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Historical Series

CARTOGRAPHIC SUPPORT TO CURRENT INTELLIGENCE

1951-1970

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OBGI-13

December 1972

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THE DDI HISTORICAL SERIES

OBGI-13

CARTOGRAPHIC SUPPORT TO CURRENT INTELLIGENCE
1951-1970

by



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December 1972



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Director
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HISTORICAL STAFF
CENTRAL INTELLIGENCE AGENCY

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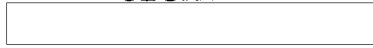
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CARTOGRAPHIC SUPPORT TO CURRENT
INTELLIGENCE, 1951-1970

I. Introduction

Current intelligence is a primary concern of the CIA and has been of great interest to the White House ever since the central intelligence concept was adopted in 1946. A number of different publications and a variety of other means have been used to convey current information, with maps and graphics playing an increasingly important role over the years. The Cartography Division (CD) has been associated with current intelligence publications since 1951, and in a particularly intimate way since 1965, designing and producing thousands of maps and graphics to illustrate the spatial aspects of current events.

This monograph traces the Cartography Division's participation in current intelligence activities. It will show how the need for the use of ever more all-source materials, for greater speed in production, and for greater simplicity in

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format became a pervasive force which required ever increasing sophistication on the part of map producers and consumers alike. Running parallel to this will be the story of how several quasi-independent and often competing graphics groups associated with current intelligence in one way or another were slowly but surely brought together by 1970 in the interest of administrative efficiency.

By and large, CIA's top management has always encouraged high-quality graphics products, and in the Cartography Division it has had a team of motivated professional cartographers accustomed to be in the lead in their field. In 1951, a very small group of cartographers was separated from the main unit, then called the Cartography Branch, to service the special requirements of offices within the Special Center. There, for over 19 years, it grew in importance and responsibility as the Agency placed increasingly greater emphasis on current intelligence production. To many people within the Center, the small unit was the only visible portion of the entire Cartography Division,

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though the job it was doing would have been impossible without the technical and research support of the larger unit. First as the Cartographic Support Section, then as the Special Support Branch (GC/X), and later as the All-Source Branch (CD/X) -- all usually known simply as "X Branch" or "Graphics" -- the unit turned out tens of thousands of specialized maps and graphics for a wide variety of requesters.

There was also a group of artist-illustrators within the Center, housed in the Office of Current Intelligence, which had existed under a similar wide variety of organizational names, sometimes in one unit, sometimes as separate units. The identity of these units was often confused with the All-Source Branch by casual observers. The responsibilities and methods of operating of the two groups were quite dissimilar, however, and the story of their relationships with each other prior to their merger into one unit in 1965 is an essential part of this monograph. After the merger, a symbiotic effect occurred

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between the two professions -- artists and cartographers -- that enabled the All-Source Branch (called CD/X after the merger) to achieve considerable acclaim in the production of high-quality specialty maps and graphics.

Throughout the period, the search for better methods of communicating vital information with an accent on brevity spurred an increased reliance upon graphics to tell essential parts of the story. Significant advances in cartographic technology, international crises requiring particular kinds of graphic products, and the strongly stated personal preferences of highly placed individuals -- including Presidents and Directors -- caused profound changes in the way things were done. No senior official was more influential in this respect than Mr. Richard Helms, both as Deputy Director and as Director of Central Intelligence. His pointed comments and continuing interest in effective graphics led to the development of several unique publications for the use of the President containing

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information of the most vital nature and relying extensively on maps and graphics to portray it.

At the beginning of the period, in 1951, the noun "graphic" -- meaning a picture, map, or diagram used as an illustration -- did not even appear in dictionaries. At the conclusion of the period, in 1970, graphics were an integral part of every major Agency publication, contributing in a major way to fulfilling the DCI's responsibility to inform the government on the significance of events taking place around the world.

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II. Where Things Stood in 1951A. The Earliest Current Intelligence Publications

President Truman's penchant for conciseness caused him to rebel at the mass of material crossing his desk dealing with intelligence in one way or another. In January 1946 he called upon Admiral Sidney W. Souers, Director of Central Intelligence in the newly created Central Intelligence Group, to have prepared for him a daily selection of items coming into Washington from all sources which would serve as a summary of the really important matters he should be aware of. 1/* The advent of the first such selection on 15 February 1946 put Central Intelligence squarely into the business of producing current intelligence reports for high-level consumers. Even so, Secretary of State Byrnes immediately protested that the daily Intelligence Summary was an invasion of his prerogatives. The President held firm, and

*For serially numbered source references see Appendix.

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the National Intelligence Authority later made the preparation of such a summary mandatory. 2/

A small Central Reports Staff in the Office of Reports and Estimates (ORE) produced the President's Intelligence Summary, with support from all other parts of the Office. In December 1949 another group -- ORE's General Division, set up for the specific purpose of handling COMINT material -- also began to produce a current intelligence publication. Following General Walter Bedell Smith's reorganization of the Agency when he became DCI in late 1950, two separate groups continued to prepare two separate dailies -- one a COMINT-only edition and one a collateral-only edition. This arrangement satisfied no one, and on 15 January 1951 the Office of Current Intelligence (OCI) was set up to produce current intelligence based upon facts and figures marshaled from all sources. Headed by Mr. Kingman Douglass, it consolidated the two predecessor groups.

In late 1951, Mr. Douglass described the activities of his Office as follows:

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1. Prepares a daily, high-level bulletin for the President and a half-dozen other officials.
2. Responsible for daily briefing of the President and the DCI.
3. Maintains a Situation Room in which maps and charts of key areas and important developments in many fields affecting national security are kept up to date.
4. Publishes a Daily Digest for general use; two weekly summaries dealing with developments of current importance; and periodic intelligence memoranda collating the most recent information on vital situations. 3/

The Current Intelligence Bulletin (the "CIB") got off to an auspicious start in 1951. The first edition was flown to President Truman who was vacationing in Florida. He immediately wrote DCI Smith, "You have hit the jackpot with this, Bedell." 4/ By 1952 the publication was going to the highest levels of government, but though maps frequently would have been useful, the severe time restraints posed an almost insuperable barrier to getting them in.

The first maps appeared in both the daily Current Intelligence Bulletin (CIB) and the weekly Current Intelligence Review (CIR) in August 1951.

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The first CIB map did not appear until the publication had been underway for almost six months,

then a map of [REDACTED]

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[REDACTED] was run in the 5 August 1951 edition

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(see Figure 1). The first CIR map, [REDACTED], was included in the third issue, 15 August 1951. These

maps -- rather crude by cartographic standards --

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were made possible by the switchover in printing from ditto to multilith, an offset process, when ORE's Intelligence Summary was supplanted by the CIB. Responsibility for producing this type of map fell to the artists attached to the Situation Room Division of OCI.

B. Cartographic and Graphics Units

Rigid security precautions surrounded the activities of OCI, and as a practical matter it was not possible to make effective use of the substantial body of cartographic expertise in the Geography Division of ORR. The same security precautions led to the need for providing several "in-house" graphics facilities and were largely

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responsible for the unorthodox division of labor that characterized cartographic support to current intelligence for many years (see Figure 2).

The Cartographic Branch of ORR's Geography Division was unique in government in the manner in which it employed professional geographers to produce special-subject maps. Its know-how emanated from experience gained over almost 10 years of working together as a team, first in the Office of Strategic Services, then in the Department of State, and after 29 December 1947 in CIA. It, too, had been part of ORE but had become a part of the Geography Division of ORR as a result of a recommendation to that effect in the Dulles Committee report. However, it had always been physically separated from the mainstream of Agency activity and was perhaps in that era temperamentally and spiritually unprepared to cope with the special time constraints imposed by current intelligence.

OCI, on the other hand, had a group of [] (b)(3)
 artist-illustrators (" []'s Shop") in the

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Technical Branch of its Situation Room Division. This group formerly had been one-half of a larger unit which had operated under various names since CIG days, always working closely with the Director and his staff on briefing aids, and it was the only graphics shop in the Agency cleared to handle COMINT material. Its charter assigned it specific responsibility to

present in graphic form the all-source intelligence available in all fields in support of substantive intelligence meetings [and] provide all graphics work for permanent Situation Room displays, as well as maps and charts for all OCI publications. 5/

For these reasons, it was the unit which produced the first CIB and CIR maps, even though its roster contained no cartographers.

The other half of the divided graphics unit was also composed of [] artist-illustrators.

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This group, known colloquially as "[]'s Shop", had functioned as the Graphics Branch of ORE for a short while after the split occurred. The dissolution of ORE left this little unit without a home in the managerial area that was to become the Directorate of Intelligence. It was at

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first slated to become a part of ORR's Publication Staff, but ORR management decreed that a more logical place for it would be the Cartographic Branch. Steps were being taken in early 1951 to move it there. 6/

The Special Center, therefore, lacked any readily available cartographic expertise, even though OCI, the Office of Scientific Intelligence (OSI), and the Strategic Division (D/Z) of ORR

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were all located there by 1951. Mr. [redacted] [redacted], a GS-11 cartographer with OSS experience, was tasked by the Chief of the Geography Division to set up a production unit in the Special Center in "Q" Building and perform such liaison functions and advisory services within the Center as he was able. It perhaps was not a coincidence that the request for a special intelligence clearance for Mr. [redacted] was initiated on the exact date (2 August 1951) OCI published the first Current Intelligence Review, presaging the stress on maps that was going to come about a few years later. By October Mr. [redacted] had been joined by [redacted]

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other assignees from the Cartography Branch, [redacted]

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[redacted].

The

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unit was soon formalized as the Cartographic Support Section of the Cartography Branch. Some knowledge of the parent branch is necessary to understand the nature of subsequent events.

The Cartography Branch was comprised of about [redacted] people, including "compilers" (professional geographers trained in cartographic research) and "draftsmen" (cartographic technicians who turned the manuscript into a form suitable for printing). The Branch was self-contained in many respects. It had been housed since 1950 in a small temporary building (Building 11) several hundred yards east of Tempo "Q" near Constitution Avenue and 23rd Street, N.W. The building had been renovated to meet Cartographic Branch requirements, and in recognition of the drastic manner in which heat and humidity changed sizes and shapes of drawing materials, it was at the time one of the few government buildings to be completely air-conditioned from a central system. The Branch had

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its own file room, its own printshop for making type and symbols, and its own laboratory for research into the technical aspects of making better maps. It also conducted its own training course for new employees and in large measure conducted its own recruitment program. Organizationally, the Branch consisted of six sections: three compilation sections, a drafting section, and the recently acquired Graphics Section in addition to the Cartographic Support Section. Relationships among the sections varied. The three compilation sections and the drafting section worked closely together. The Cartographic Support Section interacted regularly with both compilation and drafting because of its liaison function and because of the lingering associations between its members and their former colleagues in those sections. The interaction among these five units was of extreme importance in the unfolding of organizational movements which took place during the next two decades because a high degree of stability within the organization was retained,

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thus enhancing its ability to cope with changing conditions in other parts of the Agency.

The Cartographic Support Section spent the first few months of its existence establishing a presence in the Special Center (the codeword area of "Q" Building and other buildings as it expanded). Acquiring the first items of furniture was a matter of "scrounging." The unit operated as a team from the very beginning, with each person carrying on regular duties but pitching in in times of crisis to do whatever he was equipped to do. Many formal procedures followed in the parent branch proved to be unnecessary in the smaller unit, and the easy informality which arose there became a valued tradition.

At that time the Strategic Division (D/Z) was the only ORR component within the Center. It was for them that the first map produced by the new section was done: [REDACTED]

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[REDACTED]

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[REDACTED] All the data added, including all type, was hand done. The second map was also an

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[redacted]

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overprint to a base. The third map produced was in fact the first map requested. 8/ It was prepared for an economic study [redacted]

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[redacted] It, too, was an overprint to an existing base. The black plate was out of register by 1/10" and the green plate by 1/20". The type was prepared by an ingenious ("perditionous," according to [redacted]) device called an imprinter which employed letters placed into a roller and rolled across the face of the map to imprint the words in the correct location.

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These maps were remarkable achievements considering the conditions under which they were done, but their crudeness was unacceptable to the cartographer. It was soon decided to overcome the security problem by scrambling type orders and having the type prepared in Building 11. Printing quality was another matter, however, because facilities within the Center were very limited. The small printing plant in Tempo "Q" was independent of the main printing facility in South

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Building. It was originally set up to service the General Division of ORE and had made a paper transfer to the Office of National Estimates (ONE) for a short time before ending up in OCI. It would not be made a part of the Printing and Reproduction Division until late 1952. The

staff operating the multilith equipment did the black text and red classifications simultaneously. 9/ They had also learned to overprint small base maps procured in quantity from the Geographic Division with story overlay plates prepared on multilith masters by an artist or cartographer using a pencil. Maps too large or too complex for this technique were carried to the main plant and printed overnight by specially cleared personnel. 10/ These are only a few examples of the many improvisations, made one after the other, that make up the story of graphics activities throughout the early years in the Special Center. They were essential because stringent security precautions put established facilities and procedures out of reach.

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III. Shakedown, 1952-1953A. Map Production

The Cartographic Support Section provided their first CIB map 11/ on 18 January 1952, using an overprinting technique. It was to make this CIB item more meaningful:

Comment on new travel restrictions in the USSR:

The Soviet Government has enlarged the restricted travel area for foreign diplomats to include key localities in the vicinity of Moscow as well as twenty-two cities in European Russia and Siberia. This action has the effect of further limiting foreign knowledge of defensive installations surrounding Moscow. Five of the cities are located on the Trans-Siberian railroad west of Lake Baikal. With these additions to previous restrictions, all possibility of observing this main artery for the supply of war materials and industrial goods to the Far East and the Korean front is eliminated. (See map on following page.)

The overprinting method proved satisfactory, and a series of several dozen unclassified bases was put into production in Building 11 to be available for use in the CIB. These were generally known as "[redacted] maps", after their sponsor, Mr.

[redacted] of the OCI Situation Room Division.

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The CIB of 21 February 1952 contained the first
 production model of this series, depicting [redacted] (b)(1)
 [redacted] (b)(3)

[redacted] (see Figure 3). The (b)(1)
 overlay was prepared in the OCI Technical Branch (b)(3)
 using a typewriter for names and a compass to
 draw circles. The technique continued to be used
 for the next two years until the printing plant
 acquired the equipment to print maps from scratch.
 The weekly CIR began to contain both maps and
 graphics in every issue by early 1953, produced by
 both OCI's Technical Branch and Cartography
 Division's Special Support Branch.

