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COMBAT DEVELOPMENTS COMMAND

FIRST YEAR
June 1962-July 1963

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Whoever is first in the field
and awaits the coming of the enemy,
will be fresh for the fight; whoever
is second in the field and has to
hasten to the battle, will arrive
exhausted.

— SUN TZU
The Art of War
500 B.C.

Foreword

On 1 June 1962, Lt. Gen. John P. Daley, Chairman, Combat Developments Planning Group, submitted to the Director, Department of the Army Reorganization Project Office (DARPO), the group's plan for activation of the United States Army Combat Developments Command (USACDC). The command itself was activated on 20 June 1962, and one day later General Daley became its Commanding General. Thirteen months to the day after his assumption of command, he succumbed to a fatal heart attack on 21 July 1963.

These dates are historic ones for USACDC, fraught with much significance for it. Between the birth of the command and the death of its prime mover occurred the critical events that comprise the history of USACDC's first year of existence--the command's progress and problems, and the emergence of its first faint prognostications for the future.

It is the purpose of this brochure to note some of the most important aspects of that one year's experience as viewed through the eyes of the directors of the directorates, and the chiefs of the separate staff offices, of Headquarters USACDC. In the main, the directors and chiefs have confined themselves to a factual digest of accomplishments, difficulties, and trends within their areas of interest. In some instances, where considered pertinent or germane, they have taken cognizance of key activities performed among the seven USACDC subordinate commands and their nineteen attached field agencies.

To the extent permitted by the short historical perspective of a single year, the directors and chiefs have contributed analytical interpretations of present and future currents within their areas of operation.

There has been no pretense on the part of anyone participating in this brief examination to make it definitive or comprehensive in the historical sense. Essentially nothing more than a summary reporting for general reference, information, and orientation purposes has been envisaged or attempted.

But for all members of the command, both old and new alike, it is not inconceivable that a larger value might derive from the small beginnings of this pamphlet: that from its perusal there might arise, upon the part of all combat developers in USACDC, a resolve to perpetuate General Daley's oft-voiced hopes for the fullest possible military growth, intellectual development, and professional maturation of the command he started.

Lloyd P. Van Court

LLOYD P. VAN COURT
Colonel, GS
Director, Plans, Programs
and Intelligence

CONTENTS

Charts

CHAPTER I

THE INCEPTORS AND ORGANIZERS

Answers to certain questions are necessary to an understanding of even such a highlighted account of USACDC's first year of existence as is professed by this brochure. Precisely what, for instance, is the USACDC? Where and how did it originate--and why? Who were its inceptors and organizers? How far back in time should one go in order to provide this introductory background information?

The Combat Development Program and System, 1952-62

Taking the last question first, probably the best starting point for the purposes of this pamphlet is to return to the early years of the 1950 decade--specifically, 1952. The post-World War II combat development programs began in that year with Project VISTA, a contract study by California Institute of Technology of ground and tactical air warfare that emphasized the defense of Western Europe. The study recommended that the Army organize a Combat Development Group, described as follows:

> The Combat Development Group. To forge and develop the new tactics, techniques, and tools of this new type of warfare, we recommend the establishment by the US Army of a Combat Development Group. The primary function of this unit is to bring to an operational state the newest tactics, ideas, and inventions having application to the kind of warfare envisaged for Western Europe. Such a development group, to be effective, must encompass a combat unit of sufficient size to include all elements of a working combat team, such as infantry, armor, artillery, and signal troops. It must have a permanent staff that includes civilian scientists; it must have access to specialists in all relevant fields; and it must work in close coordination with Operations Research Office of the Army.

Envisaged by VISTA was the establishment of a command with sufficient qualified military and civilian personnel, troops, and other resources to formulate new concepts and test them out on the ground. The VISTA combat development organization was to be separate and independent of the Army Field Forces (AFF) system of schools and boards and would report directly to the Chief of Staff, or through the Army Staff. The Office, Chief of Army Field Forces (OCAFF) did not concur in the establishment of a separate command, generally on the basis that:

1. Duplication would result since functions of the Combat Development Group envisioned by VISTA were already included in the responsibilities assigned to OCAFF.

2. With reorientation of the functions of the schools under AFF and some augmentation of existing agencies, the desired emphasis could be achieved at less cost.

Concurrently with the review of VISTA, discussions were underway between G-3, DA, and OCAFF concerning the establishment of a Special Weapons Command for the purpose of emphasizing and accelerating the atomic weapons and guided missile program.

On 13 June 1952, General Collins, Chief of Staff, directed the establishment of a combat development group in OCAFF, stating that the dual responsibility of OCAFF for evaluating the effect of scientific developments upon tactical doctrine and for developing requirements for new weapons to support new tactical concepts called for the application of scientific methods to the problems of ground warfare.

In response, OCAFF prepared a plan designed to take advantage of the existing AFF centers, schools, and boards, including long-established liaison with the technical services. According to the plan, the AFF structure would be altered to accommodate the functions proposed both by VISTA for a Combat Development Group and by DA for a Special Weapons Command. The major points included the designation of the Deputy Chief, AFF, as Deputy for Combat Developments, the establishment of a Combat Developments Division in G-3, OCAFF, and the addition of combat developments departments at the combat arms schools and at the Command and General Staff College.

A significant aspect of the OCAFF plan was that it provided for the employment, as professionally graded civil service personnel, of a considerable number of civilian scientists and analysts. This feature was the subject of negotiations between OCAFF, DA, and the Operations Research Office (ORO). Ultimately, ORO established an element at OCAFF which was not staffed by civil service personnel, but rather by ORO analysts on a rotational basis from the parent organization.

On 15 September 1952, the Army Combat Development System was officially "born" when the OCAFF plan was approved with modifications by DA. The principal modifications of the OCAFF plan were the utilization of ORO's personnel and the reduction of proposed personnel augmentations for the new departments at the schools by 50 percent. The DA eliminated from further consideration the Special Weapons Command. The functions of a Directorate for Guided Missiles and Atomic Weapons, which had been under consideration, were absorbed by the Deputy for Combat Developments.

The Combat Operations Research Group (CORG) at this time was composed of both civilian analysts from ORO and military personnel. CORG had been formed on 17 August 1953 by merging the ORO field team at OCAFF with a group of ten officers under the Deputy Chief, OCAFF.

By early 1954 the combat development system had assumed its basic form and, through a series of adjustments, its roles had been partially clarified. The combat development agencies at the schools and the combat development element of the OCAFF staff had been deliberately insulated from operational matters so that they could devote their primary efforts to objective consideration of long-range development problems. But because of emphasis on evaluating the impact of missiles and atomic weapons, the combat development effort during the first few years was largely directed toward the mid-range period (0-5 years in the future).

In addition to overemphasis upon mid-range developments, the major deficiencies inhibiting the success of the combat development program were:

1. The Combat Development System did not include the technical and administrative services, except for the establishment of the Engineer Development Board by the Chief of Engineers, to participate actively in the combat development program;

2. The Combat Development System had little capability for field experimentation except in conjunction with field exercises and maneuvers; and

3. The number of military personnel allocated to the combat development agencies was approximately one-half of the number originally recommended by OCAFF.

In early 1954, at the request of the Secretary of the Army, a small ad hoc sub-committee of the Army Scientific Advisory Panel was constituted to review the Army's program for combat developments, review the progress that had been made since the establishment of the combat development organization in AFF, and make appropriate recommendations on ways the program could be improved. Headed by Dr. Leland J. Haworth, Director of Brookhaven National Laboratory, the sub-committee visited OCAFF and the principal combat development agencies. The committee's report, known as the Haworth Report, submitted 20 October 1954, contained the following principal conclusions:

An intensive Combat Development program is essential to the establishment and maintenance of a combat-ready Army. The focal point of this program should be a "Combat Development Organization," given broad responsibility for and wide freedom of action in the

> exploration and evaluation of new concepts of weapons, organization and tactics and their synthesis into an effective fighting system. The capabilities of this organization should include authority and means to conduct theoretical studies and to perform adequate experiments and field tests covering all aspects of land warfare. No limitations should be imposed by existing doctrine, organization, roles or missions in any of the military forces. . .
>
> * * * * * *
>
> An autonomous command at a special site possessing adequate staff, facilities, and troops for the execution of all aspects of Combat Development would have much merit and should be considered as the ultimate goal, but is probably not immediately feasible. In the meantime, methods should be devised to utilize existing organizations, personnel, and facilities for more effective execution of the Combat Development mission.

The Haworth Report was a major step in the evolution of the combat development system. It reaffirmed the need for an organized approach to the concurrent development of new doctrine, organization, and equipment and recommended that the existing system be given additional resources. This strong support from outside the Army can be credited with providing the impetus for a number of significant improvements in the system.

As a result of the Haworth Report, the combat development effort was strengthened by increased authorization of both military and civilian personnel. The ORO personnel in CORG under a Johns Hopkins University contract were replaced by civilian scientific personnel from Technical Operations, Incorporated, Boston, Mass., under a separate contract which enabled CORG to be fully staffed and to attain greater continuity of personnel.

As an outgrowth of the emphasis in the Haworth Report on including technical service personnel on the staffs of the combat development agencies, the Department of the Army decided to bring the technical and administrative services into the combat development system. On 26 July 1955, a major expansion of the combat development system occurred when DA directed the heads of the technical staff agencies, The Adjutant General, The Provost Marshal General, and Chief of Chaplains to designate agencies to participate in the effort. In continuation of this trend, other agencies of the DA staff subsequently brought into the combat development system included the Army Intelligence Center (ACSI), Army Security Agency Board, Finance Corps Field Service Board, and Army Logistics Management Center (DCSLOG).

In response to a DA directive, OCAFF prepared a plan for changes to the combat development organization and program based on recommendations of the Haworth Committee. This plan was submitted in February 1955, after AFF became the U. S. Continental Army Command (USCONARC). The USCONARC plan as approved by DA provided for troops within CONUS or in oversea commands to be made available for executing combat developments field experiments. No step was taken at this time to establish an experimentation center. However, the strong emphasis in the Haworth Report on field experimentation lent support to subsequent efforts within USCONARC to establish such a center.

Action was taken early in the development of the combat development system to provide an experimental capability, though on a modest basis in comparison with that envisioned by VISTA. The need for field experiments as a source of operational data became apparent during war games of proposed organizations. Accordingly, a program of field experimentation was developed to meet requirements for performance data through controlled experimentation or maneuvers. However, not until the establishment of the United States Combat Development Experimentation Center (USCDEC) was an adequate experimental facility provided.

On 1 November 1956, USCDEC was activated on a provisional basis for a 20-month period. During its initial two years of operation, the bulk of its effort was devoted to developing its methods and techniques of operation. In March 1958, USCONARC recommended that USCDEC be established as a permanent activity, that it be given expanded capabilities, and that its permanent location be Camp Roberts. The location of USCDEC became the major problem which delayed the final decision of its status. The matter was finally resolved in 1959, when the DA, on 6 April, announced that USCDEC would remain permanently located at Fort Ord and would continue to use the Camp Roberts - Hunter Liggett Military Reservation.

As the scope of the combat development program expanded and the number of agencies increased, the need for a common set of objectives and for means of keeping agencies informed of each other's activities became increasingly apparent. The earlier Combat Developments Planning Guide was replaced in November 1954 by a new document, the Combat Developments Objectives Guide (CDOG). This early version of CDOG consisted of objectives, studies, and tests, together with progress reports on the studies and tests listed.

