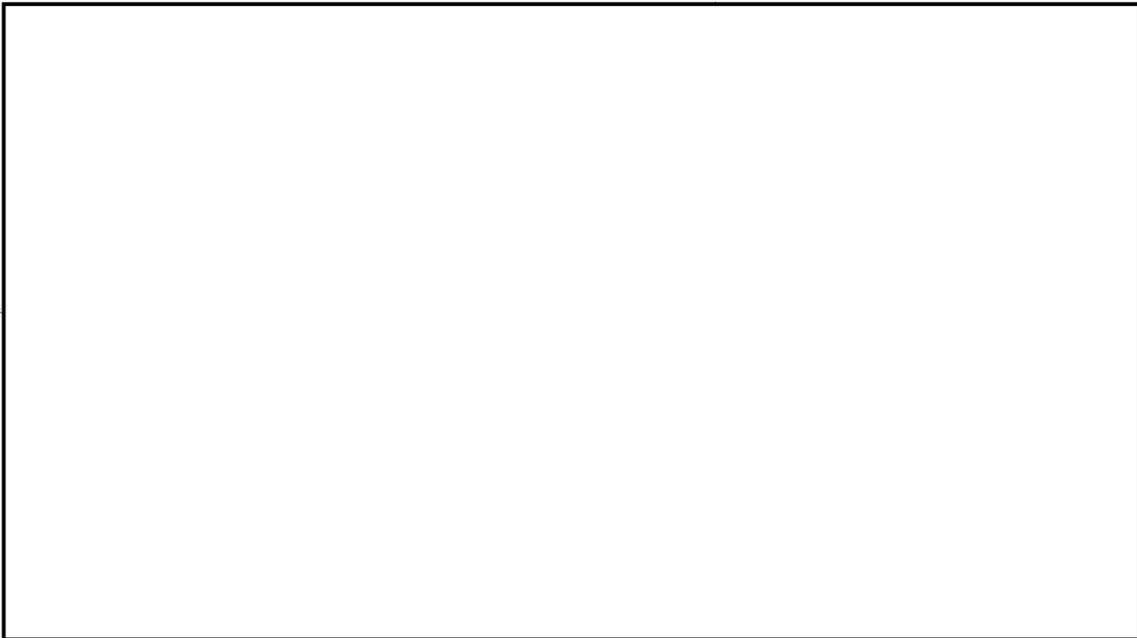
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(U) At the beginning of the Carter presidency, White House advisor Samuel Huntington predicted that Iran was the most likely trouble spot for Americans. It was a lonely prediction, because there was little direct indication that the shah was in trouble or that Iran would descend from a developing Third World country with substantial oil resources into a medieval swamp.⁶

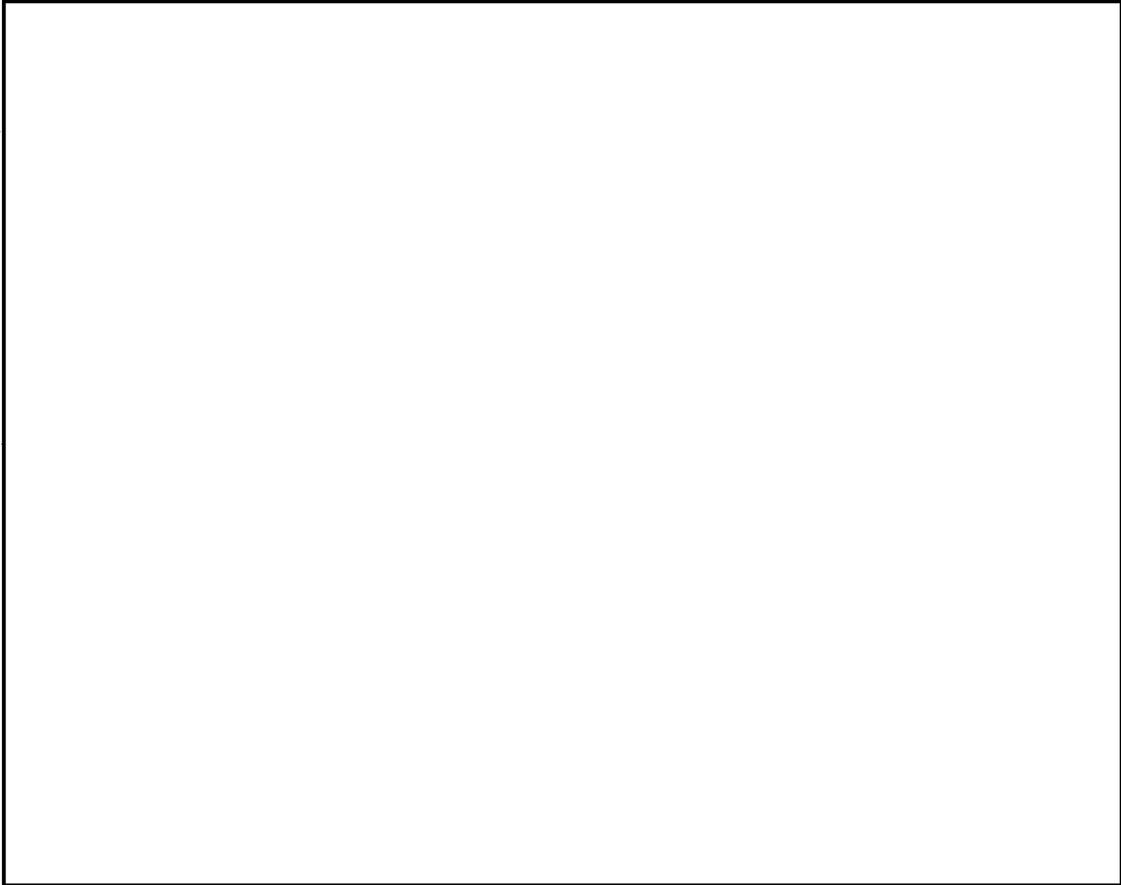
(U) The trouble began in mid-1978 and developed with frightening speed. By November a previously obscure radical cleric named Khomeini, in exile in Iraq, seemed to hold all the cards. By then, CIA, DIA, and the State Department were pessimistic about the shah's prospects for holding onto his throne. Indeed, the shah departed in January of 1979, and Khomeini swept into power. It was a breathtaking defeat for CIA, which had invested so much stock in the shah personally and in Iran as the pedestal of American presence in the Persian Gulf region.