An examination of Agency publications before
 this period reveals surprisingly few instances of
 maps being used to depict current intelligence
 situations, even in the case of Korea. This is in
 such stark contrast to the period some years later
 when [redacted] maps a day on Vietnam alone (b)(3)
 were commonplace that it gives cause to seek the
 reasons. Technical restraints were undoubtedly an
 important factor, but there existed means to over-
 come that hurdle if a strong enough demand had

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arisen. It seems in retrospect that the disjointed character and jumbled administrative control of the Agency's graphic and cartographic production resources would have hampered any efforts that might have been put forth.

B. The Special Support Branch (GC/X)

ORR was reorganized in July 1952, and the name of the Cartography Branch was changed to Cartography Division. The Cartographic Support Construction Section became the Special Support Branch (GC/X). It was initially headed by Mr.

[redacted], who left "X" to return to Building 11 as Chief of the Europe-Africa Branch in November 1952. Miss [redacted] took his place.

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GC/X worked very closely with OCI during most of the summer helping to plot intelligence information on large wall maps in the Situation Room. In the monthly report for August 1952 Mr. [redacted], the Cartography Division Chief, reported that "the Special Support Branch is well organized and can accept requests with confidence."

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In October it did [] maps for a Presidential handbook under a short deadline. In November the entire Division did a series of maps, coordinated by OCI, for the use of President-elect Eisenhower..

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C. Lack of Administrative Unity

The lack of administrative unity in graphic matters was readily apparent within the Special Center. GC/X of ORR provided cartographic support to OCI; it also provided maps and graphics to OSI and [] of ORR. The Technical Branch of OCI prepared maps and graphics for publications, maintained the Situation Room displays, and provided visual aids for the DCI and other high-level Agency officials. 12/ There was a clear (or rather, unclear) area of overlap between the two units.

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Outside the Special Center, the Cartography Division was not only fulfilling its unique responsibility to produce maps requiring cartographic research but also had under its wing a Graphic Branch which in many respects overlapped

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and even competed with OCI's Technical Branch. This unit ("[redacted]'s Shop," see section B of Chapter II, above) had been grafted onto the old Cartographic Branch as the Graphics Section in February 1951. It is essential to understand the shotgun-marriage nature of this union in order to understand two subsequent mergers in 1954 and 1965. A substantially accurate account of it was compiled for an earlier history.

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For some time in the Agency there was a group called the Graphics Branch which had been shifted from one office to anotherBecause they worked for the Agency as a whole and they did not fit in logically with any special group, no one wanted to join with them just for administrative purposes. Periodically, the Geographic Division had been approached regarding possible placement of the Graphics Section within its organization. However, they always expressed unwillingness to such a transfer because a 'large part of the Graphics Section's work was neither cartographic nor geographic in character.' In a memo to Millikan, AD/RR, on January 18, 1951, the Advisor for Management apparently suggested, possibly as a final resort, that they should put the group in the Publications Branch, ORR. (The Advisor for Management wanted the group in ORR, but the main discussion was where, in ORR.) Before this change could be effected, the D/G finally yielded because 'it has become increasingly evident however, that certain advantages to CIA would accrue from

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a transfer of this section to the Cartography Branch, D/G...also understood that your Staff is desirous of recommending such action.' Furthermore, it was to be agreed that D/G would have the same 'substantive control over graphics and art work performed for all requesters that it now has over cartographic production.' Thereupon, the AD/RR suggested to the Advisor for Management that the group be transferred to the Cartography Branch rather than to the Publications Branch as stated in the previous memo. The reasons given were that the work of the Section is 'basically dissimilar' to the Publications Branch, and direction should rest on a branch with similar functions. 13/

On 27 February 1951 the Geographic Division officially "took in" the Graphics Branch administratively. This could not be called a proper "merger," because although there was now one unit where formerly there had been two, each continued to do its own work.

The lack of a coordinated effort between ORR's Graphics Section (nee Graphics Branch) and OCI's Technical Branch, both performing the same kind of work, troubled the Chief of the Cartography Branch, Mr. [REDACTED], who mentioned in the Branch's monthly report 14/ the need for a solution to the "total graphics picture" and for several months running stressed the need for a

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survey of the graphics facilities in the Agency. Such a survey took place in late 1952. Covering 10 separate graphics facilities in the Agency, the survey report noted that "The Deputy Director (Intelligence) has requested additional graphics within OCI publications that exceed [OCI's] capabilities." It went on to recommend consolidation of the units which lent themselves to it under the "ORR Cartography Division of the Agency," since it was believed that the "Graphics Branch of ORR more closely approximates that of a central service than any other facility." ^{15/} Management did not accept this recommendation, apparently leaning more toward the findings of a similar survey in 1950 which concluded that "centralization of graphic facilities would in no way assist offices affected," although "one building housing all CIA activities would lend itself to [such] consolidation." It would be another year before serious attempts toward resolving the "graphics problem" would begin anew.

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IV. The Eisenhower Years, 1953-1960A. Graphics for the New President

President Eisenhower had been made acquainted with the CIA during the 1952 election campaign. President Truman had ordered that both candidates be given periodic briefings, and the Cartography Division had prepared some of the base maps that were used by OCI Technical Branch in making the presentation material.

With the change in administration, a grandiose scheme was undertaken at OCI's request to prepare for the White House a series of maps of the regions of the world on hand-painted panels, using enamel paint, which would be instantly available for briefing purposes. 16/ The project required a maximum coordinated effort from both OCI Technical Branch and ORR Cartography Division which sadly turned out to be largely wasted because the White House decided the maps were too cumbersome to be usable. Abortive efforts of this kind subsequently proved to be

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common with every changeover in administrations, but they illustrate the intense desire on the part of Agency people to provide a new president with useful information. Uncertainty reigns at the early stages of an administration about both the substance of the needed intelligence and the form it should take.

Eisenhower was known to prefer oral briefings over having to read reports. Both DCI Smith and DCI Dulles made frequent trips to the White House for these oral briefings, carrying large briefing panels made by either the OCI Technical Branch or the Graphics Branch in the Cartography Division. The President had additional contact with the Agency through both the CIB and the National Security Council. 17/ Presidential assistant Sherman Adams related

Ready for him (the President) when he arrived [in his office each morning] were the latest State Department, CIA and military intelligence reports and the staff secretary, at first General Carroll and later General Goodpaster, would be on hand to give him the essentials in all the various intelligence information [see Figure 4]. Once a week the White House staff was briefed by the CIA and at the

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weekly National Security Council meetings the President listened to another summary of top-secret world developments by Allen Dulles, the CIA head. 18/

A quickening interest in maps and graphics was quite evident during Eisenhower's administration. The considerable concern over the Nationalist China-Communist China problem caused large numbers of maps to be prepared on the Taiwan Straits and the offshore islands. Berlin and the Middle East area underwent recurring crises. It appeared to members of "X" Branch that a conspiracy was afoot to keep at least one hotspot going all the time, to which they had to respond with overtime.

B. Jurisdictional Disputes and OCI Graphics

It became increasingly evident in 1954 that (b)(3) the OCI Technical Branch headed by Mr. [redacted] (b)(6) [redacted] and the Cartography Division Graphic Branch (b)(3) (b)(6) headed by Mr. [redacted] were engaged in un- healthy competition. Moreover, the Graphic Branch (b)(3) (b)(6) never did fit in very well with the rest of the Cartography Division, which it had joined by default. The artists and the cartographers got

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along very well socially and as individuals, but it was clearly evident to everyone that they marched to different drumbeats professionally. Finally, in August 1954, the Chief of the Cartography Division met on several occasions with members of the DDI's Office and the Situation Room Division of OCI, 19/ and by November an agreement had been reached for the transfer of the Graphic Branch to OCI. Mr. [] expressed high praise for the departing unit and its chief and commended their contributions to the support of the Division. He noted that the Branch had shown marked improvement over the past several years, and he believed that it would contribute greatly toward the creation of an effective DDI graphics unit.

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The official notice of the change was issued on 4 January 1955. It read as follows:

1. The Technical Branch, OCI and Graphics Branch, ORR, have been consolidated into the Graphics Branch, Presentations Division, with offices in Room []

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2. The mission of the new branch includes analysis and production of graphics for all the DDI offices, but excludes cartography, which will continue in ORR.

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3. Mr. [] has been designated Chief of the new Graphics Branch. 20/

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The new Graphics Branch came immediately to be known as "OCI Graphics." Soon after its official establishment, which was more than two months after the fact, a new version of the Current Intelligence Weekly Review went into production. In a foreword to his new publication, Mr. Huntington D. Sheldon, Assistant Director for Current Intelligence, described it as being

the first number of a new weekly Code Word publication of the Office of Current Intelligence which replaces the Current Intelligence Review, the Situation Summary and Critical Situations. 21/

It was to consist of four parts: a summary; "Of Immediate Interest"; "Notes and Comments," dealing with less urgent situations; and an analysis of long-term trends.

Graphics and maps were going to be increasingly important for the new Weekly, but new jurisdictional disputes between Cartography Division and OCI Graphics were in the making. In the third issue of the new Weekly, [] maps and a chart appeared, all prepared by OCI Graphics.

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Professional sensibilities in the Cartography Division were pricked by what they regarded as poor map work. The matter was discussed at the Branch level and thought to be resolved several months later when Miss [] reported that

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when we take over map work for the Weekly we will handle all liaison with editors and staff of the Weekly instead of going through O/CI Graphics. 22/

A shock was in store, because the "take over" of Weekly map production was not to be an accomplished fact for some time to come. In two separate notices, OCI addressed the issue without clarifying the hazy areas of responsibility. For example, on 13 June 1955 OCI announced:

Effective this date, the Chief, Presentations Division, in carrying out his responsibilities for the production of illustrations (graphic and cartographic) for O/CI publications, may call on either Graphics Branch, Presentations Division, O/CI, or the Special Support Branch, Cartography Division, O/RR, as appropriate. 23/

The jurisdictional confusion still existed in August. [] wrote that "the lack of clear-cut directives is the primary cause of the problem." 24/ A second OCI notice in September

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concerned the overall problem but failed to address the issue that was of interest to the principals.

1. Purpose These standing procedures are issued to prevent publication of inadequately conceived and executed graphics in illustration of articles published by O/CI in its Current Intelligence Weekly Review (CIWR) and Current Intelligence Weekly Summary (CIWS).

2. Scope This regulation applies to O/CI. A copy has been transmitted to AD's of other offices contributing illustrated articles to the CIWR and CIWS, with request for their issue of similar instructions within their offices.

3. Responsibility^o [Describes responsibility of author-analyst for correctness of data and for making sure the graphic is in accord with the concept originally approved by the O/CI Publications Board.]

4. Procedure [Describes the channels for requesting a graphic and includes a sample request form.] 25/

The first step in the procedure described in paragraph 4 of the regulation required the analyst to obtain the approval of the Chief of the Presentations Division of OCI for his graphic. The Presentations Division therefore retained de facto authority to segment responsibilities as the Chief saw fit. By December Mr. [] was able to write in the monthly report that

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A meeting with the Chief of the Presentations Division resulted in a clearer understanding of relationship between Graphics Branch and GC/X. 26 /

In a lengthy memo entitled "O/RR Cartographic Division Views on Responsibility for Artwork in CIWR," describing the same meeting, the Chief of the Presentations Division presented the OCI view as well. Essentially, he said that Mr. [redacted] was bringing up his concern over a breach in the understanding that OCI Graphics' field of endeavor did not include doing maps or "statistical charts," which lay within the purview of Cartographic Division.

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Mr. [redacted] has received the impression that the consolidated D/Pres Graphics Branch would, in essence, confine its future work to the production of large-size illustrations required by various DDI components. All other artwork was envisioned as the proper responsibility of O/RR's Cartographic Division (and Miss [redacted]'s Special Branch in particular). 27 /

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He went on to say that the pressures of deadlines made it mandatory for short-deadline work to be done in OCI Graphics, whether maps or non-maps, and that efforts being made to achieve greater

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leadtimes were not particularly fruitful. He criticized a recent illustration planned and executed by the "[redacted] group".

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The conception was excellent, but an otherwise impressive treatment was reduced in its impact by a 'style' that remained fussily cartographic, rather than bold and simple.... 28/

He concluded,

there is no question but that Mr. [redacted] feels most strongly that the Agency's interests will best be served if most conventional CIWR maps are for the most part produced by his Division.... 29/

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He stated that, as a matter of policy, OCI would give Miss [redacted] "first refusal" on all conventional maps for the CIWR, OCI appeared determined to avoid relinquishing any of its prerogatives.

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In April Mr. [redacted] reported optimistically that during the past six weeks GC/X had contributed essentially all maps required for the OCI Weekly. He viewed this as an encouraging development which reflected cooperative efforts of the Branch and OCI. 30/ However, an examination of the Weeklies during that period reveals that

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the matter was not in fact resolved for several more months. During May, [] maps in the Weekly were made by OCI and [] by GC/X. In June, [] were made by OCI and [] by GC/X. By July all cartographic work was being done in GC/X, and a jurisdictional problem that had been in ascendancy for almost two years was finally resolved.

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C. Technical Advances

In the early Eisenhower years, the number of maps and graphics used in the CIB and the Weekly grew, but printing plant limitations made these efforts appear crude. Color work was possible, though considerable jury rigging was necessary to get it.

A significant forward step took place in February 1954 when the printing plant acquired a Robertson studio camera which made photo-offset printing possible in the Special Center for the first time. The first use made of it for a CIB map was to illustrate the order of battle in [] and the adjacent area of []. Terrain hachures showed in green, place names and

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boundaries (from the plates to a Cartography Division map) in black, 17 order-of-battle symbols for enemy forces in red, and three symbols for [] garrisons at [], and [] in blue. 31/ It was the forerunner to many [] similar maps produced on [] over the next 17 years in a constant attempt to portray the "situation." The map was a new departure not only in printing technique but also in that it was cut into the text adjacent to the section of the story it illustrated and was a valuable adjunct.

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As soon as the functional separation between OCI and GC/X became effective, there was a spectacular upturn in the quality of the graphics and maps in the Weekly. Under the new arrangement, artists and cartographers -- members of two different professions -- exclusively did work they were trained to do, and they collectively became a part of the team that provided the Weekly readership with a high-quality publication indeed. The Weekly was quite voluminous, averaging []

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pages of text in the beginning and more than [] (b)(3)
 later on. Map and graphic work was becoming quite
 sophisticated (see Figure 5). By the third year
 of publication, OCI Graphics was averaging []
 charts and GC/X [] maps in each issue. The high (b)(3)
 quality of this publication reflected the work
 of the OCI Publications Board and its Secretariat
 who oversaw the Weekly (and the CIB) down to the
 smallest detail. Mr. [], a staff member (b)(3)
 who coordinated the work of the analysts with the (b)(6)
 expertise of the artists and cartographers, was a
 strong force behind this achievement. 32/

For reasons that are not clear, the juris-
 dictional problem that arose with respect to the
 Weekly did not spill over to the CIB. OCI Graphics
 had exclusive responsibility there and ran a "late
 shift", originally with approximately one-half of
 the work force but later as a [] operation, (b)(3)
 which had as one of its purposes the preparation
 of graphics for the CIB. Few charts were required,
 but a map or two appeared in almost every issue.
 GC/X base plates drawn for a previous Weekly map

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were invariably used by the OCI Graphics late-shift person who prepared the overlay depicting the particular event that was being reported (see Figure 6). The artists who worked the late shift made no claim to being cartographers and in fact would have considered being called one a disparagement. Their training placed a premium on the quality of visual impact. This led to an occasional cartographic howler, such as the time a Mercator projection was used to plot the impact points of four Soviet missiles shot into the Pacific, landing within a few tens of miles of each other but on both sides of the meridian that bounded the base map. The CIB appeared with an illustration showing two spots on the left-hand side of a world map and two on the right-hand side, separated by almost 25,000 miles.