On 31 October 1955, USCONARC published a revised CDOG which was the first version to appear in essentially its present form. In March 1958, the Department of the Army assumed responsibility for publication of CDOG in order that it carry the requisite authority and to give it the required stature. In conjunction with this action, the DA reaffirmed the responsibility of USCONARC for the direction of combat development activities under the general guidance and supervision of the Department of the Army, and stated that the commanding general, USCONARC, was the

executive agent for the Secretary of the Army and the Chief of Staff for the preparation of that guidance for the entire Army.

In early 1958 discussions were held between USCONARC and the Signal Corps concerning the possibilities of utilizing automatic data processing and other advanced techniques to improve information flow, storage, and retrieval within the combat development system. Before taking such an ambitious step as this, it was decided to obtain a detached, objective review of how the combat development system ran its business and of improvements that might be desirable for it. In June 1958, a contract was let with the Armour Research Foundation of the Illinois Institute of Technology to conduct a management engineering survey of the combat development system.

The Armour Research Foundation study, completed in March 1959, did not constitute a comprehensive review of all aspects of the combat development system operation. Nevertheless, it was a worthwhile contribution to the continuing evolution and self-evaluation of the system. A number of the conclusions and recommendations of the foundation were accepted, including the holding of periodic meetings of the chiefs of combat developments agencies. The first such meeting was held at Fort Monroe, 13-14 January 1960. The report of the conference, published 29 February 1960, contained a review of the principal conclusions and recommendations of the Armour Research Foundation study and the follow-up actions then being taken by USCONARC.

Reorganization of DA and Inception of USACDC

This brings the background for USACDC almost to an end. The rest is nearly all current history. The chief event in the immediate past was the renaissance of the Army and its greatest reorganization in the past sixty years. Not since Elihu Root persuaded Congress in 1903 to establish a Chief of Staff and General Staff Corps has DA undergone a shakeup as drastic as the 1962 reorganization.

One of the recommendations of the Study of the Functions, Organization, and Procedures of the Department of the Army, OSD Project 80 (Army), October 1961, undertaken at the behest of the Secretary of Defense, and known as the Hoelscher Report, called for the replacement of the technical services by a functionally organized structure. Earlier, in August 1961, the conclusions and recommendations embodied in Project 80 were foreshadowed when the results of Project 100, a companion study to Project 80, became known. Project 100 resulted in the creation of the Defense Supply Agency at the Department of Defense Level. For the first time since the National Security Act of 1947, there was now set up at the departmental level an integrated and jointly-staffed operating supply organization for the future management of all common supplies and services that were formerly managed and operated at the level of the three military departments.

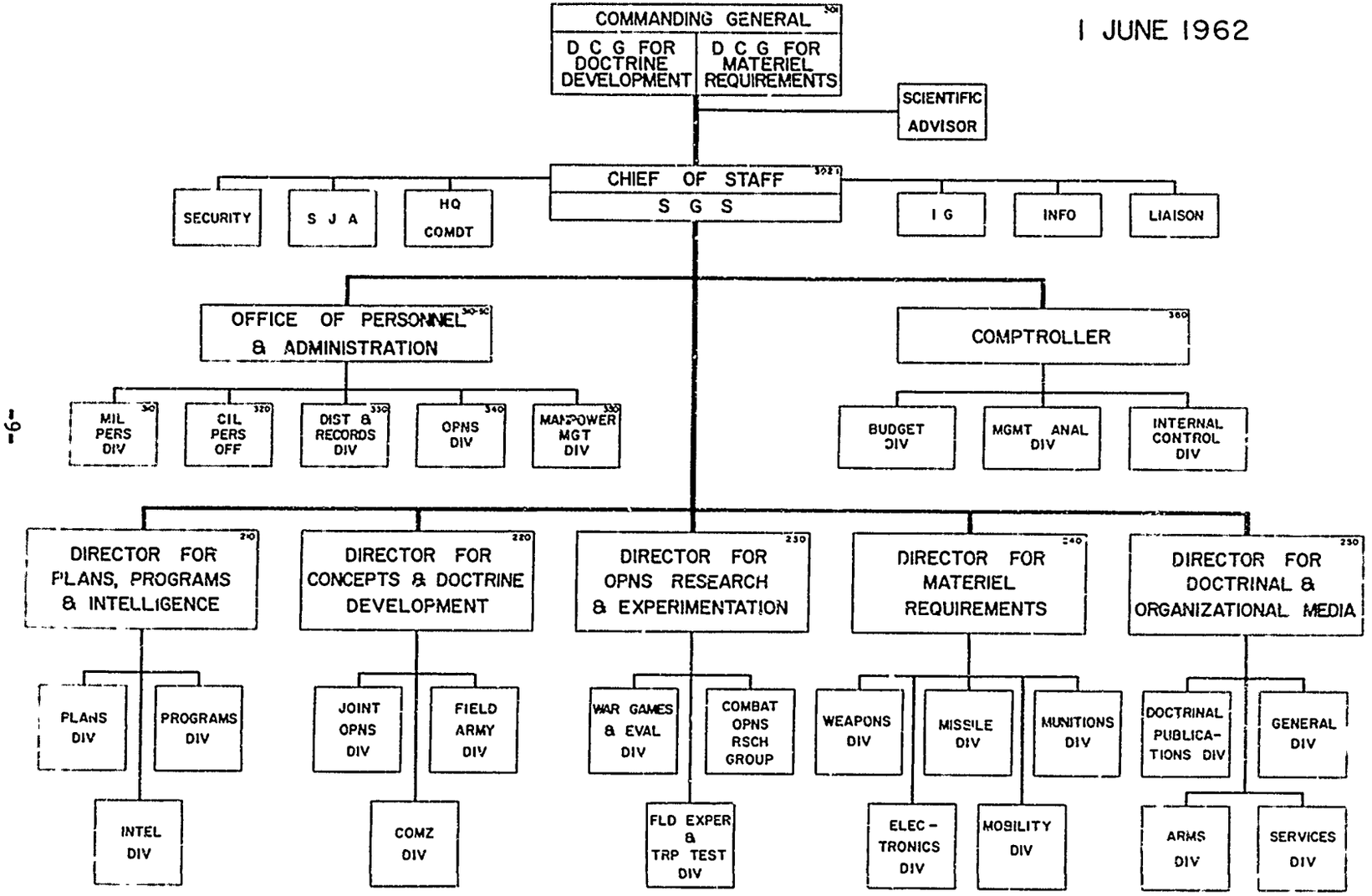
The planned realignment of functions as a result of Project 80 was designed to leave three functional commands in DA: USCONARC for command and training of CONUS units; the U. S. Army Materiel Command (USAMC) for wholesale logistic support of the Army, and materiel production and procurement, including research and development; and USACDC for centralization of all functions and activities falling within the combat developments spectrum.

Reorganization planning for the Army started immediately with the Secretary of the Army's announcement, in January 1962, of the forthcoming reorganization of DA. Lieutenant General John P. Daley, who was to become USACDC's first commanding general, was at that time Deputy Commanding General for Developments at Headquarters USCONARC. When the Department of the Army Reorganization Project Office (DARPO) was established, General Daley became chairman of the planning group for USACDC. Major General Thomas H. Lipscomb, one of the two deputy commanding generals of USACDC during its first year, was transferred to Washington in March 1962 as deputy to the chairman of the planning group, and was assigned to his present position of Deputy Commanding General for Materiel Requirements in June 1962. Major General Harry L. Hillyard, present Deputy Commanding General for Doctrine Development, joined the Command after activation, as did its present Chief of Staff, Brigadier General William L. Calhoun.

Charts on pages 9, 11, 13, and 15 show the 1962 and 1963 organizations of USACDC, for both Headquarters and subordinate commands. The combat developments phases and cycles will be found depicted in the charts on pages 29 and 31.