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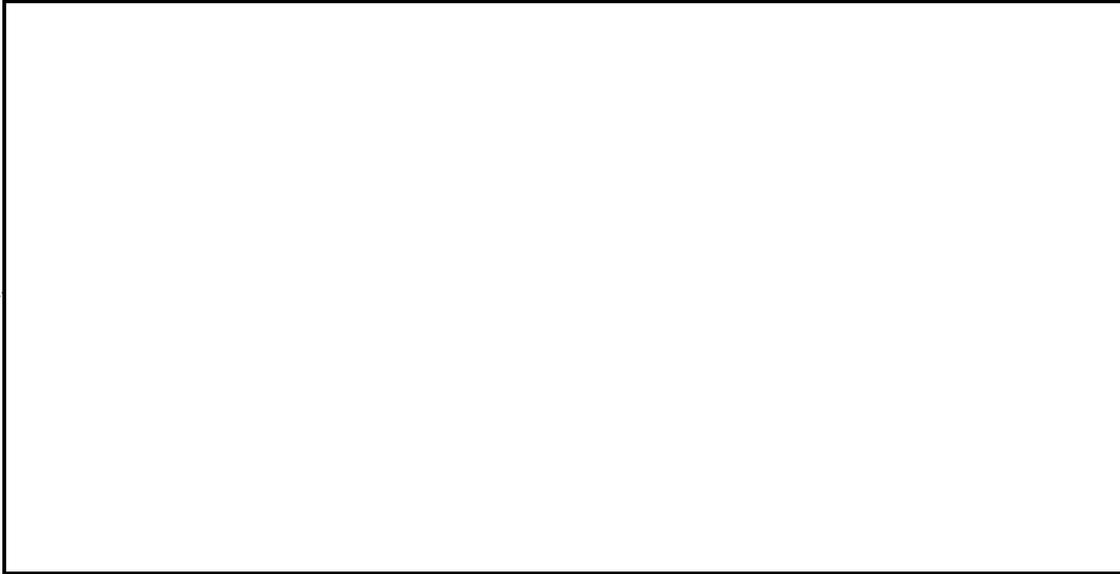
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(U) Marching a prisoner around the occupied embassy in Tehran