The Current Intelligence Bulletin was replaced by the Central Intelligence Bulletin on 14 January 1958. It differed from the former CIB principally in that it was fully coordinated within the community. 33/ Taking into account

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President Eisenhower's liking for both maps and brevity, the inside front page of the new CIB contained a map of the two hemispheres with areas highlighted where significant events were taking place, along with one or two short sentences providing a brief. The front-page map (see Figure 4) proved to be a successful device and was continued unchanged until President Kennedy set forth his own distinctly personal requirements.

The story of "X" Branch would be incomplete without a passing reference to the role it played in utilizing U-2 photography from the earliest days. Quite apart from its work on OCI publications, the Branch undertook the task of using the photographs to construct maps of Soviet cities about which there was an almost total lack of first-hand knowledge since prewar days. It was the first known attempt to use this new source to construct large-scale maps. Efforts continued until the Army Map Service in 1959-60 applied its vast resources to meeting the requirement for up-to-date maps of the Soviet Union based on aerial photography.

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V. The Kennedy and Early Johnson Administrations, 1961-1965

A. The New Frontier

President Kennedy's voracious appetite for information was not satisfied by the one-page briefs that had been done for President Eisenhower. OCI immediately added to its string a new daily publication specifically tailored to President Kennedy's needs. It was called the "Checklist" and was literally all-source, containing items such as agent's reports and information derived from clandestine photography. ^{34/} The "Checklist" (later called the President's Daily Brief) contained an occasional map or chart lifted from the CIB, but only rarely was an original map done for it.

The "New Frontier" also brought into the White House offices a number of young intellectuals who concerned themselves with foreign affairs. In the early part of the Kennedy administration, weekly National Security Council briefings by Mr. Allen W. Dulles, DCI, were still carried on. According to the usual routine, OCI Graphics

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prepared visual aids for these, and one of the younger artists was detailed to escort the boards down to the White House in a station wagon, set them up in the cabinet room, and stand by outside until the meeting was over so that he could take them back to Headquarters. During the transition period in early 1961, Mr. Dulles walked into an NSC meeting a few minutes early and saw Mr. [redacted]

[redacted] of OCI Graphics standing beside the briefing boards. He presumed he was another one of the youthful representatives of the New Frontier come to learn the state of the world. He put out his hand and boomed, "Dulles, CIA." Mr.

[redacted] replied, "Yes, sir, I know. I work for you." (b)(3)
(b)(6)

B. Move to Headquarters Building

Almost coincidental with the beginning of the Kennedy administration was the Agency's move to its new building. GC/X moved concurrently with OCI in the fall of 1961, occupying Room [redacted] in the Special Center. These were ordinary quarters, but they were equipped with a number of accouterments which improved efficiency. There

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were special light fixtures for added illumination, a photolab for in-house duplication of master plates, and a spacious vault for storage.

Several new materials and pieces of equipment had been uncovered by the Division's Technical and Construction Branch which enabled GC/X to become largely self-sufficient in the preparation of type and certain intermediate materials required in a cartographic production shop. 35/ It was becoming more and more a miniature version of the entire Cartography Division, operating autonomously in many respects.

OCI Graphics was very kindly treated with rooms on the [] floor having an array of floor-to-ceiling windows looking across the Virginia woods into Maryland. It was also conveniently located between the OCI editorial offices and the printing plant which was provided with excellent facilities. It could handle every need of both the artists and the cartographers. Just prior to the move, Mr. [] once again took over the direction of GC/X. Miss []

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had resigned from the Agency in 1960, and Mr.

[Redacted]

had acted as Branch Chief during

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the period, June 1960-August 1961.

C. The Crisis, USSR/Cuba

GC/X was closely involved in providing intelligence support during the Cuban missile crisis in 1962. U-2 photography flown on Sunday, 14 October, showed surface-to-surface missile sites under construction southwest of Havana. During the day on Monday, an urgent request came into "X" Branch from OCI to make a map showing distances from the sites to the United States. A manuscript map was hastily prepared and handed over. At the same time, in another part of the Division, a query had come in from ORR asking for the exact distance between pairs of coordinates in Cuba and Washington, D.C. The range of the missiles and the distances of the sites from Washington and other major cities were of most intense interest during the first few hours after detection. Some analysts learned for the first

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time that determining distances along earth arcs is a great deal more complicated than measuring short distances on a school map. Fortunately, several individuals in the Division were trained to cope with this kind of problem, and accurate determinations were quickly made. Washington lay at the outer edge of estimated range capabilities of the type of missile first detected.

On Tuesday, 16 October, Mr. [redacted] [redacted] made a map from scratch which showed distance relationships between the missile sites and the United States. 36/ It accompanied a three-page typescript OCI memo, 37/ believed to be the first authoritative information disseminated on the probable Soviet MRBM sites in Cuba, though preliminary judgments had gone to the Secretary of State late Monday night 38/ and to the President at 9:00 a.m. on the 16th. 39/

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During the following ten days, GC/X was fully occupied with Cuba. Almost half the projects officially logged in between 16 and 26 October dealt with it in one way or another, and considerable

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unlogged support was provided to the Situation Room and to "walk-ins" who needed immediate cartographic support. The 16 October map had to be extended three days later when longer range missiles were detected. After President Kennedy invoked a quarantine on foreign shipping on 22 October, emphasis shifted from the sites themselves to the Soviet ships steaming toward the island.

The formal daily situation report called "The Crisis, USSR/Cuba," prepared for the Executive Committee of the National Security Council beginning on 24 October, contained surprisingly few maps. 40/ Only two basic maps were used: one was a CIB-type map of the island and the missile complexes done by OCI Graphics; the other was a reiterative map of the North Atlantic showing the progress of Soviet ships as they moved toward the Caribbean. 41/ One of the ironies of the time was the printing on 18 October for the SECRET-level Current Intelligence Weekly Summary of a Cuba map

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Branch activity returned to the normal routine after the lifting of the quarantine on 27 October. The final brush with the Cuban crisis occurred a month later. A fairly sophisticated map, twice as large as page-size, was done to accompany a memo for President Kennedy laying out in detail the time sequence of construction activity. 42/ In an attached note addressed to Mr. McGeorge Bundy, the Special Assistant to the President for National Security Affairs, Mr. Cline, the DD/I, noted that it was to be used for "Mr. Mikoyan's visit to the President tomorrow" (28 November). 43/

The Cuban missile crisis illustrated, among other things, the frequently demonstrated fact that being "in the know" about important current events gives people in the current intelligence end of things a tremendous psychological boost, even though the demands upon their personal lives are arduous at times. The Cuban crisis was kept under the tightest security wraps for the first seven days. The President's 22 October speech,

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bringing the matter into the open, provided a great measure of relief to persons privy to the Soviet activities. The Secretary of State said afterward in a television interview that

Senior Officers did their own typing; some of my own basic papers were done in my own handwriting in order to limit the possibility of further spread of the utterly vital matters we were dealing with. 44/

D. New Tasks for Cartographic Support

During the early 1950's, a high proportion of GC/X efforts had been devoted to doing maps and graphics for basic ORR and OSI studies of special classifications. The association with OSI was so close in the mid-1950's that some consideration was given to setting up a support unit in Barton Hall when OSI moved there from Tempo "M". 45/ ORR requirements had increased considerably after [redacted] (b)(3) Division was dissolved in 1953 and the entire Office was housed in the Special Center. The support required for OSI zoomed in 1962 following Mr. Albert D. Wheelon's assumption of the post of Assistant Director, and it rose for the entire DDS&T Directorate when he became the Deputy

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Director for Science and Technology in August 1963. Mr. Wheelon relied extensively on graphics for his own presentations and liked to see them in DDS&T publications (see Figure 7). He created a small graphics shop as part of his own staff (and incidentally recruited [] of Cartography Division's most promising young cartographers to man it). The total graphics load was so great, however, that the workload in GC/X became heavily balanced on the side of non-current intelligence. It was necessary for Branch strength to be increased gradually from [] persons in 1961 to [] persons in 1965 to cope with the overall workload. (b)(3)

By early 1964, Vietnam had become such a preoccupation of the White House that several specialized publications were created to deal with the subject. GC/X provided an occasional map for the "Weekly Report of the Intelligence and Reporting Subcommittee of the Interagency Vietnam Coordinating Committee," issued by the Agency beginning 28 February 1964. Distribution was tightly controlled in the beginning, copies going

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only to Mr. McGeorge Bundy and other members of the Committee. The maps in it were not particularly revealing, being used principally to locate "critical provinces" for the reader and to pinpoint military activity. A year later, on 9 February 1965, a daily Vietnam Situation Report came into being, with wider -- though still restricted -- distribution. The new daily was begun in connection with renewed US air strikes against North Vietnam. It contained only an occasional map during its first several months, and those were prepared by OCI Graphics over GC/X base plates. Later on, a locator map became routine, and every issue contained two maps: the so-called "Boundary Map" (named for its original title, "Administrative Boundaries") and the "Strike Map" showing air activity. Both maps were completely lacking in merit (see Figure 8) as examples of either graphics or cartography but were continued unchanged for several months, even after the responsibility for preparing them was taken on by the cartographers after the 1965

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merger (see below). Their production was regarded as a necessary evil by all concerned, and they were given as short shrift as human nature could devise.

E. Consolidation

The Geographic Research Area of ORR was consolidated with the old Office of Basic Intelligence on 1 July 1965 to form a new Office of Basic Intelligence (OBI). The chain of command in the new Office was:

Director: James A. Brammell

Deputy Director: [Redacted]

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Executive Director: [Redacted]

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Chief, Cartography Division:
[Redacted]

Deputy Chief, Cartography Division
[Redacted]

Chief, All-Source Branch: [Redacted]

Deputy Chief, All-Source Branch:
[Redacted]

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A series of personnel shifts were made, including the assumption of the duties of Chief of the All-Source Branch by Mr. [Redacted]

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Current intelligence was a new milieu for Mr. [Redacted]

whose previous assignment was Chief of the [Redacted]

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[Redacted] Branch in the Cartography Division.

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Even as the new Office was being formed, steps were underway to merge OCI Graphics and the All-Source Branch (now called "CD/X") of Cartography Division. Mr. Paul A. Borel, the Assistant Deputy Director for Intelligence, had undertaken intensive studies of the organization and operation of a number of DDI components on behalf of Mr. Ray S. Cline, the DD/I, and several major managerial changes resulted from these studies.

Mr. Borel's perusal of Agency publications convinced him that text and graphics needed to be integrated more closely and that the work being done by the two graphics organizations was so similar in character as to make a merger mandatory. 46/ After personally conducting a survey in early July 1965, he summarized his findings on the first point as follows:

2. As I see it, the DDI has, through its publications and informal memoranda, repeatedly demonstrated high competence to communicate through the written word. We have also shown considerable ability to communicate through the graphic arts (photography, cartography, artistic illustrations and renderings). We have done less well in imaginatively relating text and graphics in

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combinations wherein each supports the other with optimal results. The problem therefore is to explore what steps may be taken to upgrade our present effort.

3. Improvement in the use of graphics can, it seems to me, come about in a number of ways.

- a. The amount of graphics can be varied to advantage, some being used, for example, where none has been. This is most likely to be the case where graphics are used to supplement text.
- b. The quality of graphics now used can be improved to make for a more meaningful presentation; that is, to tell its story more quickly or more accurately.
- c. More importantly, there no doubt are ways of using graphics or graphic techniques as a superior way of communicating ideas now conveyed verbally. This would involve graphics as a substitute for text. 47/

Mr. Borel further indicated that there were administrative and organizational problems ranging from

aspects of personnel management, competition for limited resources, allocation of priorities in view of appetites for service beyond means to satisfy, technical problems in the use of color vs. completion of projects with short deadlines, and the host of other matters involving the selection among options each having different impact upon PSD/DDS. 48/

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As a next step, Mr. Borel proposed to visit each graphics shop to familiarize himself with its program and problems and to discuss with its leaders their ideas on how best to proceed.

It was in fact true that, so far as DDI publications were concerned, no discernible difference existed in the kinds of requirements being placed upon the two graphics units. Nevertheless, OCI's two mainline publications presented a particularly muddled situation. Since 1956 it had been established practice that for the Weekly, maps were done in GC/X and non-map graphics in OCI Graphics. For the CIB, both maps and non-maps were done in OCI. The increasingly frequent maps in the CIB were often comprised of a mixture of a Cartography Division base map and an overlay made in OCI Graphics. CIB's for July 1965 contained two basic maps of North and South Vietnam, [redacted] [redacted] and a scattering of [redacted] other base maps used [redacted] times each. To an observer such as Mr. Borel, the evidence as to who was doing what graphics in the various DDI and DDS&T

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publications was difficult to discover, and the division of responsibility appeared quite illogical. For example, GC/X did maps for the OCI Weekly and OCI Memos, but not for the CIB. OCI Graphics did illustrations for the Weekly and for OCI Memos, but not for the rest of the DDI or the DDS&T. Cartography Division, GC/X in particular, did all DDS&T work, both maps and non-maps. A not uncommon spectacle at the time was a cartographer, holding a Master's Degree in geography without any formal training in design, laboring over a set of simple drawings for a DDS&T publication while an illustrator, holding a degree in art and skilled in design and layout, was doing a patchwork job on a map for the CIB.

On 19 July Mr. James A. Brammell, the Director of Basic Intelligence, submitted a formal proposal that the Graphic Division, OCI, be transferred to the Cartographic Division, OBI, and assigned to GC/X Branch. His supporting argument ran as follows:

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2. The problem of providing the DDI with a coordinated graphic-support facility can best be served by centralizing the function under a single management. Essentially, all graphic support (maps, charts, graphs, briefing aids, etc.) involves the visual medium. Experts in cartography, in graphic arts, and in visual aids all employ the same basic skills and techniques. Coupled with professional training in geography, a combined unit can provide an 'across-the-board' total graphic support facility.