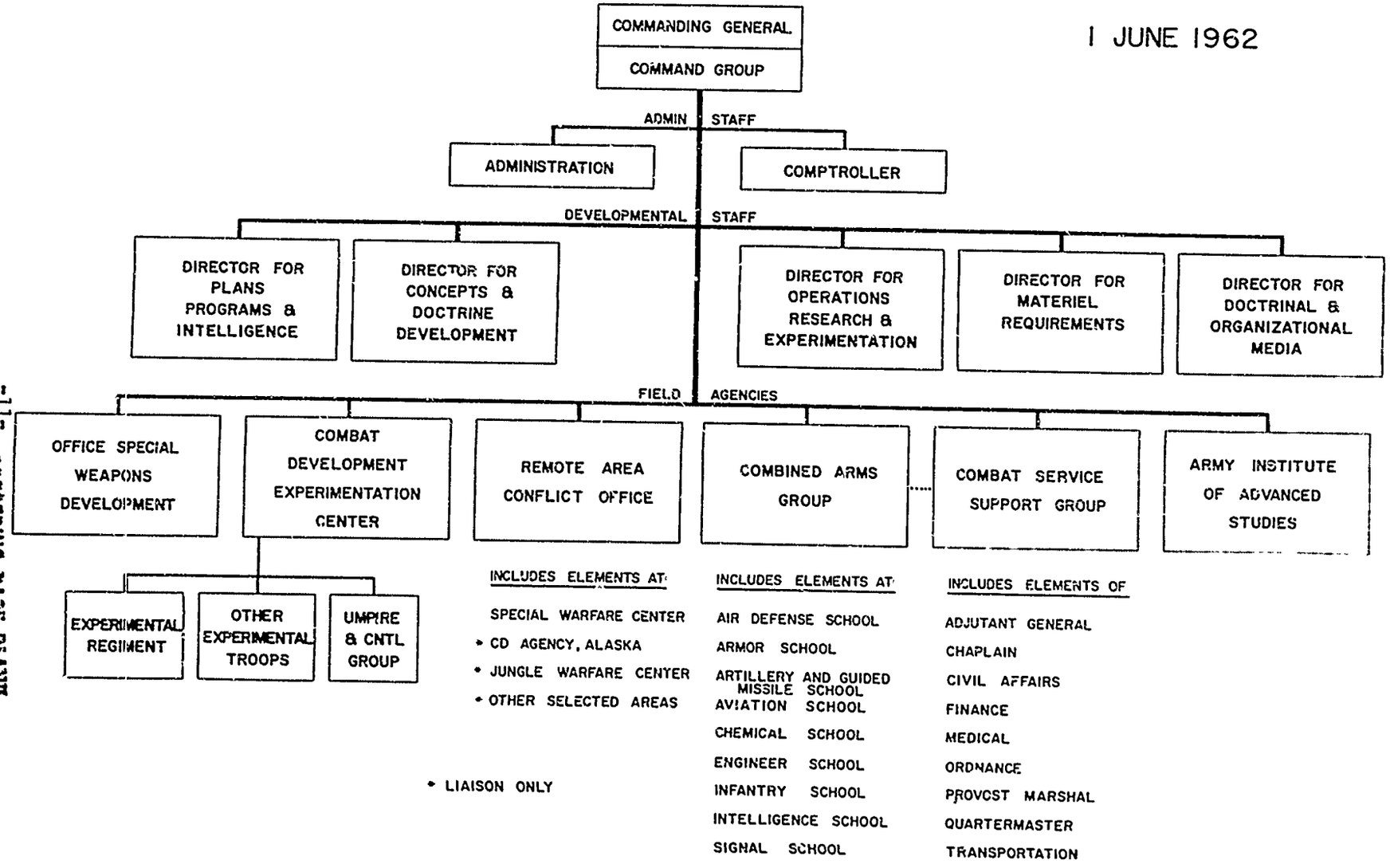
CDC HQ ORGANIZATION

1 JUNE 1962



US ARMY COMBAT DEVELOPMENTS COMMAND

1 JUNE 1962



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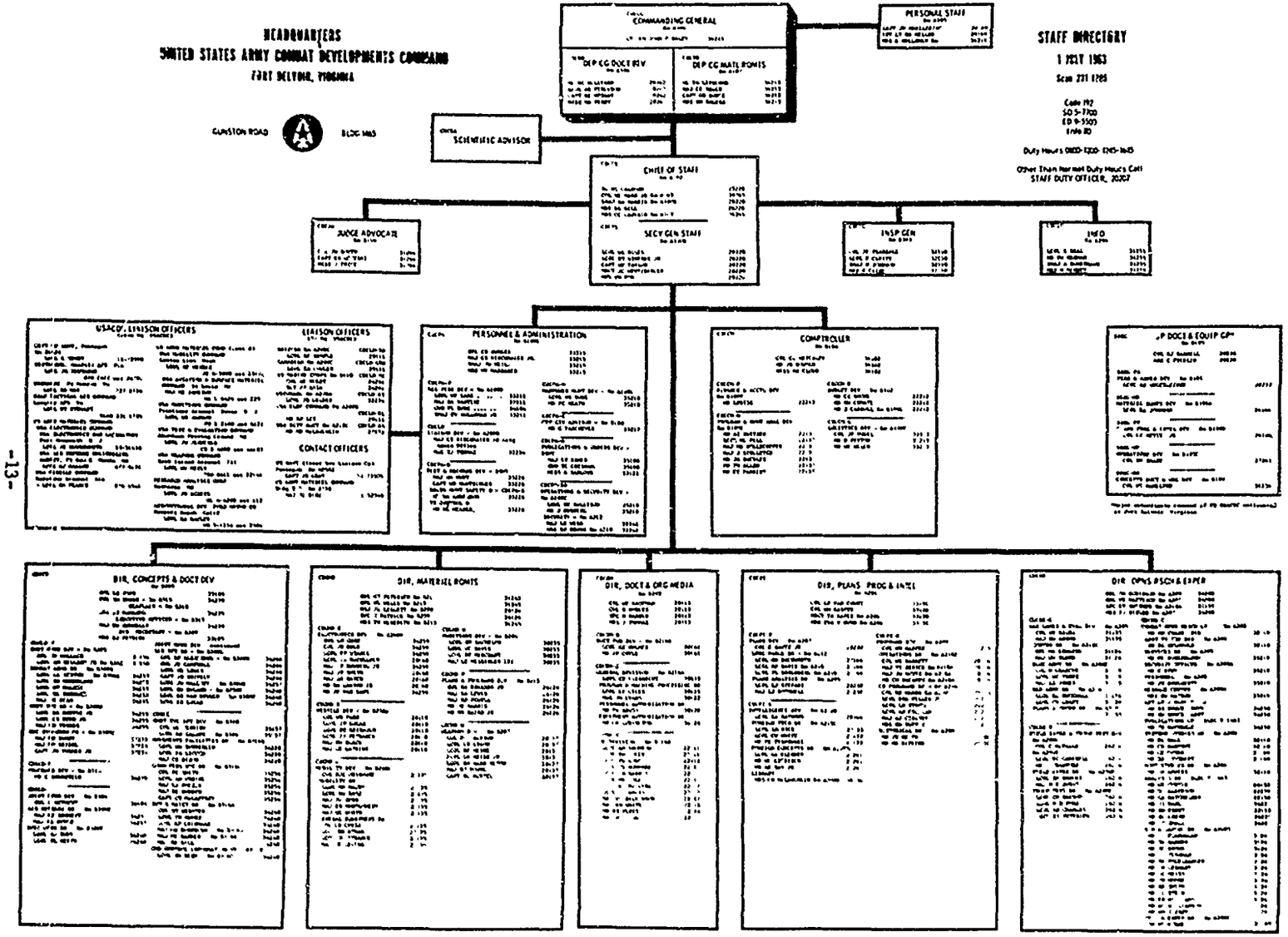
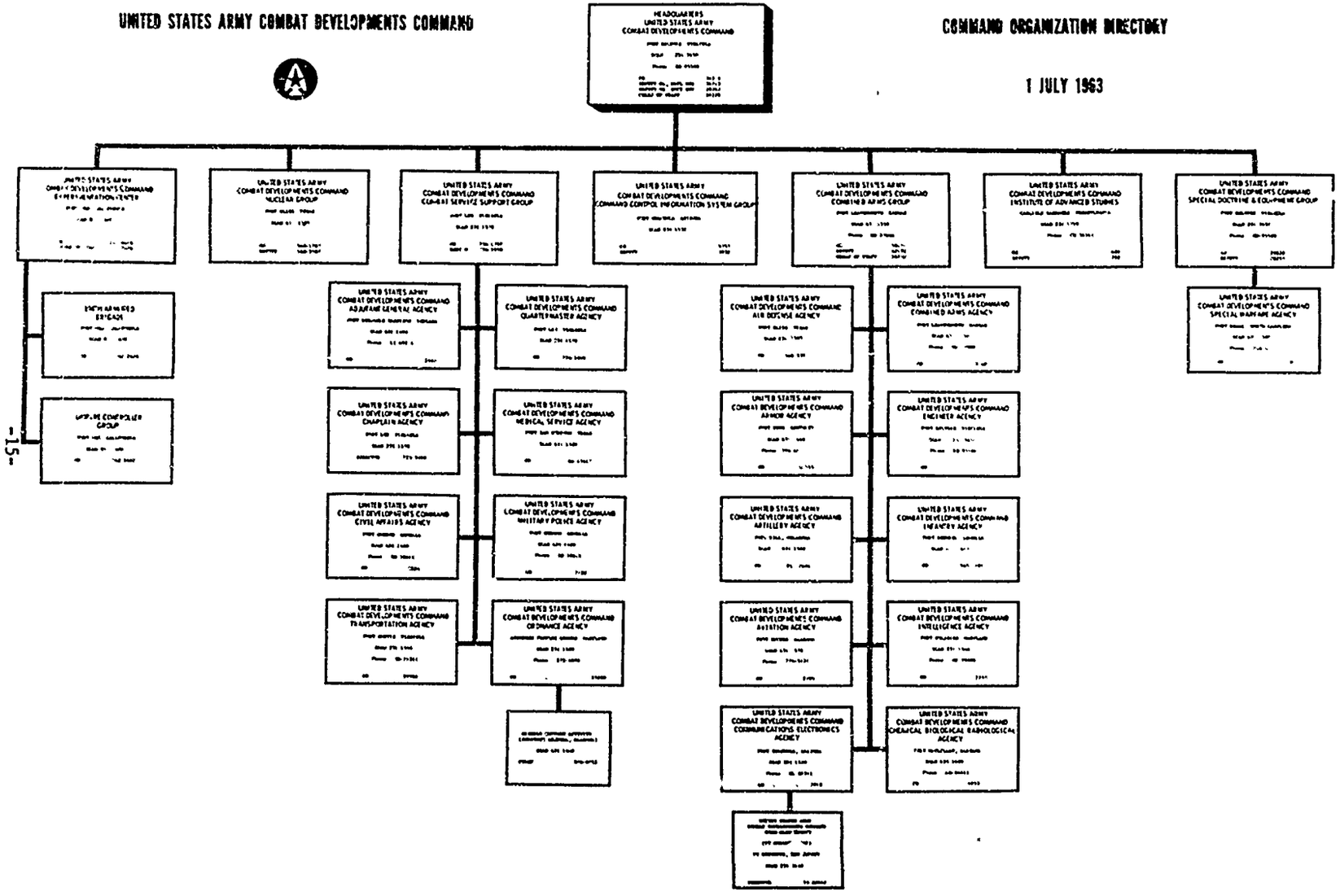


UNITED STATES ARMY COMBAT DEVELOPMENTS COMMAND

COMMAND ORGANIZATION DIRECTORY

1 JULY 1963



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CHAPTER II

THE COMMANDERS

The affairs of USACDC headquarters are largely determined and controlled by four top-level officer positions at command headquarters, Fort Belvoir, Virginia. This foursome constitutes what is known as the command group of USACDC.

Command Group Composition and Organization

At the head of the group is the commanding general himself. He has three principal assistants. Two of these are his deputy commanding generals: one for the field of doctrine development and one for the area of materiel requirements. Although two lieutenant-colonel spaces had been authorized for assistants to the deputy commanding generals at the time of USACDC's activation, 20 June 1962, it was not possible to fill these spaces until shortly after 1 January 1963, because of the existing overall shortage of officers in the headquarters of the command.

The third principal assistant to the commanding general is the chief of staff, to whom there directly report the comptroller, director of personnel and administration, and the directors of the five directorates that compose the developmental staff of headquarters. Also reporting directly to the chief of staff are USACDC's judge advocate, inspector general, and chief of information. It will be noted that on the USACDC headquarters staff directory for 1963, the judge advocate, inspector general, and chief of information are at the command group level, adjacent and attached to the office of chief of staff. But since the roles of these are primarily in the staff support and service functions, they are not being considered here as components of the command group proper. Instead, treatment of their activities and problems has been reserved for a separate chapter of this brochure. (<u>See</u> Chapter V, "The Staff Supporte s and Servicers.")

Presently residing in the office of the chief of staff are the deputy chief of staff and the secretary of the general staff. On 1 April 1963, the position of secretary of the general staff, carrying a colonel's rank, was incorporated into the office of the chief of staff, where the position of deputy chief of staff was established. No additional personnel spaces were required for this organizational change. Except for this one major alteration, the current organization of the USACDC command group remains essentially the same as on the day USACDC was activated.

Policies and Activities of the Commanding General

In carrying out his command responsibilities during the past twelve months, the commanding general maintained a keen interest in many special areas. He was particularly concerned with enhancing the reputation of USACDCEC at Fort Ord, California. The number of favorable letters received from DOD officials who visited the experimentation center during the year just concluded, testified to the success of his campaign.

To properly control USACDC, the commanding general obviously had to maintain a deep and abiding interest in all phases of the development program. In certain identifiable areas, however, he showed particular interest.

(S) In respect to the joint test and evaluation of the Howze Board concept, General Daley's views were explicit. He was completely open about the Army's position and emphasized the need for Army-Air Force co-operation. He was adamant about "playing down" obvious areas of controversy. He backed the use of solid, scientific data as a means for evaluation, rather than the use of "military judgement."

(U) On the 11th Air Assault Division matter, he stressed the need for objectivity. He often expressed pleasure at the volume and quality of special texts that were produced for the air assault division under short deadlines by the command. He tried to "sell" the idea that the Army was not trying to take over Air Force missions. General Daley held that the reasons behind the justifications for airborne divisions were, in many respects, just as vulnerable as reasons submitted against the establishment of air assault divisions. On one occasion, he said: "Machine gun fire has always been an Army mission. We have simply decided to hang machine guns on aircraft rather than on one-quarter ton trucks."

(U) General Daley approved the Army Requirements for Fire Support study made by General Seaman's ad hoc group which stated requirements for mortars, missiles, artillery, and fire-support systems for Army fixed and rotary wing aircraft.

(U) It was the belief of General Daley that the Command Control Information System-70 concept (CCIS-70), as written in May 1963, amounted "to dropping a bunch of tape at the rear boundary of the field army." He felt that the personnel and logistics field should be revised all the way back to the Pentagon. He thought that personnel, logistics, intelligence, and fire support initially had to be treated separately. Finally, he was concerned that the entire system was a very expensive one and needed a very hard cost effectiveness look during development.

(U) General Daley felt that the three studies completed on air defense gave a very good picture of what our requirements would be for the

next 5-10 years (Air Defense of Allied Command Europe, Air Defense of the Field Army, and CONUS Air Defense). Out of the first of these three studies came a statement of requirement for Army Air Defense System-70.

(U) Over 100 questions were personally raised by General Daley on the original draft of the Very Long-Range Army Forces Concept (Army-80) study. Restaffing resulted in a condensed version of the study which was published early in August 1963.