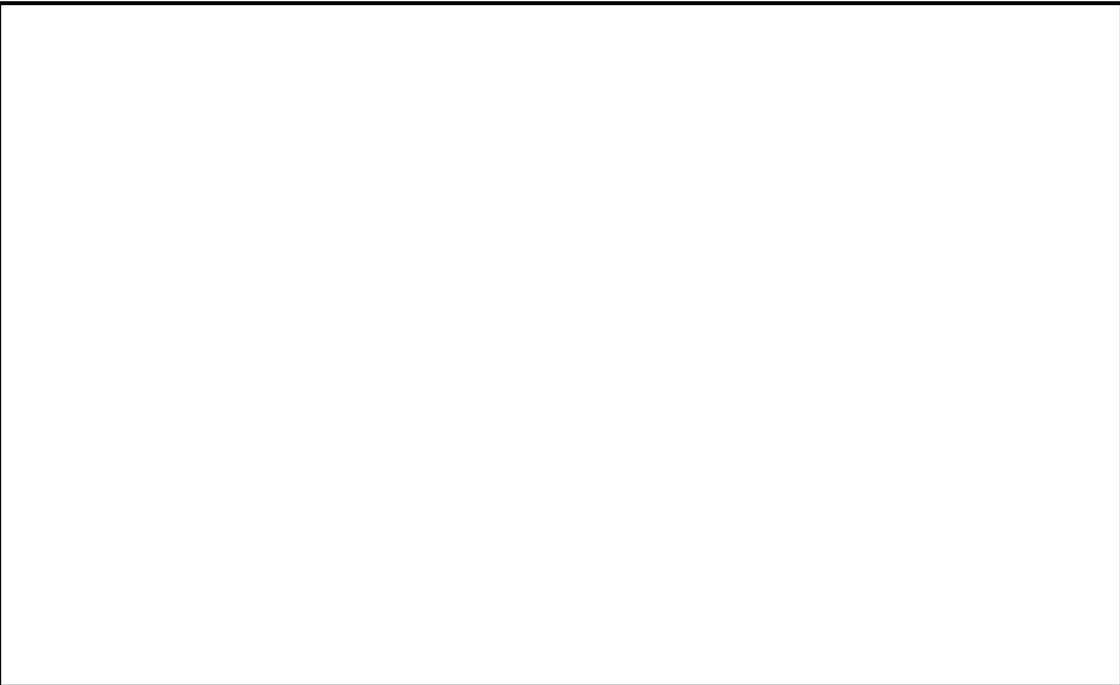
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~~(S-CCO)~~ The Carter presidency became hammerlocked over the hostage crisis and remained so until the very hour that Carter turned the White House over to Ronald Reagan. Brzezinski, always a hardliner on foreign affairs, began planning for a hostage rescue attempt the day after the second embassy takeover. He received little encouragement from Carter, who didn't believe in force to settle matters, but continued to direct a Pentagon response which envisioned some sort of forcible recapture operation.

 but security was very tight, and neither NSA nor DIA was informed.¹⁴

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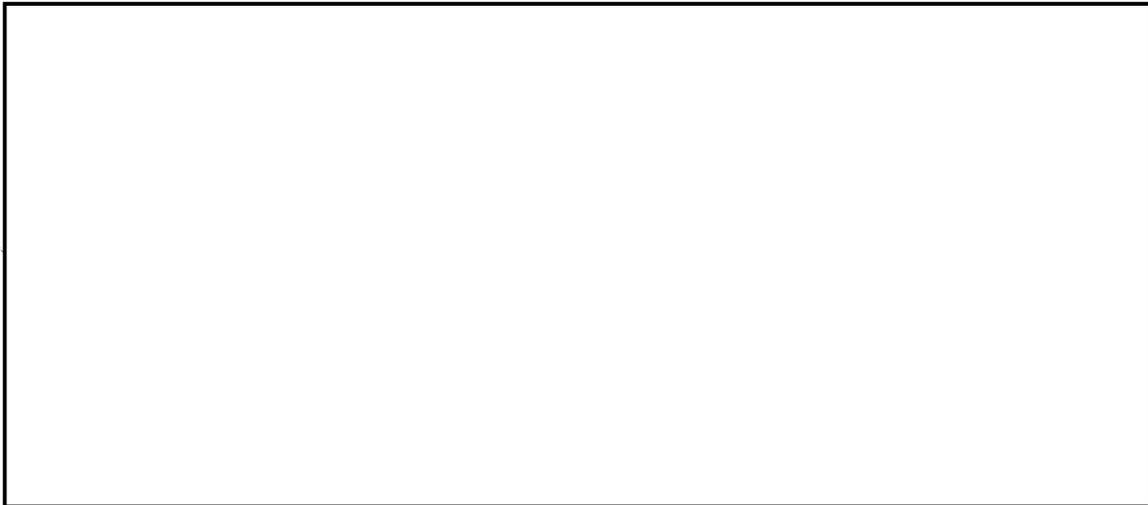
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(U) Carter remained committed to diplomatic efforts through February 1980. Through intermediaries the State Department was in touch with Iranian president Bani-Sadr, who agreed to work a face-saving compromise that would get the hostages out. This fell through when Khomeini discovered the scheme, and the president felt the last hope was gone. He turned to the Pentagon, which had been refining its scheme for three months. The JCS plan was to fly eight helicopters from the USS *Nimitz*, anchored in the Gulf of Oman, to a secret staging base in southern Iran, where they would meet six C-130 transports carrying ninety members of the rescue team plus fuel and supplies. The transports would return [redacted] while the choppers would continue on to another secret base outside Tehran. The next night trucks purchased by an American agent in Tehran would carry the team into the city. Once they got the hostages, they would all be retrieved by the helicopters, which would ferry them back to the secret base, where they would be met and placed aboard C-141 transports for the trip out of Iran.¹⁷