3. The effectiveness of the All-Source Branch, CD/BI, results from the strong administrative support within the Division and the close support given that branch by the other branches in the Division. This includes the latest technical methods and the total research-compilation efforts of the regional branches. By consolidating the graphics unit in the All-Source Branch, these support facilities would be automatically available to the total effort.

4. Single management also would provide a single contact point for requesting graphic support. Greater efficiency would be possible in assigning specific tasks and priorities, arranging for reproduction, maintaining files, and reacting to 'crash' projects.

5. The effectiveness of graphics in supporting intelligence depends on the quality of trained personnel, the maintenance of skills, the effectiveness of solid management, the stimulation of imaginative products, and a 'team' concept with high morale. A merger would provide these in a minimum of time. 49/

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Mr. Brammell's suggestion was accepted, as was his target date of 1 September 1965. On that date, a terse DDI notice stated:

1. Effective 1 September 1965, the Graphics Division, OCI, is transferred to the Cartography Division, OBI, and integrated with the All-Source Branch.

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2. After that date, all requests formerly made to the Graphics Division, OCI, will be directed to the Chief, All-Source Branch, Cartography Division (Mr. [Redacted]), Room [Redacted]

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3. Requests for cartographic support not requiring special classification will continue to be directed to the Chief, Cartography Division (Mr. [Redacted]), Room [Redacted]

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The new unit, continuing under the formal name of All-Source Branch (CD/X), but more often still referred to as "X Branch", was comprised of

[Redacted] persons had cartographic backgrounds, and [Redacted] came from OCI Graphics. The managerial problem was to get the two groups to pull together toward a common goal. To outsiders -- for example, the DDI management -- the products of "X" Branch and OCI Graphics showed sufficient similarity for them to be thought of as coming out of one professional group, but in fact

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the disparate backgrounds of the people in the two former units did not lend themselves to a perfect blending. Mr. Brammell admonished the new Branch Chief, Mr. [redacted], to avoid restructuring the Branch into sections and to guard against the two former units continuing as cliques, each going its own way. However, conditions made it mandatory that at least an informal breakdown be recognized to keep production going and standards high. [redacted]

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[redacted] teams made up of cartographers/illustrators were tried with limited success. There was constant disagreement between the senior people in the Branch, on the one hand, who knew team spirit was slowly developing, and Division and Office management, on the other, who harbored the old fears, over the need to organize the Branch along lines reflecting the type and volume of work coming in. This fundamental issue remained a matter of internal controversy for the next five years.

For six months CD/X operated out of both Rooms [redacted]. Support to the current [redacted]

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intelligence publications and work on briefing materials was carried on in Room [redacted], and maps and graphics for special projects, memoranda, and reports were done in Room [redacted]. Then the latter quarters were expanded, and by early March 1966 consolidation was a fact. CD/X was housed in Rooms [redacted] and [redacted] until it moved to the [redacted] floor in 1970.

F. DCI Raborn's Influence on Graphics

Vice Admiral William F. Raborn, Jr., served as Director of Central Intelligence from 28 April 1965 to 30 June 1966. With his liking for flamboyant graphics, he had a considerable personal impact on the Cartography Division.

Admiral Raborn's initiation into the office coincided with the Dominican Crisis in April 1965, when several thousand US Marines were sent into Santo Domingo to give protection to American nationals there during a period of violence and disorder. CD/X produced a large quantity of maps of the city and the sanitized corridor along which Americans could move safely. These were provided

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to the Agency task force established to watch the situation and were used for situation reports, memos, and the CIB, most of which were delivered promptly to the new Director.

To acquaint himself with the worldwide situation, Admiral Raborn instituted a series of morning briefings covering a specific area or topic. These were held at 9:00 a.m. daily, as the first item of the Director's staff meeting, and were conducted by Agency area and topical specialists, usually analysts from OCI or ORR. The briefing schedule was set up well in advance to allow the analyst ample time to prepare himself thoroughly and to order supporting graphics. From [] to [] briefing boards became the order of the day, and the artists in CD/X were swamped with requests entailing considerable work of the kind they most liked to do. Numerous accolades from analysts and periodic compliments from the Director were passed back to CD/X personnel and were excellent morale builders for them.

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Admiral Raborn soon engaged the services of Mr. [REDACTED], an old associate of his in the Polaris program, to give Agency supervisors a lesson in the proper use of graphics in putting a message across. On 13 August 1965 the auditorium was filled to capacity with every Agency officer of Branch Chief rank on upwards to hear Admiral Raborn give a short talk on his experience with effective graphics in the Polaris program and then to introduce Mr. [REDACTED] who talked for more than two hours, using a large quantity of illustrations to make his points.

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The lesson took. Analysts who had previously avoided the use of maps and charts began to understand their importance in reaching pressed-for-time policymakers. A measure of the change is indicated by a comparison of the number of maps in the CIB in July and in October 1965. In July, (b)(3) before the lecture, [REDACTED] maps on [REDACTED] different areas were used. In October, [REDACTED] maps were used, plus several other graphics. This doubling of effort was not limited to the CIB but carried across the

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board. The burgeoning production figures of the next 12 months (see Figure 9) stemmed from several causes, but Admiral Raborn's interest in maps and graphics was one of the principal ones. For example, Admiral Raborn wanted an atlas on [redacted] in preparation for [redacted] and paid a personal visit to the Division on a Saturday morning to discuss the project with Cartography Division personnel responsible for the production of reference-type maps.

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In CD/X, requests went up 28 percent, from [redacted], in the first six months of the existence of the combined unit compared to the previous six months. To keep up with these requirements overtime became a way of life, [redacted] hours being recorded between September 1965 and February 1966.

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Admiral Raborn again retained the services of Mr. [redacted] in June 1966 to further the cause of effective communication through more use of graphics. Dr. Edward W. Proctor, the Acting DD/I, and Mr. [redacted], Chief of Special Staff, OCI, were responsible for the arrangements. Following a

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morning session with Dr. Proctor and Mr. [REDACTED],
 Mr. [REDACTED] met in the afternoon with [REDACTED]
 supervisors of various map and graphics shops in
 the DDI, DDS, and DDS&T. Good intentions not-
 withstanding, it was not a profitable undertaking.
 Mr. [REDACTED] described the problem as being "100
 percent human," incensing the cartographers and
 artists. 51/ However, in his 11-page report to
 the Assistant DD/I entitled "Expanding the Use-
 fullness of CIA Graphics as Instruments of
 Communication," he dealt himself out of cartog-
 raphy calling it "a highly specialized function
 in which I have no experience" and restricted his
 remarks to "the charts and graphics and panels
 used by both government and business in oral
 presentation."

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Dr. Proctor forwarded the report to the
 Executive Director describing Mr. [REDACTED] as "the
 Director's Consultant" and noting that

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although it is supposed to present his
 recommendations based on his review of the
 Agency's activities, the memo outlines
 exactly what he told me before he had his
 discussion with the heads of CIA graphics
 shops and before he had a chance to review

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our publications. Clearly these are his preconceptions; yet, there are some worthwhile recommendations in the memo. This could be of use to whomever may be given the task of reviewing the organization and production of CIA graphics. 52/

There is no corroborating evidence to substantiate the hint that an overall review of Agency graphics facilities was in the offing. Admiral Raborn resigned as DCI on 30 June 1966, and the matter was dropped.

G. India-Pakistan War, 1965

Open conflict between India and Pakistan broke out in early September 1965 in the Jammu-Kashmir area, following a number of violations of the 1949 cease-fire line by both sides. A task force was set up to monitor the situation, with situation reports published several times a day in addition to the CIB item. Admiral Raborn's desire for good graphics was by now common knowledge, and the task force wanted to make full use of situation maps in its reports. The new Branch Chief of the new consolidated Branch immediately felt a kinship with Admiral Raborn's position

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during the Dominican Republic crisis five months earlier when he faced both a brand new job and an on-going international crisis of the first order. An approach toward preparing current situation maps that began to take shape during the few weeks of the India-Pakistan war developed into a fine art in later crises. It is necessary to go back a bit to understand why.

An unrecorded but openly admitted reason behind the merger of the two units was to achieve better maps in the CIB. To the cartographers this meant more accuracy and detail. To senior Agency officials it meant greater clarity and less detail. Criticisms at upper levels which may have been voiced in constructive terms invariably filtered down to the mapmakers as admonitions to remove the "clutter," a term too subjective to justify specific reactions. The cartographers felt that everything they were in the habit of including on the maps (locations of forces, roads, towns, streams) was essential to understanding the story. Still, criticisms about "too much clutter" continued to be heard.

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The cartographers doing the India-Pakistan maps (Miss [redacted] and Mr. [redacted] [redacted]) and the Branch Chief finally decided they would prepare a map that would show the opposing forces and little else. This effort appeared in the President's Daily Brief of 17 September, and it had far-reaching consequences. Quite by accident, not only was the map devoid of the usual supporting "basic information", omissions which were planned, but the Printing Plant had neglected to print even the terrain plate, which was supposed to bind the data together visually. Mr. Helms, then the Deputy Director, ordered the map completely redone by the next morning. Mr. [redacted] was told by the Senior Intelligence Duty Officer that Mr. Helms had said in no uncertain terms that the next time he saw a map like that he was going to get someone by the ****. [redacted] people literally worked all night to do a new map which was so successful it was used almost daily for the remainder of the crisis. This episode marked a turning point in CIA current intelligence mapping. It laid the old

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shibboleth of "clutter" to rest, because the new map had more information on it, not less, but the background data were woven into the story better than before. It also proved that senior management was indeed anxious to have high-quality maps in current intelligence publications, that off-the-shelf items were not good enough, and that the days of "short shrift" were past.

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VI. Growing Pains, 1966-1967A. Searching for Simplicity

On 8 August 1966 the Chief of CD/X was called into a meeting by Mr. E. Drexel Godfrey, the Director of Current Intelligence, and found himself surrounded by several senior OCI people responsible for the CIB and the Vietnam situation reports. His memo describing the event gives an insight into the desire on the part of management to get "good" graphics and into some of the obstacles that were rapidly being put behind us.

[1] Played twenty questions for an hour and 10 minutes with Drex Godfrey, Dick Lehman (Deputy Director, OCI), Waldo Dubberstein ([redacted], OCI), [redacted], [redacted] (panel secretary for the CIB). They are desperately anxious to improve CIB and SITREP (the daily Vietnam Situation Report) graphics. They are sympathetic to our real problems, but want to smooth out rough spots. Godfrey is going to direct CIB panel to ensure that adequate guidance will be given on graphic requirements, in place of the 'map' or 'chart' now thought sufficient.

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Godfrey wants [redacted] to function as a [redacted] staff, clearing path for correct procedures. I told Godfrey (he agreed) that we did not want [redacted] to be a bearer of messages. We must not cut off contact between cartographer and analyst.

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Dubberstein has strong personal opinions about appearances of graphics. I pointed out to the group that personal tastes varied considerably, and we had to play percentages. 53/

In effect, Godfrey was solving the problem posed by the "graphics coordinator," a paper position which had been created by Mr. R. Jack Smith, his predecessor as D/OCI, after the transfer of the OCI graphics shop to OBI. The "graphics coordinator" position proved to be untenable for the incumbent, Mr. [REDACTED], in that he had responsibility to oversee the use of graphics in OCI publications but with no authority to get things done. He was generally blamed for anything that went wrong, and it was clearly in the interests of everyone to make the analyst and the cartographer or artist more completely responsible for the accuracy and timeliness of the map or graphic. Moreover, the notion was rather widely held that the job had been created to assuage several members of OCI on the loss of their own graphics shop. Godfrey did not rescind the office notice defining the duties of the graphics coordinator, but by putting [REDACTED] into the

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picture in the place of a formal "coordinator," he was providing a means for the OCI front office and CD/X to communicate instantly on problems. This decision lowered some tensions that had previously existed and hastened the day for achieving more effective graphic products.

B. A Unique Cartographic Form

The cartographers in CD/X began working out various systems of portraying military activity against a cartographic background that would enhance the reader's ability to see spatial relationships. High-level interest in Vietnam was evident from the criticisms -- and praises -- of maps in the CIB or the Vietnam Situation Report handed out by the DDI at the DCI's morning meeting. The problem of achieving high-quality cartographic backgrounds was solved in 1966 by beginning a series of maps at varying scales designed for the express purpose of being overprinted with current intelligence information. The "all-purpose" base map approach was cast aside.

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The most significant advance in handling the portrayal of military operations was achieved by an ingenious method of producing relatively large-scale (larger than 1:1,000,000) area maps begun in 1966. Three dimensional plastic relief map blanks, that is, without color overprint, were procured from the Army Map Service. These were side-lit to permit the shadows to enhance the terrain detail and then photographed. The photographs were pieced together, and the splices disguised with an air-brush wielded by the Division terrain specialist, Mr. [REDACTED]. The transportation was drawn at a very large scale and photographically reduced by a factor of two to four times to obtain the correct degree of fineness. "Clutter" was handled by judicious selection of colors and screens and judicious omission of the nonrelevant, such as geographic coordinates and small streams. These base maps were preprinted, omitting the plates subject to change, such as the name plate, and stocked in the [REDACTED] floor printing plant for instant use. They were highly successful and became the envy of DIA mappers. They had just the

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right combination of simplicity, authoritativeness, and timeliness (see Figure 10). Miss [redacted] and Mr. [redacted], the developers of the map form, worked in close partnership with OCI area specialists and the printing plant to get new maps prepared on areas that appeared to be on the verge of becoming hot, so that a quite sophisticated map might appear in the CIB when the action took place.

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This technique was employed to maximum advantage during the North Vietnamese buildup in the vicinity of Khe Sanh in early 1968. There were indications that enemy forces were beginning to concentrate near the Allied base at Khe Sanh in early January. From then through the height of the assault in mid-March there was great concern for the safety of the troops there. To present information in the most meaningful fashion possible, CD/X prepared [redacted] base maps at graduated scales, each focusing upon progressively smaller areas. When enemy pressure reached its height, authoritative maps were available on which small details, such as trenching, could be shown.

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C. A Cartographic Analysis of a Soviet Activity

By virtue of its being the only all-source area in the Division, CD/X was called upon to perform many kinds of cartographic tasks not associated with current intelligence. Among these was a 1966-67 project sponsored by the Foreign Missile and Space Analysis Center (FMSAC), requiring cartographic portrayal of the activities of several

[Redacted] (the [Redacted] series). Masses of information derived from ELINT

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were available [Redacted]

[Redacted]

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However, so much data could not be assimilated by even the most sophisticated reader. It was decided to analyze all data available [Redacted]

[Redacted] as a representative first look. It

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was next decided to plot onto existing base maps the territories [Redacted]

[Redacted]

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[Redacted] The

projected manpower input to do this was so enormous

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that some means had to be found to reduce it. CD/X turned to the growing but then relatively inexperienced computer staff to seek a way to manipulate the data and turn it into something directly usable by the cartographer. The officers involved, Mr. [Redacted], CD/X, Miss [Redacted], FMSAC, Mr. [Redacted] an IBM contract employee, and Mr. [Redacted], DDS&T, tackled the problem with the gusto of new physicians in an epidemic.