(TOUO) Because of questions raised by high-ranking DOD officials, DA directed a re-evaluation of the AR15 versus the M14 (and comparison with a similar Soviet rifle) on a crash basis in November 1962. As a result of troop tests, General Daley recommended continued procurement of the M14, limited procurement of the AR15 for use in airborne and air assault units, and continued development of a special purpose individual weapon.

(TOUO) General Daley was greatly interested in troop tests in Vietnam. He dealt directly with General Rowny, who was Chief of Army Concept Team in Vietnam (ACTIV).

(U) On the question of types of forces, General Daley had definite convictions. On 3 December 1962, he told the civilian aides to the Secretary of the Army: "Your Army has a continued requirement for powerful, highly mechanized, principally ground mobile forces so well exemplified today by our Seventh Army. On the other hand, we have a requirement for other forces, principally air mobile, specifically designed for quick reaction to support our national policy, anywhere, promptly. These are the basic requirements from which stem all our organizational, doctrinal, and materiel requirements."

Besides carrying the heavy burden of determining or approving all basic USACDC positions and policies as a result of the exercise of his command responsibilities, the commanding general engaged in a wide diversity of other activities during USACDC's first year of life. As early as June 1962, for example, General Daley established and began to carry out an informal policy of personally visiting all the subordinate commands and their attached agencies at least twice a year. He began his second tour of the field in February 1963.

In addition to visits within his command, the commanding general witnessed two live firing exercises at White Sands Missile Range, New Mexico--IVY FLATS--on 18 July 1962, and the Missile Firing Exercise for the President on 5 June 1963. He attended a demonstration of the Army Tactical Mobility Requirements Board concepts at Fort Bragg on 25 July 1962, and visited Operation SWIFT STRIKE II on 17 and 18 August 1962. In September 1962, he took a two-week trip to South Vietnam. He visited installations at Livermore, California, and Los Alamos, New Mexico, 18

to 20 December 1962. He received information briefings at the Marine Corps Landing Force Development Center at Quantico, Virginia, and at the Defense Supply Agency and was paid return visits by commanders of both organizations.

In conjunction with his assigned duties as Army Representative for Joint Test of the "Howze Board" concept, General Daley visited CINCSTRIKE in February and April 1963 and received a return visit from Deputy CINCSTRIKE. He visited CROSSBOW Headquarters on 14 May 1963.

The commanding general attended a National Security Conference on 24 January 1963 at Georgetown University, where he conferred with Dr. Teller, consultant to the Air Force. He participated in Army Scientific Advisory Panel Activities at Fort Sill in October 1962, and attended the National Strategy Seminar at the Army War College, 11-14 June 1963. He was appointed Senior U. S. Army Delegate to TEAL VII and presented the United States positions in a week-long conference in London in April 1963.

During the period June 1962 through July 1963, General Daley delivered a total of twenty-five speeches and addresses. On his favorite subject, USACDC, he spoke ten to fifteen times, to such assorted groups as the USAMC Project Managers, Reserve Officers Association, AUSA (twice), Infantry Career Class at Fort Benning, Civilian Aides to the Secretary of the Army, AFSC, Army Policy Council, Army Ordnance Association, Army Commanders Conference, AOA, and Congressional Command and Control Group.

Among the graduation and keynote addresses he delivered were those of the Artillery Officers Career Class at Fort Sill; the Human Factors Engineering Conference at Fort Benning; the Fifth Tripartite Infantry Conference, also at Fort Benning; the Combat Surveillance and Target Acquisition Conference at Fort Sill; and the Ordnance Officer Career Class at Aberdeen Proving Grounds.

Both inter- and intra-command relationships bulked importantly in General Daley's mind. On a bi-monthly basis he held informal meetings and discussions on mutual problems with Lt. Gen. Frank S. Besson, Jr., his opposite number at USAMC.

The first USACDC Commander's Conference under the commanding general was held at Fort Belvoir on 22 and 23 August 1962. All field commanders and the headquarters staff personnel participated in this meeting.

The commanding general attended and participated in the Army Commander's Conference at the Pentagon, 20 April to 3 May 1963.

He supported the AUSA and entered into their annual meeting in Washington in October 1962.

Organizational Placement and Problem of Securing a Scientific Advisor for USACDC

As in the case of the USACDC judge advocate, inspector general, and chief of information, the position of scientific advisor at command headquarters is organizationally at the level of the command group, but is not functionally an integral part of the group itself. The organizational placement of the scientific advisor at the command group level stems from the importance of this position and the special relationship it bears to that of the commanding general.

It should be noted that as of this date the position has not been filled. When it is, the scientific advisor will not only serve as technical advisor to the commanding general, but also will provide a continuing contact for USACDC with advancing intellectual frontiers over the entire spectrum of science. He will advise in the long-range impact of pioneering scientific discoveries, and assure that due cognizance is taken of these, as well as of industrial and technological advances. He will analyze the scientific problem areas confronting USACDC and recommend their solutions. The scientific advisor will maintain liaison with his colleagues and other research and development agencies in order to remain abreast of the status of basic research, developmental and applied research, testing, applications engineering, and standardization of developmental items. He will represent the commanding general at the highest-level military and civilian scientific boards and committees, as well as maintain a continuing liaison with the heads of scientific societies, educational installations, industrial organizations, and private research groups.

This position, still open, is a key one within the USACDC. The qualifications for it require that the incumbent possess an outstanding scientific background and be recognized as an eminent authority in the scientific community. For these reasons, the Chief of Research and Development, DA, has supported the requirement for the position of USACDC scientific advisor, under Public Law 313.

The Department of the Army has not so far allotted a Public Law 313 space to the USACDC for appointment of its scientific advisor because all such available DA spaces had been committed prior to the activation of USACDC. Action has been continuing, however, since October 1962, to obtain qualified applicants for this position on the presumption that should an eligible candidate be proposed, a space might be made available for him. Such action has included contact with the Department of the Army Employment Coordination Board, the Chairman and Members of the Army Scientific Advisory Panel, various military service research activities, selected universities and research institutions, and personal contacts. Currently, the Massachusetts Institute of Technology and the University of California have been requested to nominate

qualified applicants on a sabbatical leave basis. To date, all efforts to locate an acceptable qualified applicant who is interested in joining the USACDC have been unsuccessful.

CHAPTER III

THE MANAGERS

Like other similar military organizations, USACDC has its managers as well as its commanders. It will be noted that on the staff directory for command headquarters (page 13), the managerial staff is located directly beneath the offices of the chief of staff and the commanding general, and is composed of two principal subordinate elements: personnel and administration and the office of the comptroller. It is the responsibility of these two organizations to keep USACDC rolling along administratively and fiscally.

Personnel and Administration

The critical military and civilian personnel situation that developed throughout the command during its first year of operation is closely related to several planning actions taken prior to its activation. These established the personnel requirement for USACDC and set the stage for the actual transfer of the military and civilian personnel to the command upon its activation. The USACDC activation plan contained the recognized requirement for personnel for the headquarters and each of its subordinate elements. The plan followed the Army reorganization concept contained in two Hoelscher Committee Reports, Project 80, and the Report on the Reorganization of the Department of the Army, December 1961 (Green Book).

Based upon the Green Book, DARPO was established to oversee and approve actions taken by five separate planning groups which were established to develop the organization, missions, functions, and personnel requirements for each of the new or reorganized elements: USACDC, USAMC, Headquarters USCONARC, the Office of Personnel Operations, DA, and Headquarters DA.

Since the establishment of USACDC called for a centralization of all combat developments activities being performed in the Army, the combat developments planning group had to determine where and what combat developments functions were being performed throughout CONUS, identify personnel utilized in support of these functions, and prepare a plan to claim and transfer the spaces (and the people involved) to the new command. For the most part, these combat developments functions were located at, or were components of the various service schools of the Army, in Headquarters USCONARC, and within elements of the offices of the chiefs of the technical and administrative services, DA.

It is significant that the number of spaces initially established as the personnel requirement for this command essentially amounted to the number of spaces or man years that could be identified as being involved in combat developments functions. The result was an initial command ceiling of 6267 spaces, including 3996 located at the USACDC Experimentation Center at Fort Ord, California.

The problem of identifying spaces to be transferred was least difficult where separate and distinct combat developments activities existed, such as in separate Class II activities collocated at schools operated by chiefs of the technical and administrative services. Where combat developments functions were intermixed with the instructional and staff functions of the combat arms and other schools operated by USCONARC and elements of the DA staff, the problem was extremely complex. The spaces identified by this process became the number that was agreed upon for transfer by DARPO as the recognized personnel requirement for the command. Except for subsequent minor adjustments, this is DA's currently recognized personnel requirement for USACDC. Based on this requirement, the command later received a DA-established personnel authorization.

Also significant is the fact that the personnel spaces required to establish Headquarters USACDC, Headquarters USACDCCAG, and Headquarters USACDCCSSG, came out of the total number of spaces identified for transfer. The impact of this space identification was important also, as it affected the approved ceiling for this headquarters. When the planning group presented a requirement for some 585 spaces for the new headquarters, the reaction of DARPO was to the effect that it did not dispute the requirement for the number of spaces requested. However, due to the shortage of spaces, the proposed table of distribution for the headquarters could be approved if it were reduced by 103 spaces. Accordingly, the table of distribution was revised downward, but only at the cost of large reductions in the proposed offices of the comptroller and personnel and administration, and by somewhat lesser reductions in each of the remaining staff elements.

Military and civilian personnel who were identified by schools and other activities as being involved in combat developments work were transferred to the newly activated USACDC elements at these installations. Since the problem was most difficult in identifying personnel involved in combat developments functions in the combat arms schools, the shortages in the numbers transferred were greatest at these installations. In the case of USACDCEC, the activity was transferred intact. Exclusive of USACDCEC, the recognized requirement for officers amounted to 1108, and the actual number transferred to the command on this date were 537 officers or 47 percent of the requirement.

Similarly, civilian requirements were identified as 890, with an actual transfer of 360 (40 percent) civilians upon activation. Enlisted

requirements for the same activities called for 264, but the actual number of enlisted men transferred was 224 (85 percent). As a consequence, the major personnel problems of the command during this first year have arisen from the command's effort to obtain the highest possible manpower authorization from DA, and to attain its authorized personnel strength. In bringing up the assigned strength, the command has placed great emphasis upon obtaining military and civilian personnel of ability, education, and experience.

As of 23 July 1963, the command personnel requirements, authorizations, and assigned strengths were as follows:

	USACDC (less USACDCEC)			USACDCEC		
	Req	Auth	Asgd	Req	Auth	Asgd
Officers	1144	938	863	369	349	297
Civilians	905	779	754	46	44	44
Enlisted	327	282	283	3583	3428	3307

In keeping with the guidance given to the planning group for Headquarters USACDC, the traditional functions of the G-1, the AG, and the training functions of G-3 were consolidated in the office of personnel and administration. Subsequently, the responsibility for security operations, emergency and continuity plans, and the administration of liaison officers, was placed within this office. This consolidation was designed to centralize normal administrative and operational functions and free the five directorates comprising the developmental staff from major involvement in them.

The assignment of this group of administrative functions to the office of personnel and administration has proved to be an effective centralization of responsibilities. But against this must be placed the fact that the austere personnel authorization for the headquarters resulted in the allocation of only 12 officers, 10 enlisted men, and 35 civilians to the personnel and administration office. Since this number is much smaller than would normally be authorized to perform these functions in a headquarters of this type, it is assumed that the forthcoming DA manpower survey will provide for an appropriate increase in the number of individuals required.