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(U) THE SOVIET INVASION OF AFGHANISTAN

(U) The takeover of the U.S. embassy in Tehran in November 1979 set the Middle East ablaze. Inspired by the radical Islamic movement in Iran, radicals stormed the Grand Mosque in Mecca, only to be put down with great violence by the conservative Saudi regime. Reacting to rumors that it was really the "wicked Americans" who were behind the troubles in Saudi Arabia, American facilities in Pakistan, including the U.S. embassy in Islamabad, were mobbed. A few weeks later, following more troubles for the United States elsewhere in the Middle East, the American embassy in Libya was attacked. For a time it seemed that the entire region would come apart.



(U) Iran and Afghanistan

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~~(TSC)~~ The Carter administration, already immobilized by the hostage drama in Tehran, feared that the destruction of the political status quo could be an opening wedge for Soviet ambitions, which seemed boundless at the time. The Persian Gulf, now lacking the stabilizing pro-American force of the shah, could succumb. This fear was heightened by a series of Soviet military exercises which had as their objective a postulated invasion of Iran and a march to the Gulf. [REDACTED]

(U) The president responded with a State of the Union Address in January of 1979 that did not sound like the old Jimmy Carter. "Let our position be absolutely clear. . . . An attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force."²¹ He followed this Carter Doctrine with a request for a 5 percent increase in military spending and a proposal that all men eighteen to twenty-six be required to register for a future draft. He began an expansion of U.S. military presence in the Gulf, and announced that the U.S. would not participate the next year in the Moscow Olympic Games.²²

(U) Afghanistan did not become important on the world stage until, in the latter half of the nineteenth century, Russian expansion into Central Asia ran into British expansion in the Indian subcontinent. Following a series of small wars in which the British were spectacularly unsuccessful, Afghanistan became a buffer between the two larger powers. The British continued to muddle unhappily in Afghanistan's affairs through World War I, when the tables turned and the independent-minded Afghans began cozying up to the new Soviet government under Lenin. Had the Soviet Union fully understood how much trouble the British had had in Afghanistan, they might not have gotten involved.²³

(U) As the United States moved into the area to try to replace British influence after World War II, the Soviet Union continued a more successful penetration from the north. In the 1960s a communist movement under Nur Mohammed Taraki and Babrak Karmal, sponsored by the Soviets, began to challenge the constitutional monarchy. In April 1978 a group of army officers carried out a well-planned, if bloody, coup in Kabul. The president, Mohammed Daoud, and his entire family were summarily executed, and Taraki became prime minister. His foreign minister, Hafizullah Amin, had played a key role in the military operation.

(U) With influence built up through many years of aid to the Afghan government, the Soviets were in a strong position. In May they established a military assistance group, and by mid-year 2,700 Soviet military advisors were in country. Afghan air bases at Bagram, Shindand, and Kabul came under direct Soviet supervision. The Soviet Union announced that, in the event of a crisis (even an internal crisis), they would intervene. This was not an entirely hypothetical possibility. The Afghan regime under Taraki was absolutely riven by tribal-based factions, the most important of which were the Khalqist group under

Taraki and the Parchemi faction under Babrak Karmal. Taraki had ousted Karmal, who was living in the Soviet Union and waiting for his turn. The Parchemis longed for power.²⁴

~~(S)~~ [redacted] Internecine warfare between Khalkists and Parchemis grew worse through 1978. Early in 1979 anti-Taraki forces kidnapped U.S. ambassador Adolph Dubs, and in the ensuing ill-advised rescue attempt (supervised by the Soviets) Dubs was killed. In retaliation, President Carter reduced the American diplomatic presence and halted all U.S. aid.