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A symbiosis among the professions took place in this project that in many ways helped the entire Division -- perhaps the Agency -- get into the forefront of computer applications to cartographic problems. A list containing over [Redacted] facilities of military significance around the world, stored on magnetic tape, was uncovered at the Pentagon. A selection of about [Redacted]

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[Redacted] was made from it and matched against the areas [Redacted]

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[redacted] by a machine owned by the Office of Special Activities. The names of the targets were sorted by a meticulously planned arrangement and processed through a third computer program -- developed by Printing Services Division in connection with the National Intelligence Survey -- which automatically provided type placement on the final map. Everything worked as planned, and the results (see Figure 11) stimulated much favorable comment. The Director wrote Mr. Brandwein, Director of FMSAC, a note expressing his interest in the project, 54/ and a group of DDI planners opined later that here was one instance where computers paid off.

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D. The Search for Better Design

The pressure from all sides to improve the clarity of Division products gave several Branch Chiefs pause to reconsider training requirements. Division personnel had always been their own severest critics on technical matters and geographic interpretations, but training in the area of design was lacking. The opportunity for day-to-day association with several excellent resident artists

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instruction plus considerable homework. The results were impressive. Mr. [] touched a responsive chord in people who had hungered for more knowledge about this neglected part of their cartographic education. Their "homework," comprising exercises in the use of colors and shapes, was put on display in the Headquarters Building in an exhibition sponsored by the Fine Arts Commission.

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E. Miscellaneous Chores

"X" Branch carried on many service-type activities that went unrecorded in the logbook. It was a convenient place to go, it had a wide variety of talents available, and it imposed little bureaucratic redtape. Some of the jobs that fell to it were:

Designing nonroutine Agency covers for reports

Doing DDP graphics work, if specially classified

Providing reproducible materials to graphics shops in the Defense Intelligence Agency and other organizations

Providing placecards for the DCI's dining room

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Preparing type for titles to most DDI publications

Serving as a source of supply for analysts who need materials to make their own briefing aids

Preparing special briefing books for high-level officials on the eve of foreign visitors' trips. (Several done for Vice-President Agnew were very favorably received.)

Other commissions were somewhat less routine.

The Arab-Israeli War in June 1967 led to the practice of making the Chief, CD/X, responsible for providing the Director's Conference Room with suitable maps during times of international crises. Care was exercised in choosing what was to go there, to make sure that it would be useful. The Branch was familiar with the room, having previously been asked by the Deputy Director, Admiral Taylor, to "do something about the map panels on the walls," for which it had then done two handsome raised-relief maps of Africa and Latin America. An easel was set up, and between 1967 and 1970 it usually contained a map of the current crisis area -- such as Nigeria, Laos, Saigon, or Czechoslovakia -- suitably annotated.

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In December 1967, a telephone call came into the Branch from President Johnson's social secretary, Mrs. Juanita Roberts. She asked that a map be prepared for use in a memento booklet of the President's recent globe-circling trip. With some imaginative planning, a handsome spread of two hemispheres was produced by means of the Division's automatic plotter and data bank. The map 55/ was appropriately entitled "All the Way with LBJ" and must have made a hit with the President, because the two project officers, Mr. [REDACTED] and Mr. [REDACTED], each received a copy of the map from him inscribed to them personally, perhaps the only instance of a president citing a CIA cartographer.

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The Branch was usually called upon to support Agency task forces providing a round-the-clock watch on an international crisis, such as the Soviet invasion of Czechoslovakia, or on a presidential trip abroad, such as President Johnson's attendance at the Punta del Este Conference. In the case of international crises,

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appropriate maps were obtained from the Map Library and posted on the walls of the task force quarters in the Operations Center. Task force members or a CD/X representative annotated these with the latest information. Task forces issued situation reports throughout the day, and CD/X normally provided a map for at least one of the reports, in addition to the map going into the CIB. In the case of presidential trips, most of the work involved plotting the President's itinerary on the largest possible scale map and identifying pertinent facilities, such as hotels where the correspondents were staying or the local police headquarters. On some occasions, a second display was prepared for DDP who maintained their own watch.

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VII. Case Studies, 1968-1970A. The Production Machinery

Procedures for producing and communicating were basically stable for the entire life of "X" Branch. The trend was steadily in the direction of placing greater responsibility on Branch personnel and fostering increasingly closer contacts between the Branch and requesters.

Over the years the Branch had developed a filing system for originals and negatives and a cross index of published maps that permitted very quick turnaround time for spot requests. A map on almost any country or region in the world could be on the press within an hour. A new kind of typewriter produced by the International Business Machines Corporation called the "Selectric Composer" purchased in July 1968 proved to be invaluable for quick preparation of small type. Two Varitype Corporation "Headliners" were purchased for large type. [redacted] place names were preprinted and kept on hand for instant

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application. Base map production by the rest of the Division was closely monitored and duplicate sets of plates obtained. These and similar efforts provided the Branch with unmatched resources to produce high-quality maps on short notice. The Branch clerk-typists, notably Miss [redacted], were the overseers of these support activities.

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The printing plant on the [redacted] floor, under Mr. [redacted], was very responsive to all Branch requirements. Its photographer, Mr. [redacted], and [redacted] day-shift foremen, Mr. [redacted], performed miracles with their limited printing equipment designed for 1961-type requirements but not for the quality taken for granted a few years later. All requests for service were channeled through Mr. [redacted]

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[redacted] in OCI. Requests that would have an unusual impact on the printing plant were cleared through Mr. [redacted], Chief, Intelligence Information Staff, OCI.

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In early 1969, the "X" Branch was organized into three sections -- Map, Publications,

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and Presentations -- each responsive to a particular kind of requirement. This formalized an internal structure dating back a year or more.

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The Map Section, headed by Miss [] and later by Mr [], was staffed with [] professional cartographers who

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concentrated on map production and development.

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The Map Section Chief coordinated Branch efforts toward the Current Intelligence Weekly Review, including attending the planning meeting held every Monday at 10:15 a.m. in the OCI Front Office. The deadline for CIWR graphics into PSD was Thursday noon, making Thursday morning a particularly busy time in the Map Section. A member of the Section remained on duty Thursday evenings to examine copies of the graphics as they came off the press to make sure everything was in order. In the event of error, corrective action was taken on the spot.

The Map Section also staffed the Branch duty-officer roster, in recognition of the fact that the frequent emergency calls invariably

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involved map work. The duty officer came in at 10:30 a.m. and worked until 7:00 p.m. or until his work was done, Sunday through Thursday. He took the following Friday off to compensate for the Sunday. The Map Section was responsible for evolving map products that addressed the needs of the Weekly, the CIB, the several DDI offices, and the peculiar requirements of the USIB Committee on Imagery Requirements and Exploitation (COMIREX). Considerable pioneering effort went into employing the Division's growing electronic data processing expertise for these purposes (see Figure 12). Each officer had an assigned geographic area of responsibility, did most of the maps on his area, and maintained contact with counterpart area specialists in the Cartography Division to keep his geographic base information current.

The Publications Section was responsible for producing non-map graphics. It was staffed by [redacted] Visual-Information Specialists (formerly Illustrators General). The Deputy Branch Chief, Mr. [redacted], served as Section Supervisor. He coordinated all DDS&T, OSR, and ONE graphics

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requirements. Each officer was assigned the graphics requirements of a particular office. As an aid to planning, Mr. [] periodically attended the meetings of the OSI Intelligence Board, chaired by the Director, Dr. Donald Chamberlain. The Office of Strategic Research (OSR) graphics requirements reflected an appreciation of the art of graphic communication held by its Director, Mr. Bruce Clarke, and the know-how of the Chief of its Publications Staff, Mr. [] [], a veteran of the CIWR. The Branch Chief attended the weekly OSR production meeting, chaired by the Director, Mr. Clarke.

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The Presentations Section was responsible for single-copy briefing aids. It was staffed by [] Visual-Information Specialists. Their work, and the work of their predecessors, is the subject of a separate OBGI historical monograph by the Section Chief, Mr. []

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The total size of CD/X after 1965 varied between [] persons, including the Branch

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Chief, [] supervisors, [] clerks, (b)(3)
 [] artists, and [] cartographers. (b)(3)

Also, one artist was permanently detailed to the (b)(3)
 National Indications Center at the Pentagon.

Division management augmented the strength of the Branch whenever the work overload reached an intolerable level. Officers were detailed there for periods of days or months to work on specific tasks or just to help out. In general, an attempt was made to rotate officers who had tired of the pace and replace them with officers who had not previously experienced the unique activities of the Branch. Unfortunately, this policy applied only to cartographers. There was no reservoir of artists or illustrators outside the Branch.

B. The Three-layered CIB

When OCI overhauled the CIB in early 1968, the graphics received close attention. The book formats were revised to comprise three versions, with one all-source version prepared specifically for high-level officials who needed to get the message clearly and quickly. This new CIB

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provided its readers with succinct, authoritative, and comprehensive summaries of all significant current developments.

Just prior to the launching of the new CIB, CD/X leadership had at last been provided with an instrument to wield on stubborn analysts unrelenting of their traditional prerogatives to control the map. It was in the form of a memo from Mr. [REDACTED], Chief of the OCI Presentation Staff, directed to all components involved in producing the CIB. In his usual forceful style, Mr. [REDACTED] wrote that

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A careful study of fresh lacerations and older scar tissue indicates that the Director reacts negatively, to put it mildly, to CIB Graphics that are not self-contained and self-explanatory....Do not run a map which is a puzzle until you read the text. Unless the title of the map, or a specific legend, makes it clear why certain areas are colored, don't color them....In other words, the maps should contain what is necessary to help the reader understand the text, but inasmuch as he is going to see the map first don't create a map which interests and puzzles him so much that he bogs down before going on to the text matter. 56/

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As a snapper, the Chief of CD/X or his representative (Mr. [REDACTED] or Mr. [REDACTED])

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was now included in the daily CIB planning meeting where initial decisions were taken with respect to the thrust of articles and judgments made on whether meanings would be clarified with the aid of a map or other graphics. After a month of experience with the new CIB, launched on 23 April 1968, Mr. [] was able to write in an internal memo to CD/X personnel that

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Recent comments to me by D/OCI, D/OBGI... and numerous requesters clearly indicate we are consistently producing interesting, useful and attractive products for the CIB. 57/ [See Figure 13]

C. The President's Quarterly Report

In late 1969 work commenced on a CIA project which would pull together into one thin report "evaluated facts with interpretive comments" on the subject of Soviet strategic forces. 58/ It was to be aimed at one consumer, the President of the United States; to be produced quarterly; to be all-source without limitation; and to impart maximum information with minimum verbiage. OSR, under the leadership of its Director, Mr. Bruce Clarke, was the principal production agent, and

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representatives from OSR and CD/X worked together to devise a concept and a layout which would achieve the desired aims. It was agreed that tight self-discipline would be exercised on space utilization, and the graphics would be used freely to convey ideas of magnitude and change. Opinion was divided on format, so Mr. [redacted] of CD/X was tasked to establish a model. He proposed a folio-size book, one page for each topic, using maps, photos, sketches, and graphs in harmony with paragraphs of text. He also presented an alternative book more conventionally done up. To everyone's delight, the DD/I, Mr. R. Jack Smith, favored the folio approach and was seconded by Mr. Helms and Presidential advisor Henry Kissinger. After very considerable effort to remain within the limitation established by the format, success was achieved. Mr. Helms wrote Mr. Clarke a note describing the report as "one of the best things we have ever done." 59/ Its doing required an enormous expenditure of planning time on the part of the analysts, the artists, and the printers.

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It also represented another example of the fact that sound planning was the sine qua non of effective graphics communication.

D. Automated Mapping Applications

The variety of requirements placed upon CD/X allowed it many opportunities to experiment with automatic data processing applications to cartographic problems. These experiments met with varying degrees of success. Some solutions were conversation pieces that afforded such design niceties as bird's-eye views of the earth from space. Some offered a better basic map projection than was otherwise obtainable; the first successful use of the Division data bank was of this nature. 60/ Some were spectacularly successful in terms of man-hours saved or in superior quality achieved. The latter points became increasingly significant as COMIREX requirements grew more sophisticated. Plotting of thousands of targets, earth traces, range-rings, azimuths, etc., became routine production problems, limited only by the accuracy of base maps. Work done in the Branch, primarily

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by Miss [] and Mr. [] in late 1969 and early 1970, demonstrated that an accurate base 61/ coupled with various computer programs offered vastly improved capabilities to monitor certain collection programs involving photography.

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E. Vietnam Coverage

The war in Vietnam at first exhilarated, then exhausted, eventually bored, and always disappointed people closely associated with reporting about it in CIA publications. CD/X, and OCI Graphics before it, passed through each stage. "New boys" were invariably given the job of doing the routine daily maps. The periods of exhilaration and creative endeavor were associated with breaks in the routine. There were a number of these between 1965 and 1970, several of which have received prior mention in this monograph. The intensity of interest in Vietnam by the White House was continually evident. CD/X prepared many [] of maps and graphics on every phase of the war, many for ultrasensitive reports. Secretaries of

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Defense McNamara and Clifford received profusely illustrated studies from the Agency on the effectiveness of the bombing campaign. The National Security Council staff wanted "Eyes Only" maps done of the trends in the pacification program. Studies on all phases of the war went to Presidential advisors Walt Rostow and Henry Kissinger. One of these projects is worth describing in some detail because it illustrates both the problem-oriented character of much of CD/X activity and Mr. Helms' views on the potential of a well-thought-out graphic.

In mid-November 1969 the DCI directed the Special Assistant for Vietnamese Affairs (SAVA) and the Chief, CD/X, to devise a single-page graphic that would illuminate trends in the war. It was to be for the President only and designed to be delivered to the White House within hours after the receipt of statistics. Several mockups were shown to the DCI who made pointed criticisms about each one, continually stressing the importance of simplicity and the necessity that trends be

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quickly evident. The final plan contained a series of small graphs of quantifiable factors comparing one year with another, combined with short narrative comments. It was favorably received at the White House. It has been updated weekly since the first issue and is routinely delivered to the White House the same day the data are received by SAVA.