Because the nature of most of these functions will not tolerate a backlog of work, the result up to now has been lack of adequate personnel flexibility when individuals are absent, insufficient manpower to

handle special projects, and an inability to provide an acceptable level of responsiveness to all command requirements.

Comptroller

The Office of the Comptroller at Headquarters USACDC provides the only full comptroller capability within the command. Comptrollership activities of the subordinate command elements are limited. These are dependent upon their host installations for finance and accounting support, through individual host-tenant agreements which were adopted in order to permit austere staffing. Similarly, the command "owns" no real estate. Facilities are provided by host installation commanders under host-tenant agreements. The command, however, is responsible for programming major construction and submission of such requests directly to DA. Already approved by the Secretary of the Army and forwarded to the Secretary of Defense is a proposal for the construction of a headquarters building for USACDC at Fort Belvoir.

Headquarters USACDC has been operating under the concept that the money of the command belongs neither to the comptroller nor to any other single command activity. A USACDC program-budget advisory committee (PBAC) has been established with the chief of staff as chairman and the directors of the development and administrative staffs as members. The purpose of the PBAC is to insure the most effective use of available funds in support of the USACDC mission. Its essential responsibility, therefore, is to recommend actions to the commanding general concerning all programming, budgeting, and review and analysis matters.

To support the operations and maintenance of USACDC in fiscal year 1963, expenditures of $14.4 million were necessary. In conformance with the command's policy of spending only for what it needed, $993,000 was returned to DA at the close of the year. For fiscal year 1964, USACDC has a funding program of $20.6 million and has requested $23 million for fiscal year 1965.

In addition to funds for operations and maintenance, the command requires funds to provide contractual scientific and technical support. In fiscal year 1963, it received $1.6 million, and $3.1 million in fiscal year 1964. An additional $1.8 million has been requested for fiscal year 1964. This will make contractual scientific and technical support available to all elements of the command on a continuing basis.

Logistics support is a function of the comptroller. It includes the furnishing of internal support for the headquarters and staff supervision of the command's logistical policies, plans, and procedures. A major requirement in this area during fiscal years 1964-65 will be the co-ordination of the design and construction of the new headquarters building at Fort Belvoir.

Unavoidably, management activities for USACDC have had to be minimal during the first year of operations. Responsible for this have been delays in recruitment, austere staffing, and the press of "crash actions" that have compelled the concentration of effort in other areas. On the other hand, a major accomplishment during the period has been the development of a command-wide program system. It is hoped to have this system operational by 1 October 1963.

One of the most important areas for emphasis during fiscal year 1964 is the preparation of a formal organization and functions manual for the entire USACDC. This will eliminate the necessity of employing the USACDC activation plan for this purpose--a stop-gap measure that has not been too satisfactory over the past year.

To date no guidance has been developed for automatic data processing applications. Actions involving support of war gaming, operations research support, and information storage and retrieval, require early emphasis in this area.

A matter of importance to the command is the provision of a permanent installation for the 4th Battalion, 73d Armor, assigned to the USACDCEC at Fort Ord, California. The commander, USACDCEC, has proposed the transfer of this unit from Fort Ord to Camp Roberts, California, an inactive installation. Such a transfer would involve securing an exception to the provisions of AR 210-17 and Department of the Army Program Guidance, fiscal years 1964-68. The proposal seeks elimination of housing, support, and morale problems found at the present location. The proposal has been returned at the request of the new commander. It will be resubmitted and at that time a command position must be determined.

CHAPTER IV

THE COMBAT DEVELOPERS

The five working directorates at Headquarters USACDC make up the "main line" of operational staffers for the commanding general and his two deputies, reporting to the command group through one of its members, the chief of staff. The titles of the directorates are fairly indicative of their missions and functions: Plans, Programs, and Intelligence; Concepts and Doctrine Development; Materiel Requirements; Operations Research and Experimentation; and Doctrine and Organizational Media. The Special Doctrine and Equipment Group, though a major subordinate command of Headquarters USACDC and collocated with it, also functions as one of its staff directorates.

Since the directorates are functional organizations, their activities are largely related and interlocking, requiring horizontal co-ordination. Co-ordination is also important between each directorate and the seven subordinate field commands and their attached agencies, in respect to the staff supervisory functions of the directors over field activities and projects which fall within their areas of interest. It would be well to keep these two factors in mind because they have had a very real and direct bearing upon the mission accomplishments and problems of the directorates over the past year as recounted in this chapter, and the analytical evaluations of these by the directors themselves.

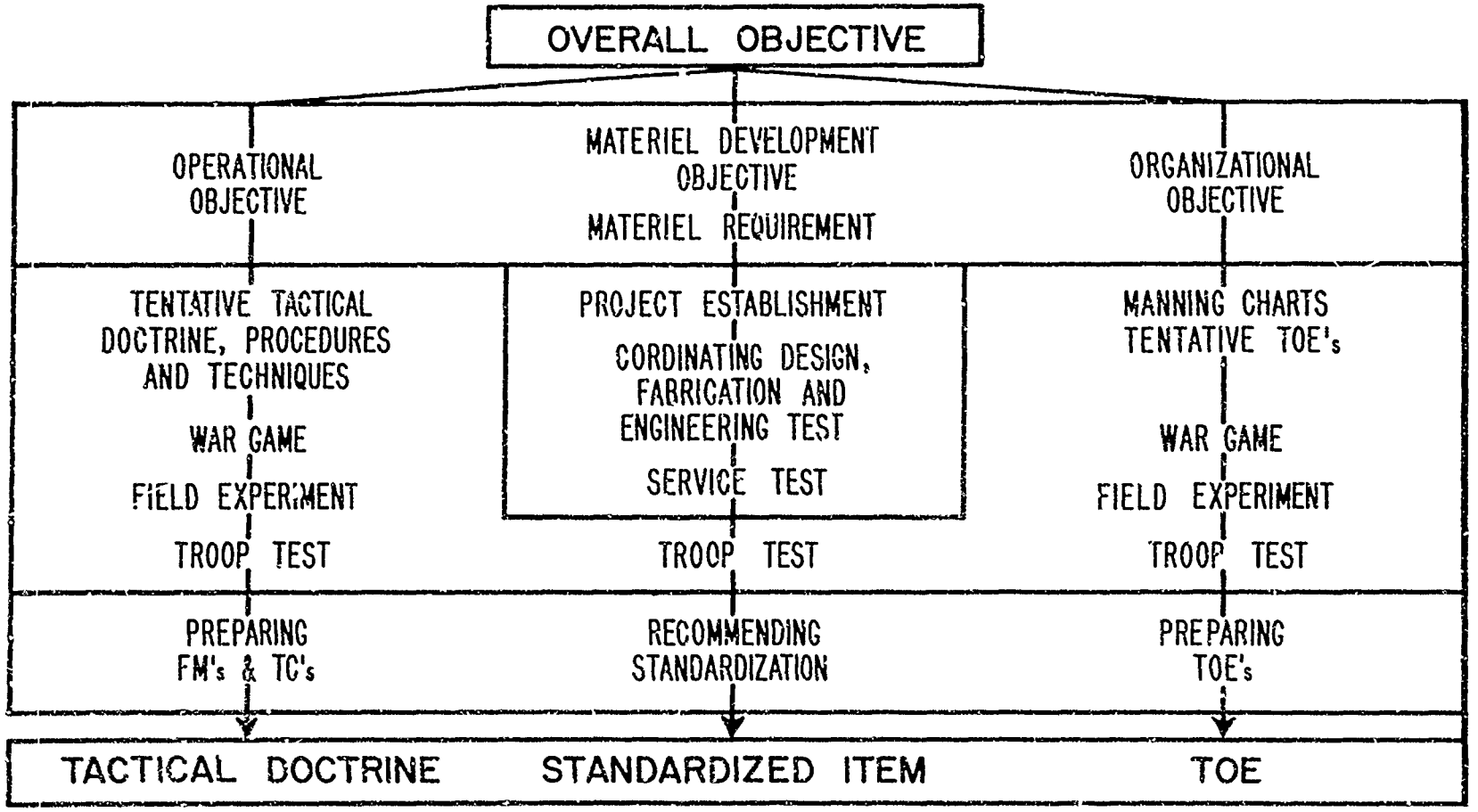
The two graphic representations which follow on pages 29 and 31, depict the sequence of the combat developments cycle from tentative ideas and objectives to approved doctrine, organization, and requirements for equipment.

Plans, Programs, and Intelligence

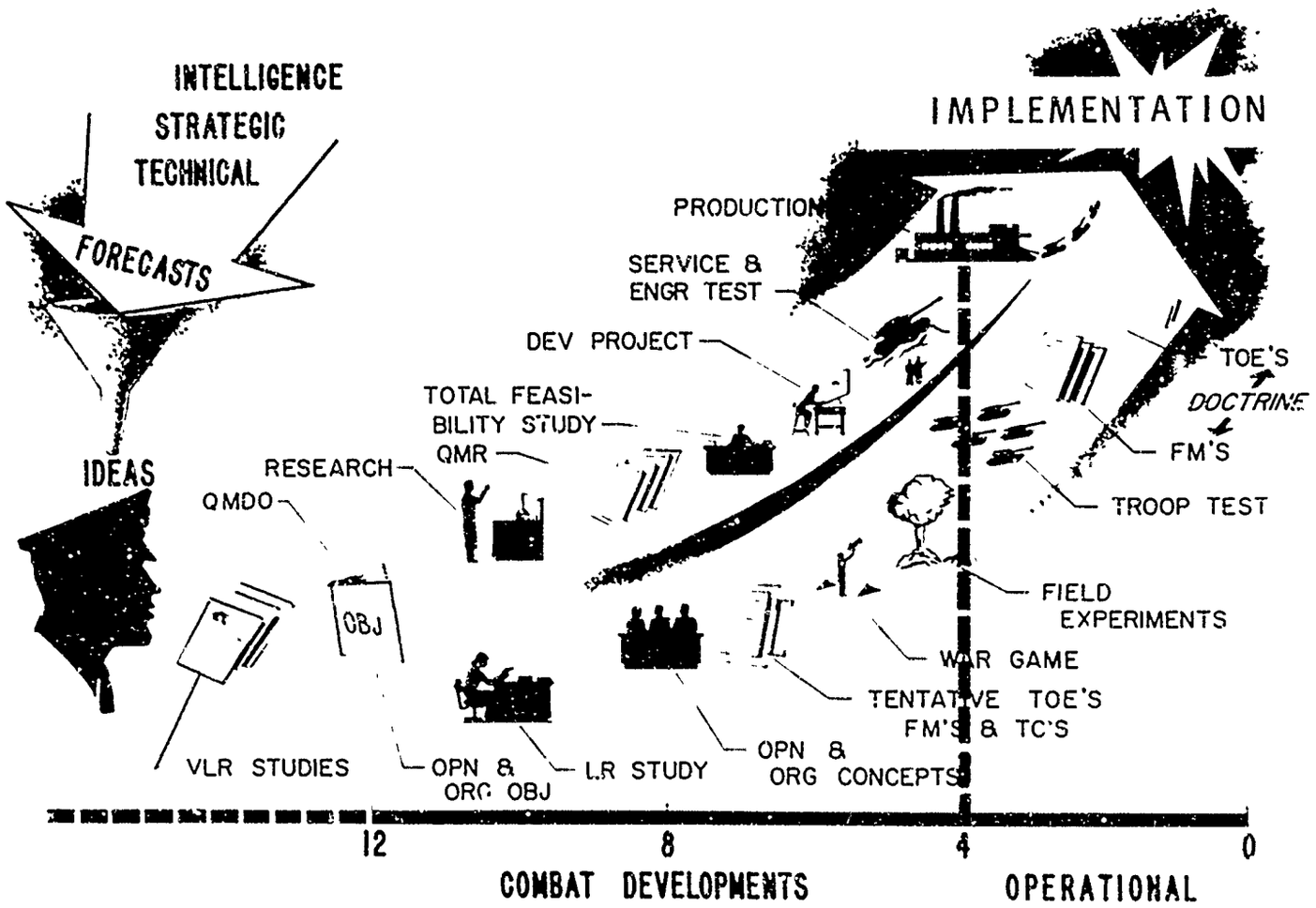
The Directorate for Plans, Programs, and Intelligence (PP&I) is organized and assigned missions and functions that enable it to establish the framework around which the other activities of USACDC are built. As its title indicates, the directorate is composed of three functions: planning, programming, and intelligence activities. Throughout all three the need for additional personnel has more or less existed as a common denominator from the day of activation.