~~(TSC)~~ Soviet contingency planning for an invasion probably began as early as 1978, but by March 1979 the urgency of the situation pushed them into hasty preparations. Soviet exercises in the spring took on the look of an invasion scenario. Top KGB officials met with Marshal Sergey Sokolov, first deputy minister of defense, on May 25 to discuss the route of march for an invasion. [redacted]

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(U) Soviet frustration with the Taraki government was growing. His deputy, Hafizullah Amin, was becoming increasingly autocratic, and Taraki was no longer in full control of the situation. Soviet concern was tipped off in June with a press announcement that General Pavlovskij, commander in chief of the Soviet Army, would visit Afghanistan in August. His visit lasted until October. As one journalist commented, "Pavlovskij stayed on in Afghanistan far longer than he had needed eleven years earlier to plan the invasion of Czechoslovakia."²⁷

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[Redacted]

(U) The first crisis came on September 14, while Pavlovskij was still in country. At a meeting in Kabul arranged by the Soviets, at which Taraki supporters were to have ended the Amin threat, the opposite happened. There was a shootout between Amin and Taraki supporters. Amin's people came out on top; Amin arrested Taraki, and two days later Taraki's resignation was announced "for health reasons."²⁹

~~(TSC)~~ The White House was well aware of Soviet concern over the situation. Beginning on September 10, intelligence reports to the president, [Redacted] began to discuss the possibility that the Soviet Union might be forced to act. [Redacted]

[Redacted] This was, in fact, probably earlier than the Soviets themselves decided. Most probably they waited for the return of Pavlovskij to Moscow. In any case, the decision was probably made sometime in October.³⁰

~~(TSC)~~ Then the issue began to fade in Washington. The Iranian hostage crisis of early November pushed Afghanistan off center stage, and there appeared to be nothing especially dramatic happening in Kabul. But early December saw accelerated activity.

[Redacted]

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~~(TSC)~~ During the week prior to Christmas, Soviet forces continued to pour into staging bases in southern USSR, [Redacted]

[Redacted]

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[REDACTED]

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[REDACTED]

~~(TSC)~~ This time there was no "intelligence failure." The postmortems, which began at the White House level only days after the invasion, were unanimous in describing it as an intelligence success. Generalized warnings had begun in September, and specific warnings preceded the operation by at least ten days. The Soviets followed their own doctrine, and intelligence followed the Soviets every step of the way. [REDACTED]

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[REDACTED]

~~(S-CCO)~~ December of 1979 marked a high-water mark of sorts [REDACTED]
[REDACTED] After years of struggle, it was now possible to predict with some clarity and speed the intentions of the major antagonist. It had been a long walk from Pearl Harbor.

(U) THE SINO-VIETNAMESE DISPUTE

(U) With the United States out of Southeast Asia, the inhabitants of that area took to internecine disputes. Every country, it seemed, had a border dispute with its neighbors. One of the most serious was between Vietnam and Cambodia. Years of low-level conflict broke out in full-scale battle in December 1977. It did not take Vietnam long to decide that the only solution was to take over Cambodia and install a puppet government, and they accomplished this by ejecting the blood-stained forces of Pol Pot from the capital and placing their own man, Hun Sen, in power.

(U) Vietnam was still supported economically and militarily by the Soviet Union, to neighboring China's great concern. The expansion of Vietnamese influence in Southeast Asia was thus a matter of considerable nervousness to the Chinese, and they openly supported Pol Pot, partly to insure a balance in the country. But there were other, peripheral, issues that went into the mix. The two countries were involved in a dispute over the ownership of some potentially oil-bearing islands in the South China Sea, and the Sino-Vietnamese border was still in dispute in places. Vietnam had a large ethnic Chinese population, whose treatment China regarded as falling within its area of concern. During

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1978 Vietnam moved many Chinese out of population centers and into "new economic zones" to ease an economy in crisis, but China considered this to be discrimination.

~~(SC)~~ China opened up a diplomatic war on Vietnam in the spring of 1978, portraying Vietnam as a Soviet Cuba in Southeast Asia. But diplomacy was getting them nowhere, and in the late summer they began planning for punitive military action. The movement of troops, begun in a very small way in late spring, moved forward in earnest in October.

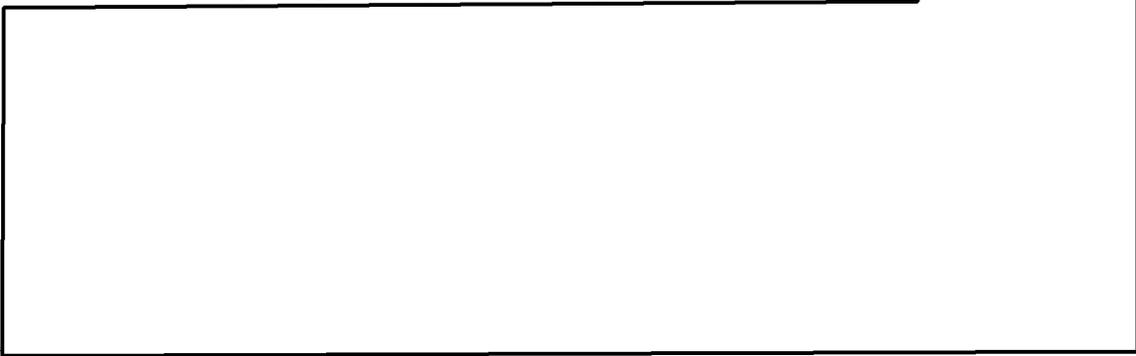
 Chinese ground forces began moving from their garrisons in Kunming, and were joined by other units from the central provinces of Wuhan and Chengdu, the Chinese Army's base area. By February 1979 the Chinese enjoyed a numerical superiority of more than four to one over Vietnamese forces along the Sino-Vietnamese border.³⁴