F. Reorganization and Consolidation, 1970

The increasing complexity of map requirements at special classification levels developed to a point that began to give OBGI management rather grave concern about the effectiveness of the organizational structure of the Cartography Division. In 1969 the Division Chief proposed that the Division be housed either entirely within or at least contiguous to the Special Center and that the branches be restructured to overcome deficiencies that had become more pronounced over the years. According to his plan, the entire research activity, for example, should be centralized in one large branch; CD/X activities would be

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curtailed, and some of its functions spun off to the other branches. In a memorandum on the subject of a proposed reorganization of the Cartography Division, he described the problem thus:

The All-Source Branch [CD/X] is isolated from the Division physically and extremely difficult to manage in all aspects. With an increase to people it becomes a major chore to handle time and attendance reporting, supervise production, provide policy guidance and control, and provide for house-keeping chores, supplies and materials. It is quite obvious that the Branch responsibilities have expanded to the point it has become an entity relatively isolated from the other Branches of the Division. This has lead to management of the Branch making policy decisions which rightly belong in the province of the Division Chief. There is a duplication of production effort between the All-Source Branch and both the compilation branches and Technical Support Branch. Because of the policy of production based on classification there are frequently reports issued with graphics produced by both CD/X and the downstairs units which leads to confusion in the Division and in PSD. 62/

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Sufficient space to house the entire Division within the Center could not be obtained, and it was decided that appropriate support to current intelligence could be rendered from facilities located outside the Center. Accordingly, in November 1970, the old CD/X -- which had been renamed the Current Intelligence Branch (CD/I) in April 1970 -- moved

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into quarters on the [REDACTED] floor contiguous with the rest of the Division. A large portion of its responsibilities, together with a third of its personnel, went to other branches in the Division. The entire Division was by then provided with security safeguards that enabled work to be done on projects bearing special classifications. The move brought to a close an activity that was established to fill a gap, had done its job, and was wound down as an independent outpost after producing [REDACTED] individual pieces of work.

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VIII. Conclusion

The all-source current intelligence support unit of the Cartography Division was created to make cartographic support available to components within the Agency's Special Center. It continued to fill a need over the ensuing years, not only in meeting cartographic requirements but also in the rapidly developing field of graphic communication. It worked in harmony with a wide variety of requesters and associates, and it served well during crises and during a period of expanding Agency influence in the Intelligence Community.

A curious aspect of an assignment to one of the units doing current intelligence support work was that one either loved or despised it. A neutral, take-it-or-leave-it attitude was rarely encountered. There is no rational explanation in academic managerial courses as to why it should be so, but all those who have held the post of Branch Chief in either the "X" Branch or the OCI Technical Branch look back upon their tenure with warm

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satisfaction -- despite the fact that the job offered relatively poor physical working conditions, mental strain, external pressures, long hours, frequent weekend work, and no increase in pay.

Several impelling lessons have come to this writer out of his assignment as Chief of CD/X:

a. Recognition of an individual's contribution to his profession is one of the more important rewards he can receive.

b. Busy officials who have little time to read voluminous reports are very appreciative of a map or graphic that lets them see at a glance how the present compares with the past, whether the trend is toward more or toward less, or whether the outlook is favorable or unfavorable.

c. Maps and graphics done solely to "beautify" a report are usually a waste of time.

The Agency has provided the cartographers as a group with professional standing, career development opportunities, and physical facilities always adequate to the task. This investment in managerial support has been amply repaid in that

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the Agency has always been in the forefront in matters involving thematic maps and mapping. A past chief of the Cartography Division regards the long and successful struggle to raise the professional standards of the cartographers as "our finest hour." This achievement stands in vivid contrast to the professional standings of the artists, cum illustrators, cum visual information specialists in the Agency, who play a vital part in getting the Agency's message across. A question that senior management would do well to consider is whether similar attention is being paid to the human side of developing the art of graphic communication.

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AppendixSource References

The writer was closely involved with developments relating to the July 1965-June 1970 period, during his tenure as Chief of CD/X. Personal files, containing scribbled notes and memos of record, were valuable supplements to official documents in reconstructing the events of the period. The Records Center holds archival copies of all Cartography Division maps and graphic production (when multiple copies were made), filed numerically. OCI memoranda, both formal and type-script, are filed in the Records Center by date of issuance and frequently contain marginal notes concerning high-level reaction of interest to the historian. OCI's serial publications (the various weeklies and dailies) are filed by title and date.

Files held by the CIA Historical Staff were invaluable in determining the sequence of events that shaped the present DDI during the transitional period of the early 1950's.

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One of the problems in writing a microcosmic history is that many achievements, not to mention goofs and internal managerial crises, never become a matter of record. The writer has had the good fortune to be friends with most of the staff members in both graphics and cartography during the period which is the subject of this monograph and had heard over lunch much enlightening information that put the official record into perspective.

Monthly reports were a requirement in the Cartography Division from its establishment, and record copies have been retained. They are useful as leads to activities and problems but rarely provide sufficient background material to permit weighing the relative importance of achievements.

Anonymity was a passion with management of the era, making it extremely difficult to establish which personalities were involved in history-making projects. This is quite evident in monthly reports, where surnames were a rarity.

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A five- or six-digit number in the lower left-hand corner is the only identifying feature of graphics and maps produced by the units described in the monograph. "X" Branch numbers were:

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Graphics used a code that indicated the year, month, day, and item. For example, [Redacted] shows the item was the second job logged in on 3 April 1965. This numbering system was discontinued on 31 August 1965.

Individual source references are cited below.

Source References

[Redacted]

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Figure 1. The first use of a map in the Current Intelligence Bulletin (5 August 1951). Drawn by one of the artists in OCI, it appears to have been an experiment, since no other maps appeared in the CIB for several months.

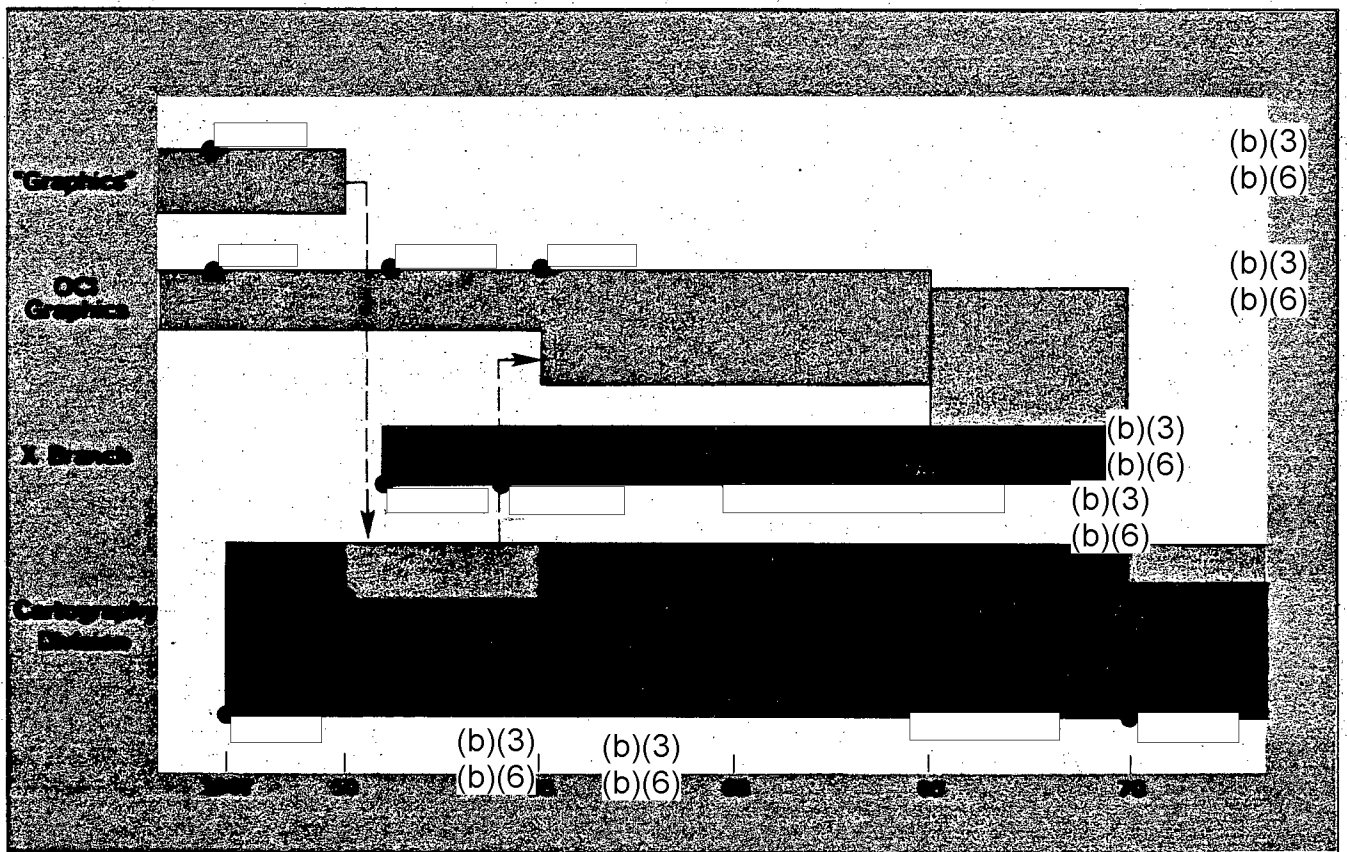


Figure 2. Cartographic and graphic units in OCI and ORR, ORE and OBGI, 1946-1970. Cartographic support to current intelligence evolved along the lines indicated on the diagram. The Cartography Division provided a stable base which supported and ultimately absorbed other units engaged in current intelligence support.

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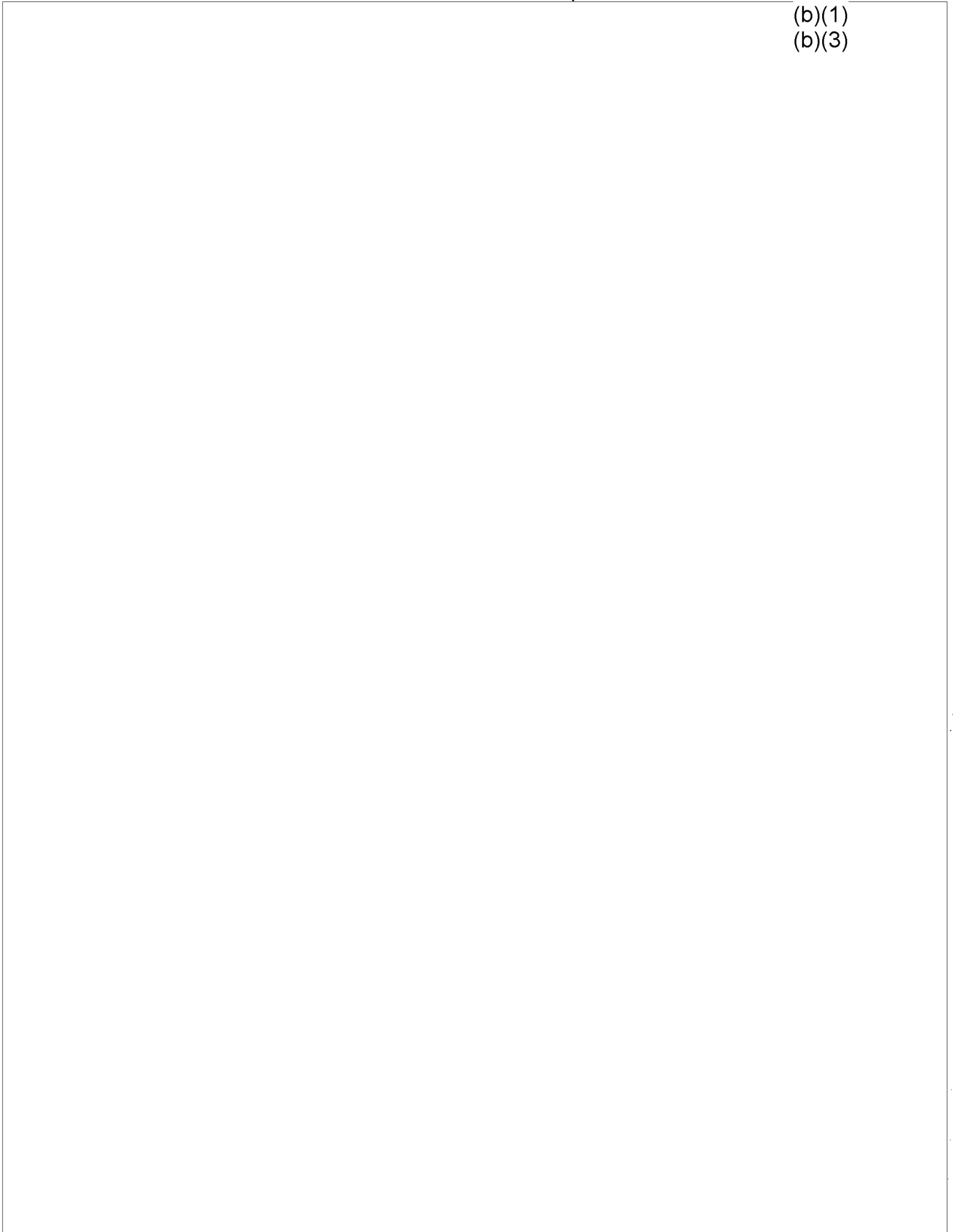
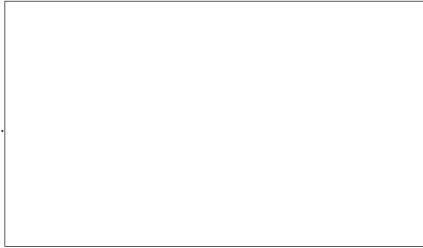


Figure 3. Example of a map as used in the Current Intelligence Bulletin. (b)(3) base map prepared by the Cartography Division was overprinted on a multilith (b)(6) press, using a multilith plate made with a typewriter and pencil. It represented a major step forward in cartographic style over the crude maps used in earlier "Bulletins."