At that time the planning mission, as derived from the statement of functions listed in the activation plan, was "to develop basic policy guidance and general objectives that establish the direction of the total combat developments effort within the long range perspective." This

PHASES OF COMBAT DEVELOPMENTS



PICTORIAL REPRESENTATION OF COMBAT DEVELOPMENTS CYCLE



mission still stands, except for the loss of functions regarding QMDO processing, primary staff responsibility for research actions, and staff supervision of AIAS (USACDC Circular No. 10-5).

Examples of planning accomplishments during the last half of fiscal year 1963 include publication of new general, operational, organizational, and materiel objectives for Section I, Chapter 1, Combat Developments Objectives Guide (CDOG); preparation of final command position on Army 80, to include a brief in-house rewrite of the concepts; initiation of action for conduct of studies on Space Operations, Army Role in General Thermonuclear War in 1975-85; initial analysis of 91 contingency plans and identification of 63 which may have combat developments implications; study of means to implement USACDC responsibility for expedited combat developments action on contingency plans, and development of "the concept of pattern" for combat developments planning. It is expected that the planning activity will show an increased workload in the staff review of actions and assignment of actions pertaining to the near-range time period (0-10 years); an increase in requirements to provide input for the new series of DA planning documents--BASE, ASP, AFDP--for the entire time frame, 0-20 years; and a continuing deficiency in resources to carry out the functions of contingency plan analysis and expedited combat developments.

In the programming function, the main focus has remained on the Tripartite (American-British-Canadian) standardization actions that were received by this command in August 1962, after being held in abeyance by USCONARC during the reorganization period. During the entire past year all of the operations personnel of the programming function have been concentrated upon this processing. Since the volume of standardization activities has continued to exceed the estimates of the planning group, secondary attention has had to be given throughout the year to other assigned programming functions, such as mission analysis and policy.

For the programming function proper, there are two principal recurring activities: to prepare, maintain, and distribute a five-year developments program for USACDC and to revise CDOG. There is a very close relationship between the combat developments objectives guide and the developments program. The former lists approved objectives and those projects designed to achieve the objectives. It is used within DOD, DA, and throughout the Army for information, planning, and budgeting for combat developments activities. This command has the responsibility for submitting annual recommendations to DA for the revision of CDOG. After approval, it is published as a DA document. The developments program, on the other hand, lists the projects which appear in CDOG, but it assigns responsibilities to elements of USACDC and provides a schedule for initiation of major actions. Though the program is given wide distribution, its essential purpose is to provide a management tool for

this command to assure integration of combat developments projects to meet objective years for stated operational capabilities. The USACDC developments program, published in five volumes on 1 July 1963, covers general guidance, the study program, the materiel program, the evaluation program, and the doctrine program.

During the planning period for reorganization in early 1962, staff officers in the combat developments section of USCONARC felt that much valuable information would be lost with the transfer of responsibilities from USCONARC to this command. It was therefore decided to prepare a document which would provide information to USACDC that might otherwise have disappeared in the transfer. This document, given the title of the Combat Developments Objectives Guide Reference Book, contains briefs, conclusions, recommendations, USCONARC positions, and when available, DA comments on completed combat developments studies and field experiments and troop tests. In addition, it contains briefs on QMR's that have been deleted from CDOG, along with the causes for their deletion.

On 24 April 1963, the programming function proper was enhanced by the addition of the responsibility for the management of all Army Tactical Mobility Requirements Board (ATMRB) actions within the headquarters. Since there were no spaces authorized for special activities of this nature, the directorate's executive officer was loaned to the programming staff for this function. In May of this year the programming element of the directorate was designated as the headquarters focal point for all actions connected with ATMRB activities.

The third and final area within the programming function of PP&I is the historical activity. This program, carried out by a staff of two professional historians and one clerk-typist, has had a tenure of but seven months in USACDC, having been first activated within PP&I on 2 January 1963.

Although the historical mission calls for the production of programmed and scheduled historical works as part of the Army Historical Program for each fiscal year under the auspices of the Chief of Military History, DA, as well as to provide separate historical support for the special mission needs of USACDC, very little of the regularly programmed projects could be completed. This has been due almost entirely to the high priority that had to be accorded to the influx of unprogrammed historical requests from higher authority, all of which were of a "crash" nature.

The intelligence function of PP&I supports USACDC by providing intelligence materials to Headquarters USACDC and to its field agencies, and by furnishing and reviewing threat studies for weapons systems development.

The Headquarters USACDC requires that the development of any new weapons system must start with a study of the enemy threat, i.e., a study of projected enemy dispositions and capabilities which will affect the system. At present, ACSI, DA, distributes intelligence materials for threat studies directly to USACDC headquarters and to the command's field agencies. Distribution is made on the basis of statements of intelligence interest (SII's), which are reviewed as part of the intelligence function. In the near future, the Defense Intelligence Agency will take over this task.

Although USACDC field agencies have been instructed to designate an intelligence officer to receive and exploit these materials, the unavailability of trained personnel within USACDC groups and agencies to perform intelligence studies will undoubtedly present a continuing problem.

Concepts and Doctrine Development

The major function of the Directorate for Concepts and Doctrine Development (C&DD) is the supervision of the USACDC study program for a time frame of 0-12 years. The directorate is also responsible for preparing the USACDC submission to DA of revised Section I (Objectives) and Section II (Study Program) of CDOG. In the execution of this study program, C&DD performs some of these studies in-house. The process of preparation of studies includes appropriate co-ordination with DA, including elements such as ACSFOR, OCRD, ACSI, and with USCONARC, USAMC, RAC and TAC. Comments are also solicited from operating theaters. A conscious effort has been made during the past year to emphasize the objective, scientific, and economic approach commonly known as operations research or systems analysis. Each study furnishes enough data that higher authority, applying considerations beyond the purview of this command, may choose a different alternative from that recommended in the study.

At the beginning of fiscal year 1963 the study program as listed in CDOG amounted to 182 projects. Twenty-one were completed during the year, 24 were deleted, and 16 new ones added. During the annual revision of CDOG, 57 studies were deleted and 68 new ones added, bringing forward a new workload of 164 studies for fiscal year 1964.

The number of CDOG studies completed during the year does not begin to indicate the total accomplishment. A major part of the effort during the year was expended upon 49 unscheduled studies directed by DA, and 4 originated by USACDC. Four of these unscheduled projects were performed substantially by personnel of this directorate: "The Armored Structure of the U. S. Army, 1965-70", "Tactical Nuclear Warfare Escalations and Constraints", "Target Composition, Acquisition, and Identification", and a line-by-line review of ROAD TOE's. The first two projects are still continuing. Of the other 49 studies, 40 were assigned to field agencies

(of which 24 were completed) and 9 to ad hoc groups (of which 7 were finished). At the end of fiscal year 1963 an uncompleted backlog of 20 studies remained out of the original 53. It might be pointed out that the field agencies were also working on revisions to field manuals and TOE's, troop tests and experimentation, and war gaming.

The Howze Board deliberations in the summer and fall of 1962 generated requirements for a group of related air mobility studies which had not been programmed in CDOG. Five of these studies for which C&DD has proponency are slated to be completed before the end of September 1963. These are the light observation helicopter program, the operation of aircraft in all environments, the strategic deployment of Army aircraft between 1963 and 1970, combat service support for air mobile operations, and the daily resupply tonnage requirements for air assault operations. Eight additional studies are part of the program to evaluate the Howze Board Report. Four of these projects which have completion dates through mid-July 1964 are concerned with the staying power of the air assault division, aircraft augmentation of the ROAD division, a parachute capability for air assault units, and an air assault capability for standard Army units. Four others for which completion dates have not been set include two studies of supply support to air mobile operations, one on an aircraft maintenance and supply system, and one on an integrated aerial resupply system.

The studies for which C&DD has proponency may be divided into three broad categories. An example of those which covered combat operations was General Seaman's fire support group, similar to the ARDFIRE study of direct fire power now being prepared at Fort Leavenworth, Kansas. Others in this category treated dual capabilities of conventional and nuclear weapons combinations, alternatives for the post-1965 main battle tank, a comparison of the NATO M14 rifle and the AR15, a vehicle rapid fire weapons system, and NUTAC studies. One of the NUTAC studies, prepared by this directorate in co-operation with representatives from ACSI and others, provided the DA input to the JCS Special Studies Group, and became part of the supplement of JCS Project 23, "Requirements for Tactical Nuclear Weapons". The study compared the DAVY CROCKETT, 155mm Howitzer, 8-inch Howitzer, and atomic demolition munitions with each other and with other nuclear systems, conventional systems, and PACE BIT systems.

The second category of studies, for combat service support, included the CO-STAR study of combat service support to the field Army, the TASTA-70 study of administrative support to the theater Army in the time period 1965 to 1970, and CCIS. During the year the DA approved the activation of a separate CCIS group as a subordinate element of this command to provide special professional attention to this important area.

In the third category, joint operations, two ad hoc groups set up at Fort Belvoir studied the air defense of allied Central Europe and the air defense of CONUS. The air assault division projects also fall into this third category.

In the preparation of joint doctrine, USACDC normally does not deal with any unified commanders other than CINCSTRICOM. The relationship with CINCSTRICOM is unusual because he has the specific mission to promulgate joint doctrine for his assigned forces and he accomplishes this by requesting inputs from his component commanders which are ARSTRIKE (CONARC) and AIRSTRIKE (Tactical Air Command). To insure that the Army views are given to STRICOM, USCONARC, in its ARSTRIKE role, turns to USACDC for the doctrinal input to be made to STRICOM. In turn, any official USACDC input to Headquarters, STRICOM, is made through USCONARC (ARSTRIKE). This system does not preclude USACDC from maintaining direct liaison with Headquarters, STRICOM. This system has been prescribed by DA to insure that STRICOM is not confused by more than a single considered Army viewpoint. A problem which has arisen in relation to joint doctrine concerns the recent and continuing efforts of STRICOM to change JCS Publication 2, UNAAF, the basic charter of joint doctrine. The charter assigns primary responsibility for joint doctrine to the services. CINCSTRIKE claims that under his terms of reference he has primary responsibility, rather than the services, for the preparation of joint doctrine. This matter has been referred to CofS, DA, for resolution.

An important aspect of the C&DD mission, the development of concepts leading to new doctrine, is not now being performed as fully as it should be because of the preparation of projects carrying a higher priority.

Materiel Requirements

The Directorate for Materiel Requirements (MR) began operations in June 1962 with four officers and one clerk and by July attempted to carry on the projects inherited from USCONARC, plus several new tasks. Classified documents flooded into the office by the thousands. Staffing has been complicated by the fact that the most experienced people in the field of materiel requirements were members of various test and evaluation boards which transferred to USAMC. The directorate at present has about half of the officers and civilians it needs. As a consequence, other agencies tend to usurp the mission of MR which spends its time taking care of crash actions only. This directorate cannot allow sufficient representatives to leave the headquarters to see what they should, cannot get the proper information with which to advise superiors promptly and accurately. Key people have left or been transferred, preventing a stable first year without interruption. In USACDCCAG, only four people are assigned to materiel work, not enough to do the research which is necessary in their holdings of 56,000 documents.