~~(SC)~~ The air defense posture, too, underwent considerable augmentation. The Chinese bolstered their tactical air strength along the border, the main increase coming after the first of the year. In all, they moved nearly 500 aircraft into the area, bringing their military aircraft total to about a four-to-one advantage. They coupled this with large-scale air exercise activity. The naval changes were slower and less dramatic, but had the same effect and, in the end, increased Chinese naval forces in the Gulf of Tonkin to record levels.³⁵

~~(SC)~~ None of this was a secret, nor was it designed to be. Unlike the Soviets, the Chinese relied on well-publicized moves as part of their negotiating posture. 



~~(TSC)~~ Just to insure that there was no mistake, Chinese premier Deng Tsao Ping, in his state visit to Washington in January 1979, told President Carter that they intended to "teach Vietnam a lesson." Carter's main concern, aside from wanting to resolve all international disputes peacefully, was about possible Soviet reactions. 



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(U) Chinese premier Deng Tsao Ping with Cyrus Vance, January 1979

~~(S)~~ The assault began early in the morning of February 17, and within a few days the Chinese had achieved their military objectives, which consisted of capturing several small border towns. But it was a much tougher fight than they had bargained for. Against the outmanned Vietnamese they took heavy casualties, and when Deng announced on March 5 that they would begin to withdraw, it was in the manner of declaring victory and going home. Their ground forces had taken a pounding, and they never even tried to match their air force against the more capable Vietnamese. [redacted]

[redacted]

~~(S)~~ [redacted]

And every diplomatic tiff between the two countries was accompanied by Chinese threats to teach Vietnam a "second lesson." But the lesson never came - the Chinese were apparently not anxious to display further military weakness.

(U) THE SOVIET BRIGADE IN CUBA

(U) Near the end of the Carter administration, one of the most bizarre episodes in American [redacted] history occurred. It related to Soviet forces in Cuba and began with the Cuban Missile Crisis of 1962.

(U) During the crisis the intelligence community believed that a Soviet ground combat unit was present near Santiago de las Vegas in Cuba. The matter came up in the context of the removal of the offensive missiles, and in early 1963 President Kennedy admitted

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publicly that some 17,000 Soviet troops were still on the island. Included in the number were four combat units totaling about 6,000 men. The Kennedy administration dropped the subject with the Soviets, and in February of 1964 [redacted]

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[redacted] most of the combat troops were gone and the bases transferred to Cubans. This seemed to end the issue.³⁹

~~(S)~~ But the issue refused to die. In the early 1970s intelligence (what type we are not informed) indicated that the Soviets still had about 2,000 troops in Cuba: 1,500 at the Lourdes SIGINT site and the rest at the MAG (military advisory group). [redacted]

[redacted]

~~(S)~~ In November 1978 the Cuban issue suddenly got a boost. In that month intelligence discovered new MiG-23 aircraft in Cuba with a possible ground attack role. While the Community stewed about the possible meaning of this new information, it hit the press. The Carter administration was already becoming sensitized to the Cuban issue, as Cuban soldiers began appearing in Ethiopia and Angola. Journalists and amateur fanciers of international intrigue worked the issue to a frenzy, and in the spring of the following year the White House, at the instigation of an NSC staffer, Colonel William Odom, decided to do a full-scale study of the Cuban threat.⁴¹ Odom, a Brzezinski protegé, frequently took a hard line on Soviet issues.