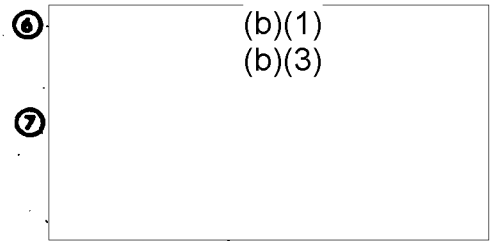
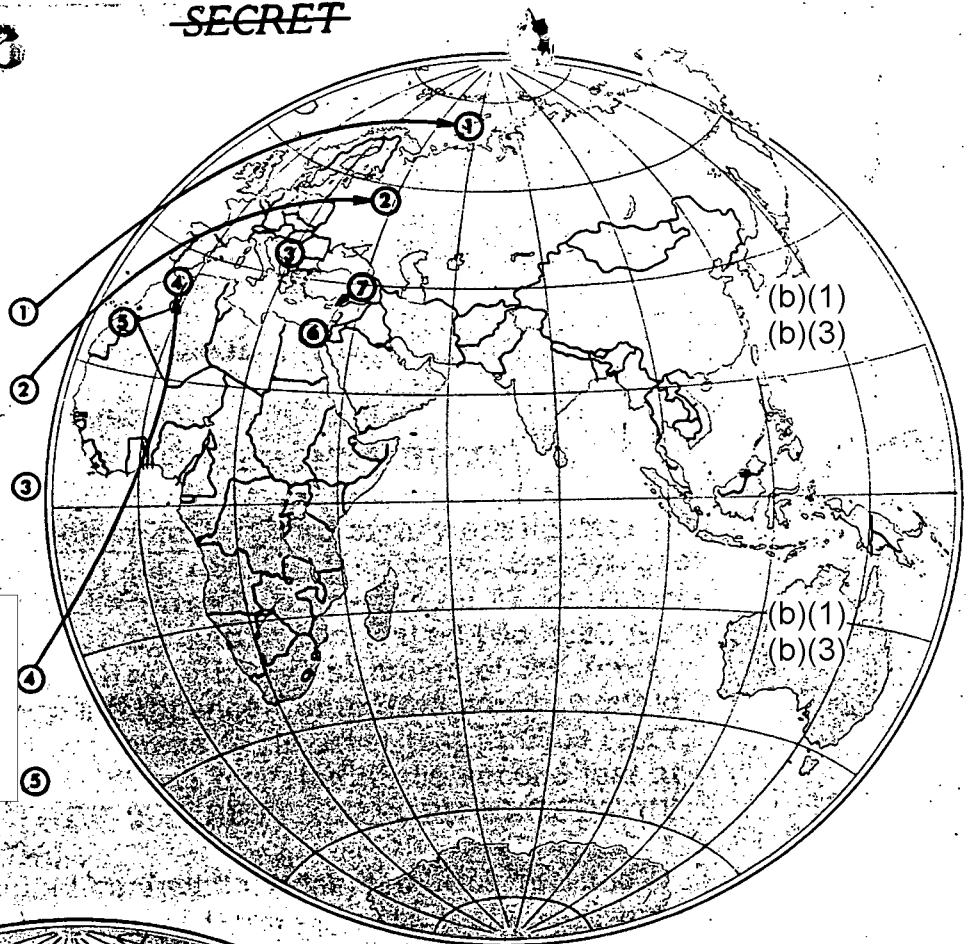
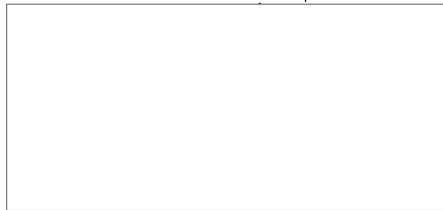
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28 FEBRUARY 1958

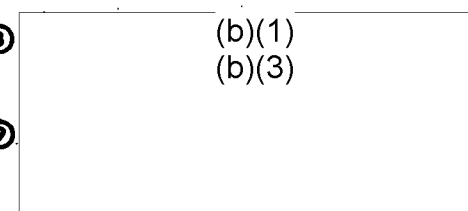
I. THE COMMUNIST BLOC



II. ASIA-AFRICA



III. THE WEST



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Figure 4. Maps such as this appeared as frontispieces in the Central Intelligence Bulletins in the last years of the Eisenhower administration. They provided the President with a synop

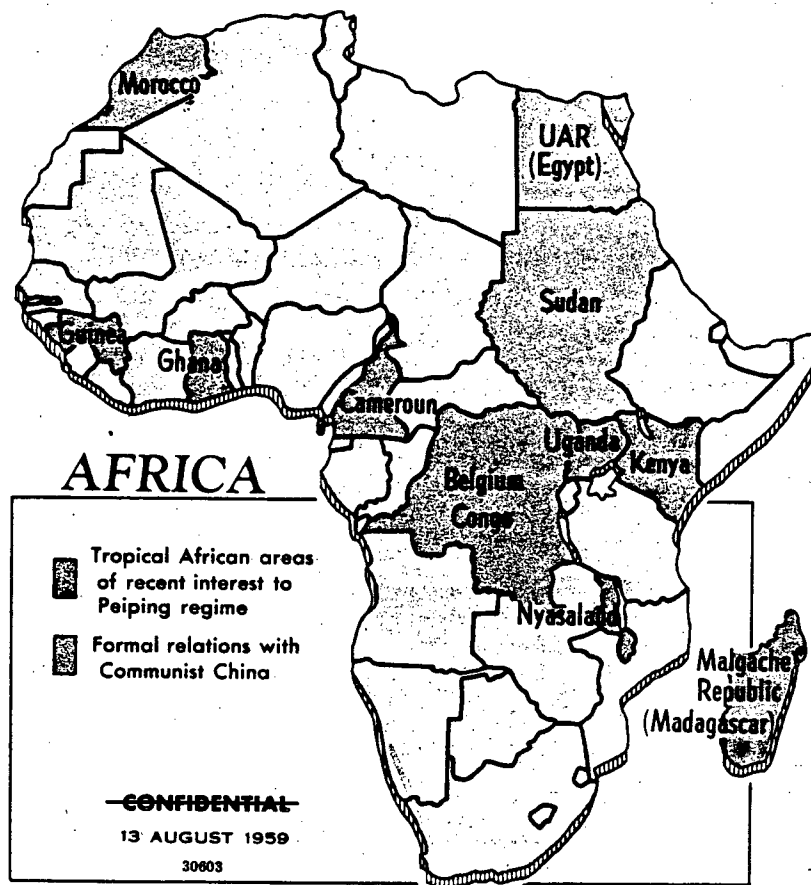


Figure 5. Maps in the Central Intelligence Review in the late 1950's reflected a high degree of correlation between text and map. Newly available printing inks provided cartographers with opportunities to experiment with design that ultimately evolved into a kind of cartographic journalism that became one of the hallmarks of CIA cartography.



CYPRUS

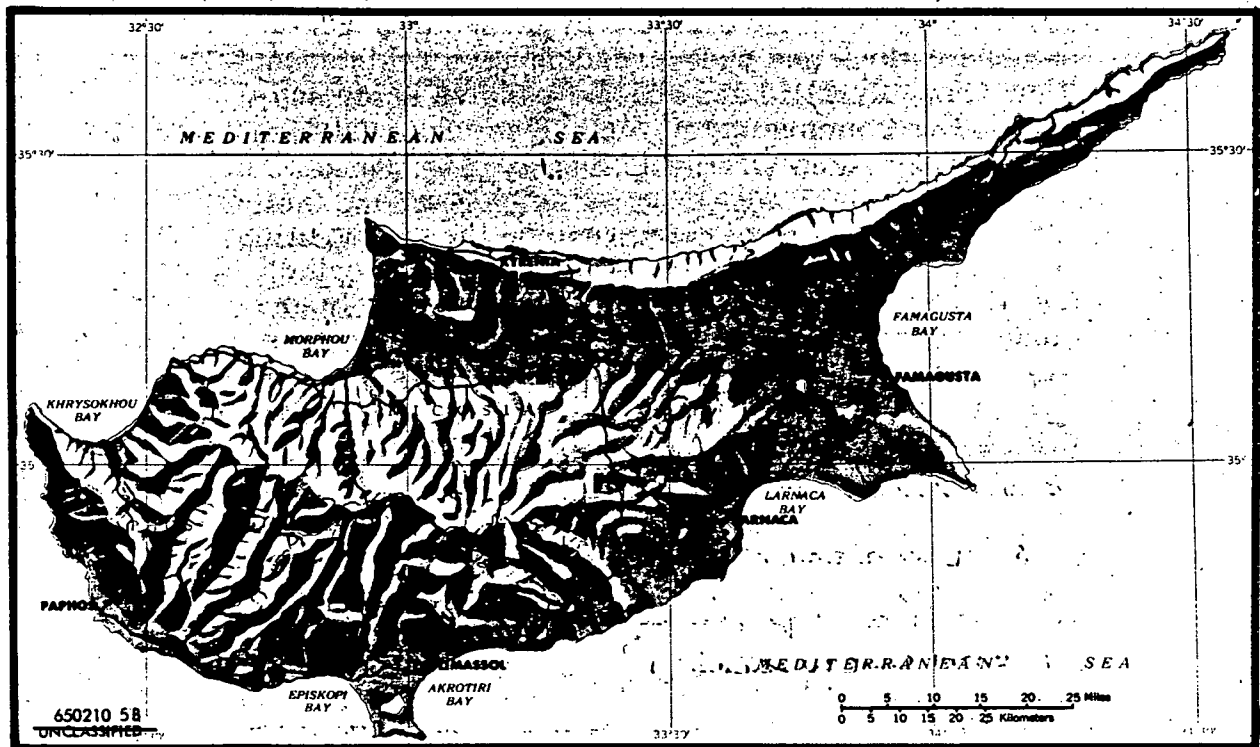


Figure 6. A map from the Central Intelligence Bulletin in early 1965. Such maps were pairings of base plates from the All-Source Branch and overlays made by the "late shift" officer in OCI Graphics. Quality was irregular, depending upon the availability of an appropriate base and the skill of the late shift officer.

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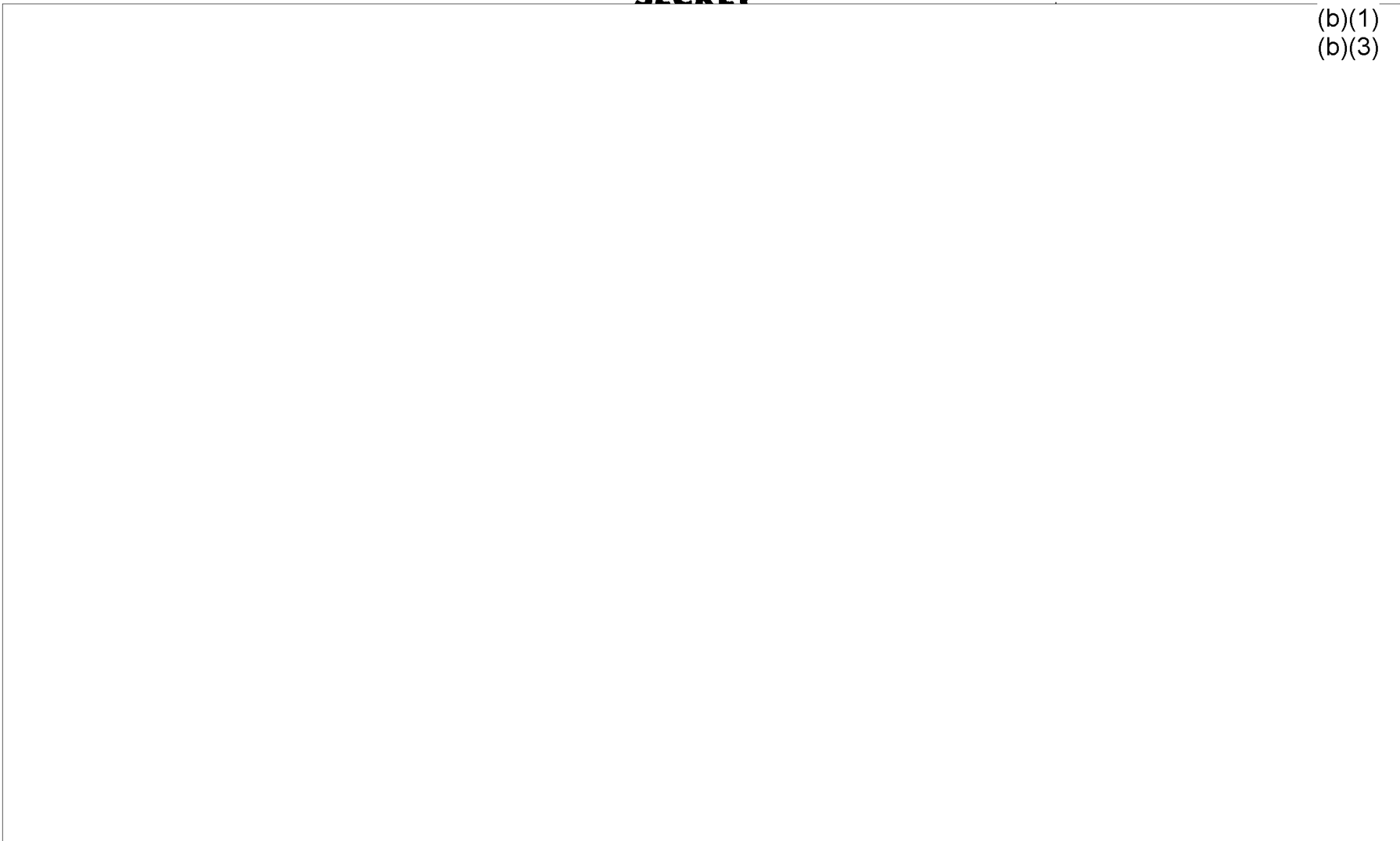
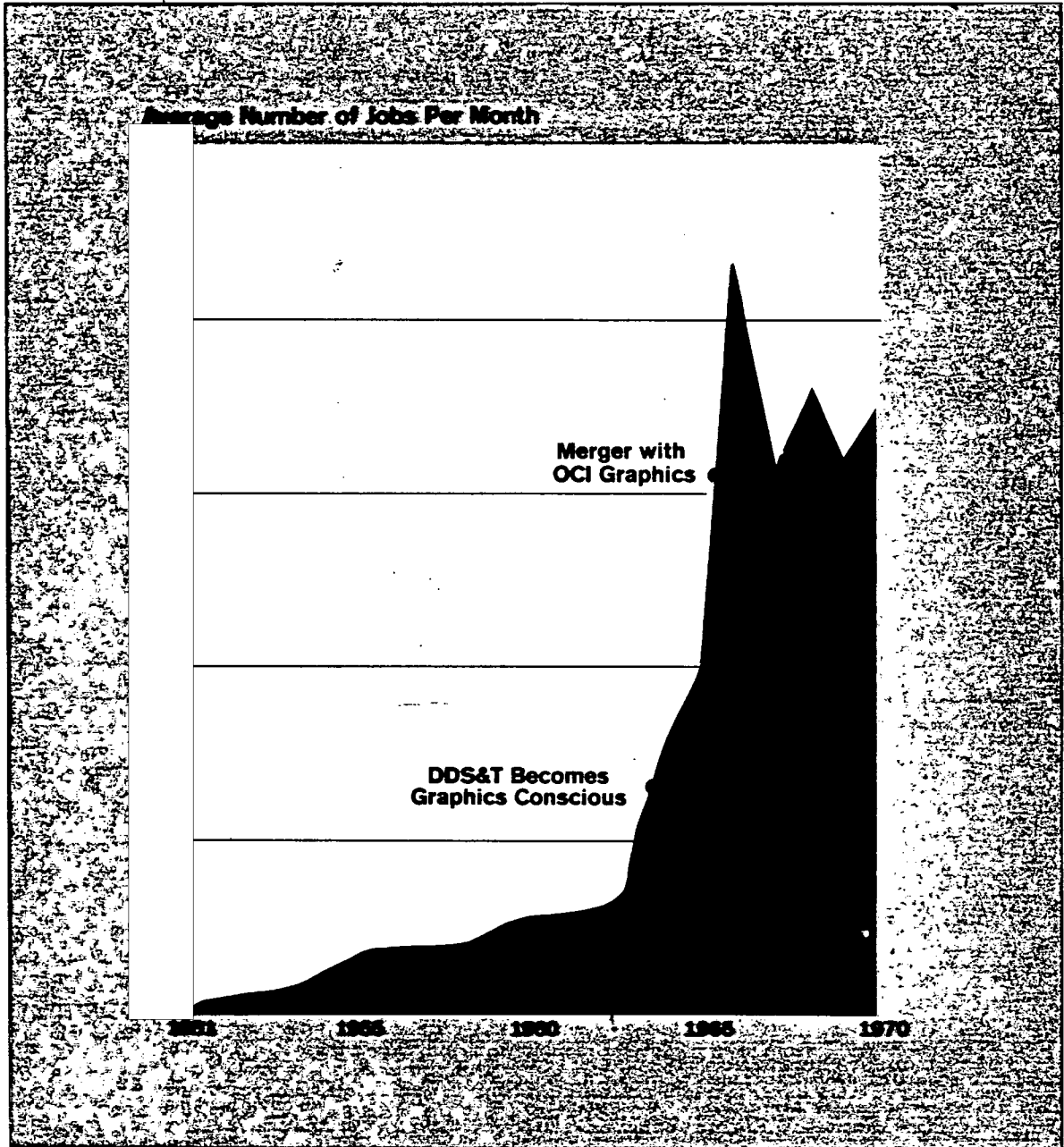