During the course of the past year Materiel Requirements assembled from a number of sources an almost complete file of those QMR's and SDR's

which have been approved by the Department of the Army. The format of these documents varies widely. For the 195 written before 1958, there exists only the brief statements which appear in CDOG. The 149 written since 1958 take various forms. Of the 149, MR now has 127 in hand and has reproduced and distributed copies of them to all USACDC agencies, to USAMC, and to USSTRICOM. Only 5 percent of the total number is in the form prescribed by current Army Regulations, giving complete statements of objectives, operational and organizational concepts, justification, feasibility, priority, performance characteristics, personnel and training considerations, and the cost of development, production, and maintenance. The job now is to get all QMR's and SDR's into the currently approved format.

At the direction of the Chief of Staff, Department of the Army, MR reviewed during the month of February 1963 all of the QMR's and SDR's in CDOG. As a result, USACDC recommended that 86 QMR's and 13 SDR's should be deleted because the requirements no longer existed, were beyond the present state of the art, represented marginal improvements only, duplicated other requirements, or the items had been developed and type classified. The Department of the Army approved the deletion of 55 QMR's and 11 SDR's from CDOG. An additional 10 QMR's will be deleted whenever a QMDO from USACDC can be substituted for the current QMR.

In June 1963 the Department of the Army specified that an additional review should be made of 10 QMDO's, 12 QMR's, and 5 SDR's. USACDC considered all 10 QMDO's to be valid, but recommended that 9 of the QMR's and 4 of the SDR's should be deleted. One QMR and 1 SDR will be deleted upon the type classification of the items in the near future. Two QMR's are still under consideration.

Still later in the year the Department of the Army requested USACDC to review 53 Research and Development Test and Evaluation projects and tasks which require justification by QMDO, QMR, or SDR. The review, completed in mid-July, indicated that there is an approved QMDO or one being processed for 11, that there is an approved QMR or one being processed for 6, and that 9 SDR's are being processed. There was no requirement for 14 of the projects, 9 represented product improvement only, and 4 others are undergoing further study by USACDC.

On the other hand, QMR's, SDR's, and QMDO's have been generated at an accelerated pace during the past year. Those originated at this headquarters, those received from various USACDC subordinate commands and agencies, others sent in from a number of military units, and from industrial firms, accumulated to a total of 182, a number equal to about half of the current requirements included in CDOG. Many were follow-on items adding to the capabilities of existing equipment such as armament for helicopters and improvements upon devices for night vision. Others were

concerned with the miniaturization of electronics, new requirements for special forces, and needs establishes in active theaters such as South Vietnam. Of this total, some 27 have been submitted to the Department of the Army for approval. Others are being co-ordinated with USAMC, USACDC agencies, and overseas commands.

The routine processing of requirements from originator, to this headquarters, to co-ordinating agencies, to DA for approval, is not always observed. In the case of urgent projects, a faster process, including meetings of high ranking officials, by-passes several steps and effectively takes the requirements out of the ordinary channels.

This directorate is responsible for the activities of this headquarters pertaining to the Materiel Requirements Review Committee (MRRC), and recommends to the Deputy Commanding General for Materiel Requirements the positions which USACDC should take at this committee's meetings.

In order to provide basic justification for QMR's before the Materiel Requirements Review Committee, this command is preparing to develop cost-effectiveness analyses of all QMR's submitted for approval in the future. Comparisons will be made of present equipment and that proposed, considering several alternatives. Subordinate commands will make the first analyses which will be refined at this headquarters. Guidelines for this work are being prepared in manual form by CORG.

Each QMR and SDR brought into the system must have one of three priority designations. The definitions of the three categories are not mutually exclusive or meaningful. Complying with a letter from the Chief of Staff of the Army, MR is preparing a new system of priorities which will be submitted 30 September 1963 as part of the Program for Review of Materiel Development and Procurement Procedures.

Two Army Regulations originating within the Office of the Chief of Research and Development (OCRD) concerning the reliability and maintainability of equipment require specific numerical measurements to be included in all QMR's and SDR's, such as how many rounds should be fired from a gun tube before replacement of the tube should be necessary. USACDC and USAMC are required to "bank" information of such nature as will assist them in the accomplishment of their mission. It is the interpretation of this headquarters that USACDC will "bank" the tactical and operational data and USAMC will "bank" the technical data. It is understood that the US Army Maintenance Data Processing Center will be made full use of in order to preclude duplication of effort. The two types of data are difficult to separate and no precise definition of terms has yet been established by OCRD. At the request of OCRD this directorate recently completed reliability requirements analyses upon

fifteen items and forwarded the results to OCRD. In a separate but related action, USACDC queried OCRD as to whether the data contained in the analyses represent the type of tactical and operational measurements required of USACDC by the regulations. No answer has been received from OCRD.

The Directorate for Materiel Requirements was responsible for the accomplishment of several agreements to improve the co-ordination between this command and USAMC, USCONARC, and the Surgeon General in matters concerning materiel development. One agreement still pending pertains to the control of engineering changes to type classified materiel.

One example of co-ordination between this command and USAMC is the joint review being conducted of a number of in-house projects being accomplished within the commodity commands of USAMC. At a meeting between Generals Besson and Daley in January 1963, they agreed that several small ad hoc boards should be organized for this purpose. Representatives from MR served on these boards, which have reviewed 230 projects. Thirty-nine have been deleted with an estimated saving of $2.75 million of R&D funds and an additional $120 million in PEMA funds. Although this review was initiated prior to the recent instructions from the Chief of Staff, Department of the Army, to eliminate "nice to have" items and the "gold plating" of existing equipment, this review is considered a partial implementation of his directives and was recently presented by USAMC to the Materiel Requirements Review Committee (MRRC). The MRRC indorsed this review and recommended that the boards continue their work.

No methods or procedures have yet been worked out between USAMC and USACDC in order that USACDC may know how many of the requirements included in CDOG are being acted upon. If problems arise during the course of research and development, USACDC does not always become aware of them. An estimated 20 to 35 percent of the current research and development effort is being monitored by USACDC.

Requirements have in the past been looked at on an individual basis. This directorate plans to put Army materiel on a program basis. An example would be to consider the Armored Division as one element, to look at its total set of equipment and consider its supporting elements. One result may be to insure that a unit that is exceptionally mobile will not be crucially dependent upon a supporting unit that is not adequately mobile.

Doctrine and Organizational Media

The Director of Doctrine and Organizational Media (D&OM) is charged with the development and processing of TOE's and the management of the

program for some 277 field manuals which address themselves primarily to an exposition of doctrine. Previously, this responsibility had been lodged with USCONARC, but under the new organization of the Army USACDC became the proponent for TOE's, and divided with USCONARC and USAMC the obligation of preparing field manuals.

The TOE workload which shifted from USCONARC to this command on 1 July 1962, contained a considerable number of TOE's in draft form which had not been processed for publication. The field manual program was also behind schedule. Difficulties in finding a sufficient number of qualified people impaired the efficiency of D&OM until about mid-September 1962.

At about this time the Department of the Army sent back for revision the ROAD concept TOE's which USCONARC had previously submitted. During the revision of the ROAD TOE's the requirement developed for TOE's to support the air assault concept. Both of these projects are now virtually completed. The directorate has published and distributed the TOE's for the ROAD ground divisions, is in the final stages of processing and modifying the ROAD airborne division, and has taken on the development and revision of TOE's for CO-STAR. Due to the foregoing major actions, the development and revision of TOE's for smaller units and the normal updating process have received second priority.

The responsibility of this directorate for the preparation of field manuals is one of supervision. The manuals are written at the various subordinate headquarters and subagencies of this command. The field manual program, projected over a two-year period, does not present any great problems. Sixteen special texts have been written to support the air assault concept.

The directorate performs several other functions for USACDC, including the determination of all bases of issue for TOE's, including the supervision and revision of all Class II requirements. For TA's the only responsibility is for determining training requirements for new items of equipment entering the Army supply system.

The directorate advises the Department of the Army on the qualitative requirements for MOS's and studies manpower availability factors which affect strength and distribution patterns in TOE's. It furnishes to the Department of the Army the recommendations of USACDC for the reduction or elimination of equipment items in the supply system. This directorate exercises that responsibility for USACDC on a world-wide basis and gives it close attention because of the special interest of the Chief of Staff, DA.

No outstanding or unique problems confront this directorate. Responses to sudden requirements from DA have interfered with the development of an orderly program of TOE's and field manuals. Reorganization

plans did not allocate to the new agencies all facets of the duties and functions formerly carried out by various agencies, offices, and services. Some confusion still exists in a number of areas of interest. The quantity of personnel has been adequate in this directorate and the quality of the work will improve with experience.

Operations Research and Experimentation

The Directorate for Operations Research and Experimentation (OR&E) evaluates concepts and doctrine through studies and analyses, field tests, field experimentation, and war games. The original activation plan provided 23 officers for war gaming, but this number was reduced to an authorized strength of 14 officers. Ten are now assigned and 8 are present for duty and working on war games requirements. The number of officers working on war gaming does not in any way affect the validity of the results but varies the length of the process.

War gaming at USACDC could not begin until January 1963 because this command did not have until that time a sufficient number of officers trained for this work. During the course of the last half of the fiscal year the only game played was the "Air Assault Division in South Vietnam," which took two months to set up. The results are now being evaluated. The original completion date of 31 July has been shifted to 30 September. The next game will be the "Air Assault Division in Korea," scheduled to run from 1 October 1963 to 31 March 1964.

Lack of adequate war gaming capabilities forced OR&E to go outside of USACDC to seek assistance from the Research Analysis Corporation (RAC) and the US Army Strategy and Tactics Analysis Group (STAG). By so doing, USACDC provided those agencies with a basis for developing their facilities at the expense of those of the command. In addition to this objection, extensive use of those agencies is not a satisfactory arrangement because they are not sufficiently responsive to USACDC requirements and necessitate the expenditure of much effort in negotiation and supervision. Three and a half months were required to develop approved scenarios, methodology, and schedules with RAC and STAG. Two officers from OR&E and six officers borrowed for varying lengths of time from other directorates are required to provide continuing supervision at those agencies.

War game evaluation during the early phases of concept development is essential in order to reduce the number of possible alternatives to a few of the most productive ones. This headquarters has therefore approved for planning purposes the establishment of complete war gaming facilities at USACDCCAG and USACDCCSSG.

The Combat Operations Research Group (CORG) is a civilian contract organization, located at this headquarters, which provides a part of the

operations research support for USACDC. This organization has been exceedingly responsive to unprogrammed requests. Shortly after its transfer from USCONARC the CORG group set up a war games training program for USACDC officers and helped establish an active gaming facility at this command. In July 1962 representatives from CORG made weapons-effects analyses for the NUTAC Study Group at Fort Leavenworth, and shortly thereafter analyzed data collected during the Howze Board field exercises. Other activities included a cost effectiveness study of the LANCE surface-to-surface missile, a brief study for USAREUR concerning the survivability of the MOHAWK air raft in a conventional environment, and an analysis of data resulting from world-wide troop tests of the AR15 and M14 rifles. CORG provided cost effectiveness analyses of fire support systems to the Army Fire Support Study Group and participated in a nuclear weapons cost effectiveness analysis. A portion of the effort has been spent upon urgent requests for consultations upon technical problems such as the site evaluation and selection for project CROSSBOW. A major project at the present time is providing technical support for the Training Evaluation and Control Group at Fort Benning in the testing of the air assault division concept. Other current work includes cost effectiveness analyses of weapons alternatives for the ARDFIRE Study Group, the simulation of a scheduled supply system to assist USACDCCSSG in the evaluation of logistical concepts, and the preparation of a cost effectiveness manual for USACDC.