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[redacted]

~~(S-CCO)~~ The intelligence community might have continued to mull the issue for months, but time ran out. On July 17 Senator Richard Stone of Florida made a public announcement referring to a Soviet combat unit in Cuba. Stone evidently had inside information. [redacted]

[redacted] Just a week later Stone sent a letter to the president stating that it appeared that "the Soviet Union was setting up a high-ranking command structure in Cuba."⁴³

[redacted]

[REDACTED]

(U) The matter made the rounds of the press corps, but it was the August recess, and not much could jar Washington during the summer doldrums. But then Senator Frank Church, who was engaged in a tough (and ultimately unsuccessful) reelection campaign, was briefed on the issue by a White House aide, and asked Secretary of State Cyrus Vance if he could go public with it. Vance realized that it would come out anyway and authorized Church to go with it.⁴⁵

(U) Church's sensational press releases brought the argument to a boil in the Senate, and hardliners proclaimed that ratification of SALT II (which had been on the senatorial plate for the fall session) would be placed on hold. The administration, not wanting to seem less hardline than the Senate, bungled the issue by demanding withdrawal of the unit or a revision of its mission. Alarmed at the problems that the issue was causing for SALT ratification, Carter called a team of foreign policy experts dubbed the Wise Men.

(U) The administration had been scrambling to review the history of the unit and by mid-September had concluded that it was probably a lineal descendant of the unit that had been at Santiago since the Missile Crisis. Somehow the intelligence community had lost track of it, and when it again appeared [REDACTED] in 1976 it seemed to be a new thing. There was still some question concerning whether or not it had taken on a new and more aggressive-looking role, but the Wise Men advised Carter to simply ignore this and smooth the issue over. Otherwise it would jeopardize other, more important, foreign policy objectives.⁴⁶

(U) Unfortunately, Carter could not leave well enough alone. His speech on October 1, while intended to return things to the status quo, did nothing of the kind. In it he announced that he was increasing surveillance of Cuba and strengthening American presence in the Caribbean. The disbelieving Soviets told the White House that the unit had always been there, that the issue was a phony one, and that they would make no changes.⁴⁷ So the bellicose speeches of Carter and Vance achieved nothing.

(U) A month was lost on SALT ratification, and the matter was still perking in the Senate when, on Christmas day 1979, the Soviets invaded Afghanistan. The ratification process came to an outraged halt and was never resumed. So this tempest in a teapot had real and undesirable consequences.

(U) Admiral Turner predictably blamed NSA for the fiasco. He accused the Agency of grandstanding on the issue, by coming out with a product report declaring that there was a Soviet combat brigade in Cuba without previously sharing its secret with the rest of the intelligence community. NSA, he claimed, acted on SIGINT, with a little HUMINT and IMINT thrown in, when in fact the Agency was not supposed to draw such analytical conclusions. "When readers saw the designation 'combat', they imagined a unit preparing to move out of Cuba and go to war in Central America. . . . Because intelligence had never before

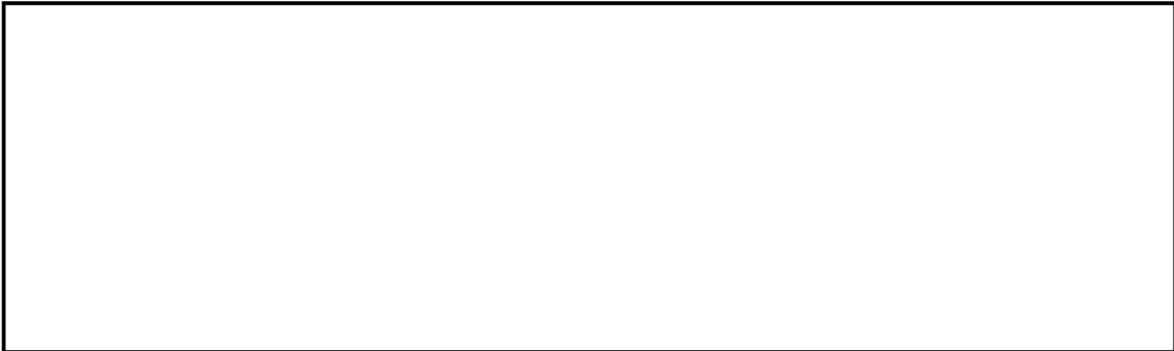
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reported a Soviet combat unit in Cuba, people assumed that the brigade had just arrived.”⁴⁸

(U) Turner’s post-CIA autobiography took NSA seriously to task:

The NSA is mandated to collect intelligence, not to analyze it. . . . Processing is regularly stretched by the NSA into full-scale analysis. In this instance, the abuse of processing was flagrant. . . . The NSA’s analysis is bound to be biased in the direction of what signals intercepts tell, and is less likely to take account of photographic or human intelligence. . . . A dangerous side effect of the NSA’s regular transgression from processing into analysis is that it leads to deliberate withholding of raw information from the true analytic agencies. The NSA wants to get credit for the scoop. Even when the NSA does release information promptly, it is so digested that other analysts can’t use it. . . . There is a fine line to be drawn here, but there is no question in my mind that the NSA regularly and deliberately draws that line to make itself look good rather than to protect secrets.⁴⁹

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(U) The basic fault, aside from that of forgetting history, was in the political handling of an intelligence event. As with the Gulf of Tonkin crisis of 1964 and the Tet Offensive of 1968, the issue seems to have been mishandled at the top.