Figure 7. Example of a map made for a DDS&T report in the early 1960's. A high proportion of the All-Source Branch workload in that period stemmed from the heavy emphasis being placed on graphics in the Directorate of Science and Technology. Some reports contained or more photos, diagrams, charts and maps, greatly enlarging the scope of CD/X activity.

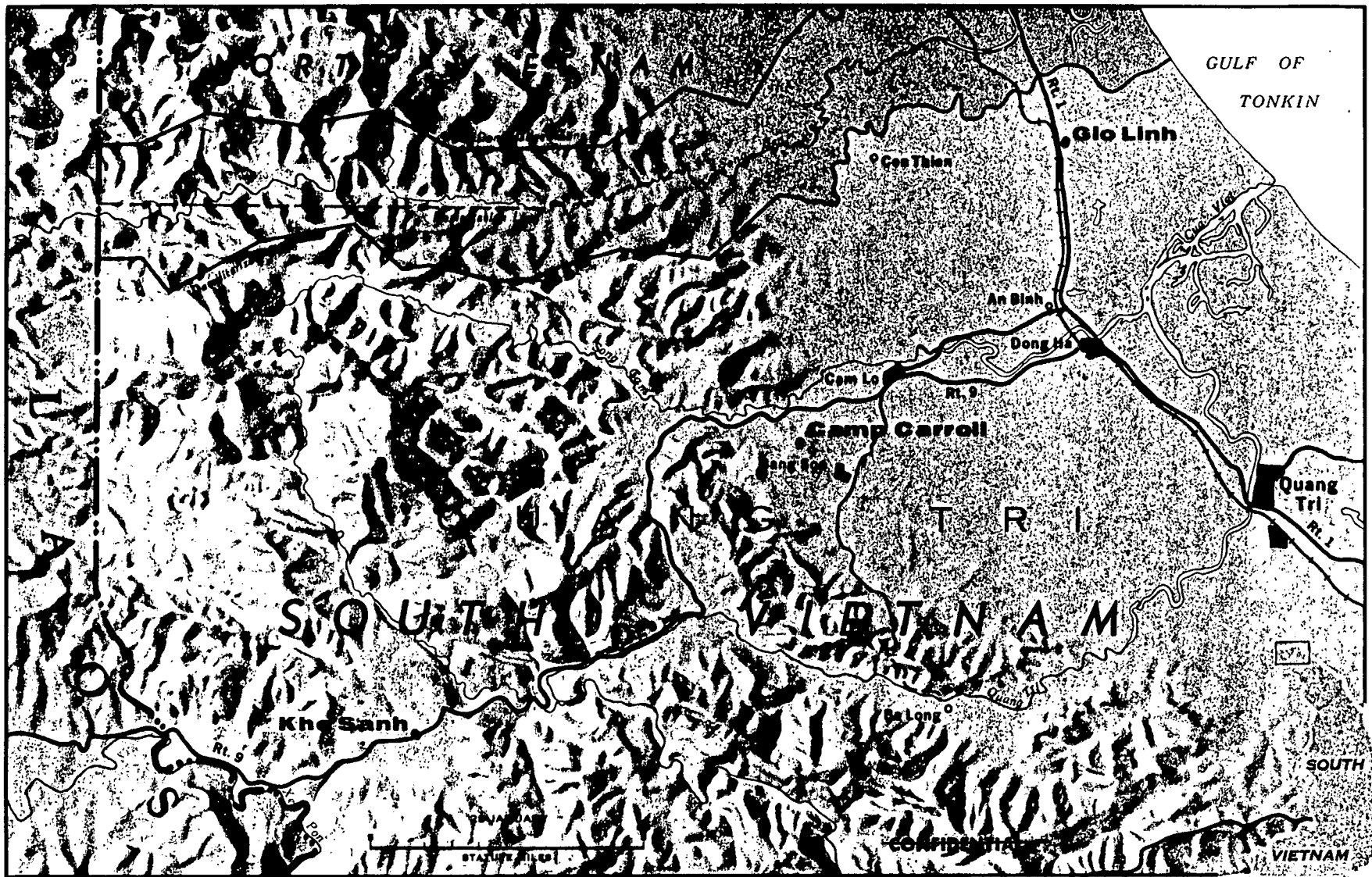
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Figure 9. Monthly production rate in the All-Source Branch, 1951-1970. Statistics present a generally reliable guide to the burgeoning workload in the Branch but are only part of the story. In the early 1950's almost every item was done from scratch and tailored to the needs of the Weekly. The sharp rise in the early 1960's reflects the growth in the use of graphics in DDS&T reports. Merger with OCI Graphics took place concomitantly with a sharp rise in requests associated with Admiral Raborn's directorship. More emphasis has been placed on quality rather than quantity in recent years.



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Archival Record

Figure 10. Maps such as this were routinely prepared to depict military activity in crisis areas, both in Vietnam and elsewhere. They reflect a high degree of cartographic skill, employing methods beyond the ability of other government agencies reporting on the Vietnam war.

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Figure 11. [Redacted]

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[Redacted] The team effort to pull vast quantities of data together and process it through computers was noteworthy and helped get ADP into use on a routine basis in the Cartography Division.

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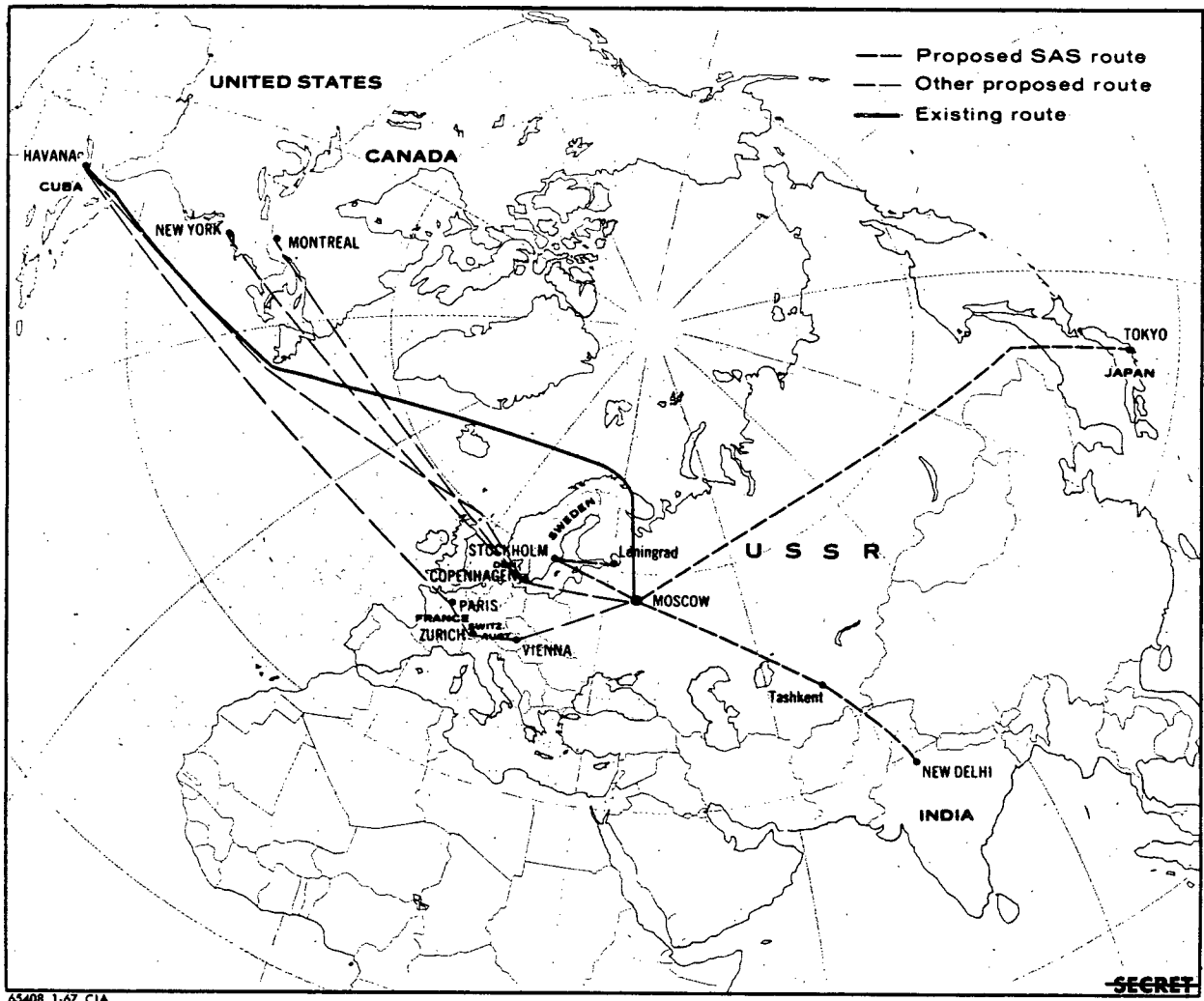
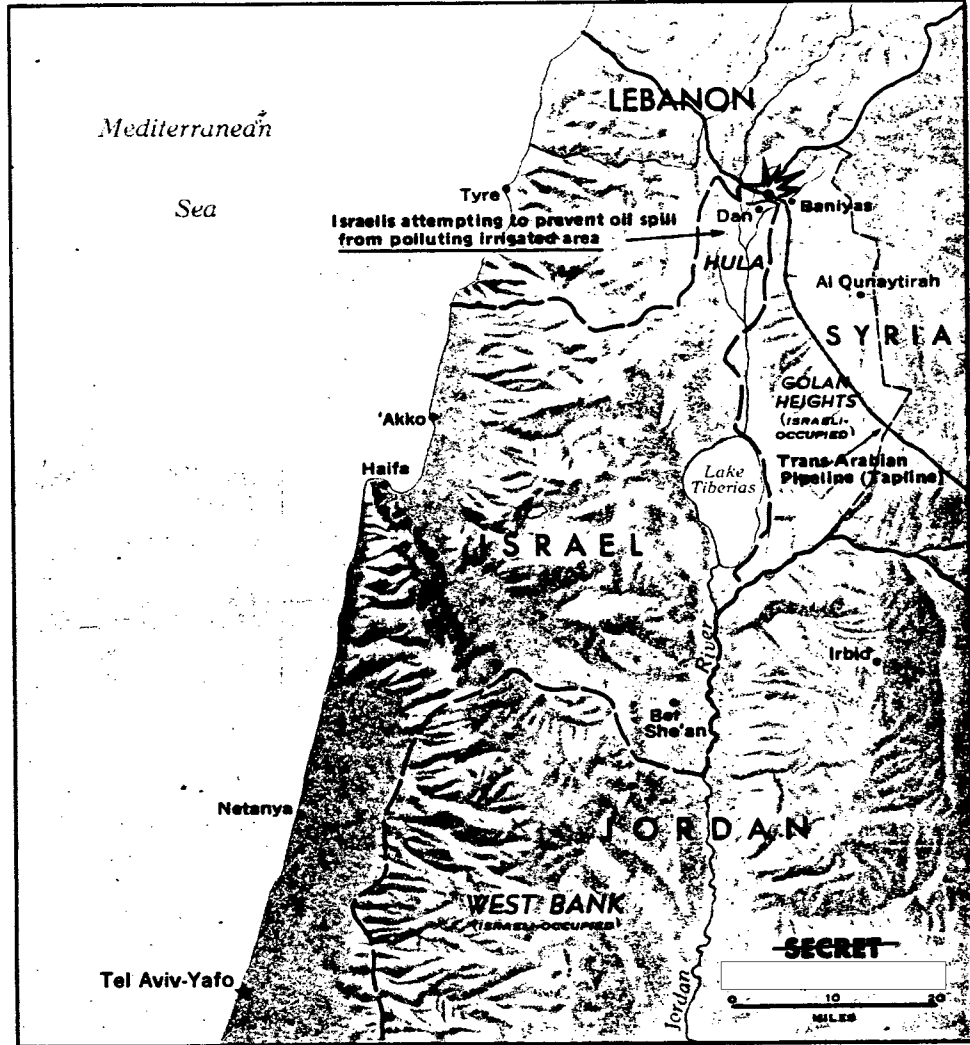


Figure 12. In January 1967, the first of many maps was constructed almost wholly by automatic data processing equipment, presaging a cartographic revolution still in the making. At this writing (March 1972) no cartographic establishment in the world has demonstrated a similar ability.

Tapline Blown Up in Israeli-Occupied Syria



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Figure 13. A typical Central Intelligence Bulletin map in 1970. Continuing pressure from top Agency management to "remove the clutter" caused a cartographic style to evolve that centers on conveying a message without sacrifice to cartographic integrity.