In field experimentation and troop testing the major concern of OR&E has been to make sure that the scheduled test program supports the overall objectives of USACDC During the past fiscal year the tests, inherited from USCONARC, developed useful information, but the total effort was not channeled in one direction. It is the intent of OR&E to have the war games, field tests, and experimentation all tied in with the study program of USACDC so that they point toward the evaluation of such concepts as RODAC-70 and Army-80. The proposed troop tests of organization and doctrine for fiscal years 1966-69 are being developed now.

Only minor changes can be made in troop tests through fiscal year 1964. Field experimentation, however, is more flexible because the troops to be employed are all under USACDC control. One field experimentation conducted on a crash basis last year was a quick evaluation of the new light and simple AR15 rifle as against the standard and approved M14.

A major accomplishment of this directorate in the past months was the writing of twenty-three troop tests in sixty days in order to evaluate the capabilities of the air assault division organizations, implementing the findings of the Howze Board. The tests were then sent to the Test and Evaluation Group for further refinement and scheduling. This action completed the first phase of the test program for the air assault division.

Special Doctrine and Equipment Group

The Special Doctrine and Equipment Group (SDEG) is the focal point for all special warfare combat developme. s activities and requirements, providing needed speed and responsiveness to requirements in the special warfare field for the Army as a whole. Since October 1962, SDEG has functioned as a staff directorate of Headquarters USACDC, as well as a subordinate command. The mission of this group is to command assigned combat developments agencies and to carry out for the commanding general, USACDC, his responsibilities for all aspects of special warfare. This group presently has combat development responsibility for special environments such as Arctic, mountain, desert, and jungle.

Beginning in March 1962 a committee headed by then Brigadier General William Rosson conducted a study and established a program for special warfare for the time period 1963-1970. By late August 1962 the Secretary of Defense had approved the implementation of the fiscal year 1963 portion of the program, leaving the rest to be included in future program and budget requests. In November 1962, SDEG, responsible for determining the combat developments implications of this program, published its combat developments program. One major deficiency of the program was the lack of a concept of operations for special action forces which was not published by DCSOPS until April 1963, but actions to support counterinsurgency forces from now until 1970 are presently well under way. Also new objectives for a longer range program beyond 1970 are currently being evaluated by twenty experts in the field of special warfare at various headquarters in CONUS and overseas. The program and conceptual work in special warfare, initially undertaken by DCSOPS in the absence of an SDEG organization, will be accomplished by this latter group in the future. The Special Doctrine and Equipment Group plans to update its program for psychological operations, unconventional warfare, and counterinsurgency every five years.

Correspondence between the Chief of Staff, DA, and General Daley before the organization of SDEG confirmed the requirement for a group which would serve as a focal point for special warfare information on an Army-wide basis. This role has been undertaken by SDEG. Through conferences, informational publications, and direct responses to specific inquiries, the group has established a degree of co-ordination in the Army-wide effort that has been invaluable in terms of time and money saved. As different people and agencies became aware of the capabilities of SDEG, the demands and number of subscribers increased. This has created an incongruous situation in which the better the job, the more people and effort are required.

The current authorization is for 32 officers, 8 enlisted men, and 9 civilians. The assigned strength is 29 officers, 8 enlisted men, and 8 civilians. With the present authorization, all of the assigned functions cannot be performed. No liaison teams have been sent to major overseas commands nor to underdeveloped areas where insurgency is in progress or

is likely to occur. Temporary duty up to six months for some officers, much of it in fields other than special warfare, deprives the group of a part of its manpower. In April 1963, SDEG recommended a reorganization and an increase in personnel spaces to provide a more responsive group. Included in the recommendation was a request for four civilian scientists. Although the reorganization has been approved, the additional personnel spaces are still under consideration.

A continuing complication with which this group must contend is that with the proliferation of special warfare elements in many government agencies there is no clear-cut chain of command. Overlapping responsibilities and functions of the various elements tend to take away from SDEG its primary purpose of serving as a focal point for such matters. The situation has already caused excessive time to be expended in co-ordinating special warfare combat developments activities.

One of the major goals of SDEG with respect to materiel is to reduce lead time to approximately eighteen months from the inception of an idea to the production of hardware. A program of work priorities, "Operation Speed," has been established to regulate the order in which ideas will be evaluated and requirements prepared, co-ordinated, and submitted. It sets target dates for each project for the various stages through which it must pass. This program is distributed quarterly on a world-wide basis to all of the headquarters, offices, and agencies which are involved in special warfare planning.

In the interest of improving mobility, SDEG has queried major field commanders regarding their mobility requirements for areas of potential counterinsurgency. Replies have been received and appropriate QMR's and SDR's are being prepared. The group will evaluate the mobility aspects of SWAMP FOX II and the possibility of employing the Canadian Jiger vehicle in Southeast Asia as soon as final reports are received from USAMC.

Since 1 July 1962, 69 QMDO's, QMR's, and SDR's have been submitted. At present 33 are being staffed, and an additional 36 new proposals are being evaluated. These requirements and proposals range from silent, handheld weapons systems to position locating devices.

SDEG is closely monitoring 65 projects which have been approved for research and development. Of these, 18 are basic research and no specific development has been undertaken. The other 47 are under development and are expected to be type classified within the next four years. An additional 330 development projects are being monitored because of potential application to special warfare.

In May 1963, ACSFOR requested that a study be made of communications equipment suitable for a jungle environment. The study group which convened at this headquarters between 3-7 June brought together representatives of USARPAC, COMUSMACV, and various CONUS agencies. The group

clarified user requirements, and considered carefully the equipment in the defense inventory which can be modified for jungle communication, off-the-shelf commercial radios, equipment under development, and untried techniques and concepts of employment which would improve the capabilities of existing equipment. The Vice Chief of Staff, DA, approved the resulting study on 29 July 1963.

The Special Doctrine and Equipment Group provides special warfare troop tests for the U. S. Army troop test program developed by Headquarters USACDC, to test special force units, special action forces, joint unconventional task forces, and conventional units such as the ROAD brigade operating in a special warfare environment. Ten tests are currently scheduled for fiscal years 1965-1969. The group is also involved in unprogrammed testing. As an example, the DA directed on 30 April 1963, that an unprogrammed test WATERBUCKET be conducted on an expedited basis. The plan was prepared by 15 May. Tests implementing the plan were conducted during the second and third weeks of June, and follow-up actions including evaluation and analysis of test reports are now in progress. In addition, the group is the DA point of contact for the Army Concept Team in Vietnam (ACTIV), which is an agency assigned to DCSOPS and responsible for conducting Army field tests in the Republic of Vietnam (RVN). For ACTIV, SDEG develops outline plans, stating test scopes and purposes, insures that test objectives are achieved, and provides that agency with technical information, and budget support. Completed test reports are evaluated by SDEG and distributed throughout USACDC for information or action. Currently, ACTIV is programmed to conduct twenty-nine tests during fiscal years 1963-65, exploring the subjects of communications, ground mobility, logistics, civic action, special force activities, and Army aviation. To date, Army aviation has received major emphasis.

A program for the expedited publication of a series of field manuals covering special warfare was formulated by SDEG. A total of seven of these manuals have been published, or are in the process of being published. A review of the entire program is under way to determine what changes are required for the second generation of manuals. Although not a special warfare manual, FM 21-76, on survival, is the responsibility of SDEG. There are at present six additional field manuals in which this group has an interest and assists proponent agencies both in preparation and coordination.

During the past year SDEG provided conceptual briefings for various DA agencies. It participated in the development of joint unconventional and counterinsurgency doctrine. New logistical and maintenance studies were developed involving remote areas aviation operations, combat service support doctrine for special action forces and their supporting units, and improvements of methods and techniques in activities that directly influence the morale of special action forces. The Special Doctrine and Equipment Group also monitors the development and revision of thirteen TOE's which are primarily concerned with special warfare.

The subordinate agency of SDEG, the Special Warfare Agency at Fort Bragg, N. C., conducts and participates in the studies which produce the future objectives, concepts, and requirements for special warfare. It prepares or revises TOE's and doctrinal manuals, reviews studies and doctrine prepared by other USACDC agencies to insure that special warfare portions reflect the latest concepts, prepares QMR's and SDR's, furnishes observers at tests and maneuvers, and co-ordinates actions with the Special Warfare School and Center.

Even though this has been a year of organization, growth, and adjustment, SDEG has at the same time contr buted a steady flow of constructive projects, solutions to problems, and recommendations in special warfare. It is difficult to measure the total contribution to the special warfare effort, but SDEG feels a sense of accomplishment. These accomplishments are being confirmed daily by a growing interest reflected in increased questions, suggestions, and co-operation from units in the field.

CHAPTER V

THE STAFF SUPPORTERS AND SERVICERS

As noted in Chapter II, the three headquarters staff offices of the judge advocate, inspector general, and chief of information, although organizationally part of the command group, are not components of it in the functional sense. Rather, the roles of the three are to furnish staff support and services to the command. They are the command's exponents, respectively, for military law, military inspection, and military information.

Judge Advocate

The Commanding General, USACDC, does not have general court-martial jurisdiction and does not exercise either special or summary court-martial jurisdiction. The decentralized nature of this command militates against general court-martial jurisdiction, which carries with it a large amount of administrative responsibility. Such jurisdiction is exercised by each host installation or the area Army.

This command has authorized majors and above to impose correctional custody, and has placed no restrictions on the exercise of any other non-judicial punishment authority under the recently revised Article 15 of the Uniform Code of Military Justice. Because Article 15 authority follows command channels, the exercise of this authority is important in maintaining command integrity. Thus, any infractions by officers are handled by the commander of the USACDC agency, not by the host installation. Any infractions by enlisted men which are directly related to performance of USACDC duties will also be handled by the USACDC commander. In the case of any enlisted infractions not related to USACDC duties, USACDC has no objection to the host commander taking action. Appeals under Article 15 follow normal command channels.

Inspector General

Investigations and complaints during the past fiscal year were few. The major workload consisted in conducting annual general inspections of all subordinate headquarters and agencies of USACDC. Inspections below the first echelon were necessary because only the U. S. Army Combat Developments Command Experimentation Center, out of all the major subordinate headquarters and agencies of this command, has an assigned Inspector General. The inspections, all made during the second half of the fiscal

year, revealed certain common problems. Larger staffs and fewer unprogrammed actions with short deadlines would have facilitated the early organization of the commands and allowed adequate resources to be allocated to the longer-range projects which the commands felt they should have been doing.

Information

During USACDC's first year the operations of the Information Office were adapted to serve as many as possible of the Army's information objectives with the least possible interference with the daily business of a new command. No attempt has been made at "image building" through an aggressive program aimed at the public mass media. Instead, a "low key" program has been carried out, beamed primarily at the Army and at the executive and planning level of industry. The most successful parts of this program were the articles which appeared in publications serving these groups and the speeches made by senior officers of USACDC.

There have been no significant problems in implementing the Troop Information Program, under which USACDC troops receive instruction through the units to which they are attached. The only exception to this arrangement throughout this command has been at USACDCEC at Fort Ord where the troops have their own training program and their own information personnel.

This office will assume greater responsibility for the supervision of all phases of the program when the Department of the Army inaugurates the new Command Information Program which will direct each command to give its own instruction. This office anticipates providing more guidance and supporting materials, including USACDC fact sheets, as well as making frequent visits to subordinate headquarters and agencies.