(U) THE FINAL DAYS





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(U) President Carter in the White House

(U) The scene in the Oval Office that morning was best described by Zbigniew Brzezinski in his autobiography:

I found in the Oval Office a large group of people. The President, sitting behind the desk with the red phone in his hand [it was actually a STU-II; see photograph] listening to direct intelligence reports pertaining to the two Algerian aircraft parked on the runways at Tehran airport, said to me, 'They have been ready to take off since 8:35'. Everybody is standing around or sitting. The Vice President on the sofa, Rosalynn coming in and out and looking concerned, [Presidential assistant Jack] Watson, Gary Sick, Muskie, Jordan, Phil Wise, Pat Caddell, Jody in and out, Cutler, Kirbo. . . . At 9:55 the President talked to the operator monitoring Tehran. No flight plan has been filed yet. Moreover, the Iranians apparently have asked the Algerians not to announce any departure until the plane is outside of Iranian airspace. . . . Until the very last minute the transfer of power and departure of the President is dominated by the Iranian affair. I went down

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to the Sit Room before leaving my office to monitor the latest developments from Iran. The plane as of 11:30 was still on the ground. It became clear that the Iranians were deliberately holding it up so that the transfer of the hostages would not occur while Jimmy Carter [was] President of the United States.⁵²

Notes

[Redacted]

- 2. (U) CCH Series XII.H.27; XII.19.3.
- 3. (U) CCH Series XII.H.19.3.
- 4. (U) Ibid.
- 5. (U) [Redacted] memo, 24 February 1976, in CCH Series XII.H.19.3.
- 6. (U) Interview with Brzezinski, Albright, Denend and Odom, Miller Center Interview, Carter Presidency Project, Vol XV, February 18, 1982, 38.

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[Redacted]

- 8. (U) NSA Archives, acc nr 27263, CBUB11.

[Redacted]

- 10. (U) NSA Archives, acc nr 27263, CBUB11.
- 11. (U) Ibid.

[Redacted]

- 13. (U) Carter Library, NSF, CIA Brief, Box 22/23/24, in CCH Series XVI; [Edward Wiley] *On Watch: Profiles from the National Security Agency's Past Forty Years* (Fort Meade, Md.: NSA, 1986), 81.
- 14. (U) Inman interview; *Brzezinski, Power and Principle*.

[Redacted]

- 16. (U) [Redacted] interview.
- 17. (U) Burton I. Kaufman, *The Presidency of James Earl Carter, Jr.*, American Presidency Series: Donald R. McCloy, Clifford S. Griffen and Homer E. Socolofsky (eds.) (Lawrence, Kansas: University of Kansas Press, 1993), 173-75.
- 18. (U) Kaufman, *The Presidency of James Earl Carter*, 175.
- 19. (U) Inman interview.
- 20. (U) Carter Library, NSF, in CCH Series XVI.
- 21. (U) Kaufman, *The Presidency of James Earl Carter*, 164.
- 22. (U) Ibid.

[Redacted]

24. (U) Ibid.

25. (U) Ibid.

[Redacted]

27. (U) Ibid.

[Redacted]

30. (U) [Redacted] Inman interview.

[Redacted]

[Redacted]

33. (U) [Redacted] Inman interview.

[Redacted]

35. (U) Ibid.

36. (U) Inman interview [Redacted] interview.

37. (U) Brzezinski, *Power and Principle*; [Redacted]

[Redacted]

39. (U) Inman interview.

[Redacted]

41. (U) Carter Library, NSF, Brzezinski files, Cuba, boxes 1-4, in CCH Series XVII.I., "Cuba-Soviet Brigade."

42. (U) Ibid.

43. (U) Inman interview.

44. (U) Inman interview; Carter Library, NSF, in CCH Series XVII.I., "Cuba-Soviet Brigade"; Turner, *Secrecy and Democracy*, 230-36.

45. (U) Turner, *Secrecy and Democracy*, 230-36; Brzezinski, *Power and Principle*, 347.

46. (U) Carter Library, NSF, in CCH Series XVII.I., "Cuba-Soviet Brigade"; Kaufman, *The Presidency of James Earl Carter*, 155-56.

47. (U) Brzezinski, *Power and Principle*, 347.

48. (U) Turner, *Secrecy and Democracy*, 230-31.

49. (U) Ibid., 235.

[Redacted]

51. (U) Inman interview.

52. (U) Brzezinski, *Power and Principle*, 507-08.

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