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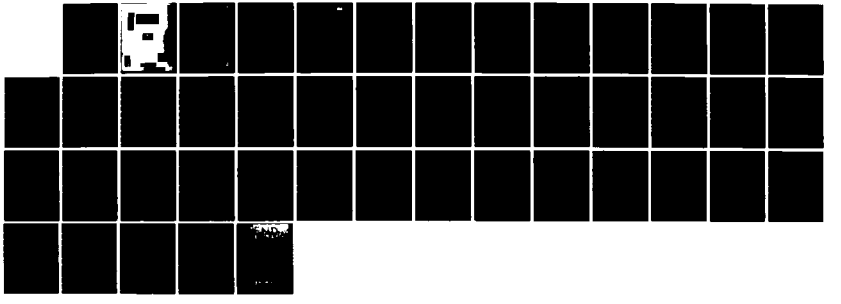

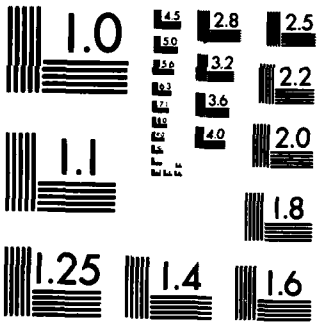
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ACQUISITION PLANNING AT THE DEFENSE COMMUNICATIONS AGENCY

LMI

LOGISTICS MANAGEMENT INSTITUTE

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DEFENSE COMMUNICATIONS AGENCY

April 1984

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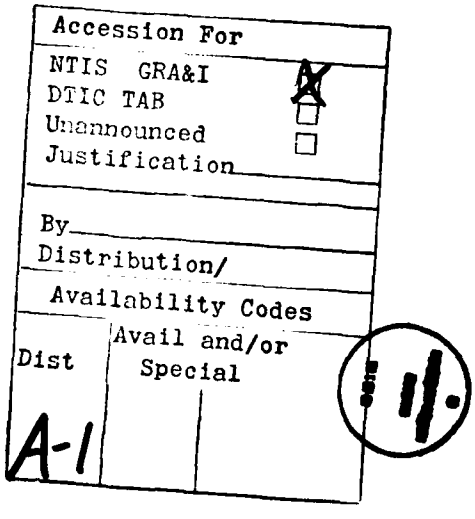

Executive Summary

ACQUISITION PLANNING AT THE DEFENSE COMMUNICATIONS AGENCY

The Defense Communications Agency (DCA) has evolved from functioning simply as primary manager and operator of the Defense Communications System to providing command, control, and communications (C^3) mission analysis, long-term planning, and systems engineering and integration support to the National Command Authority and to the Office of the Secretary of Defense, Joint Chiefs of Staff, and Unified and Specified Commands. The reorganization of the DCA in 1981 created discrete centers for C^3 planning and systems integration, engineering, technical support, and integrated logistics support. It was a major step in consolidating mission and mission-support resources to accommodate DCA's enhanced role. To maintain the momentum generated by this reorganization, it is necessary to (1) define the acquisition planning process, including supportability, and (2) evaluate the effectiveness of the process within DCA on a demonstration basis.

Acquisition planning at DCA should be mission-oriented -- that is, it should be a process for acquiring C^3 systems that are responsive to all mission needs. Through analysis of Department of Defense (DoD) and DCA mission areas, long-term plans should be developed and then implemented in the DoD Five Year Defense Program and budget by DCA and the Military Services. System acquisition and supportability principles should be applied within the planning process. The process, as we define it, specifically provides for:

- Mission analysis that covers all the C^3 missions and functions for which DCA is responsible and leads to an integrated DoD C^3 program

- Linkage of DCA long-term planning to DCA, Service and other Defense Agency C^3 programs and system acquisitions to respond to mission needs in an affordable manner and to ensure responsiveness to changes in national policy, threat, and technology

- Early and thorough consideration of supportability issues

- Definition of the roles of the discrete DCA centers, explicitly relating those centers to the Services in the areas of planning, programming, acquiring, operating, and supporting C^3 systems

- Program reviews, a cost data base and tracking system, and an acquisition and supportability management information system oriented toward life cycle management

- Timely analysis and supporting documentation consistent with DoD requirements to ensure that DCA C^3 planning will have an impact upon DoD planning, programming, and budgeting.

DCA is demonstrating this acquisition planning process in the development of the Minimum Essential Emergency Communications Network (MEECN) Master Plan, which for the first time will be integrated with the long-term plan for strategic C^3, thereby reinforcing relationships among the centers. Completion of the MEECN Master Plan should be accompanied by a second demonstration focused on a major Defense-wide C^3 program such as the Defense Switched Network, so as to apply the process throughout DCA with the participation of the Services.

We recommend that DCA implement the acquisition planning process by means of specific instructions and programs for improving system acquisition and supportability in such areas as life cycle costing, management information systems, threat assessment, and requirements analysis. These programs can be conducted through the second demonstration and through applications to ongoing DCA projects. The costs of such programs are modest in relation to total C^3 costs and to the savings that should result from improved management decisions.

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1. BACKGROUND FOR THE DCA ACQUISITION PLANNING INITIATIVE

The Defense Communications Agency (DCA) has evolved from functioning simply as primary manager and operator of the Defense Communications System (DCS) to providing command, control, and communications (C^3) mission analysis, long-term planning, and systems engineering and integration support at the National, Office of Secretary of Defense (OSD), Joint Chiefs of Staff (JCS), and Unified and Specified Command levels. The 1981 reorganization of DCA established discrete centers for C^3 planning and systems integration, engineering, technical support, and integrated logistics support. As such, it was a major step in consolidating mission and mission-support resources to accommodate DCA's enhanced role. However, a number of factors motivated the development of an acquisition planning approach based on DCA corporate planning and integration.

The overall motivation has been to develop an acquisition planning approach consistent with the emerging environment for management of system acquisition and supportability[1] within the Department of Defense (DoD). Acquisition policy in the DoD has been in a state of almost continual flux for about a decade and a half.[2] Since the DCA was established in 1960, the focus

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[1]Supportability is the degree to which system design characteristics and planned logistics resources, including manpower, meet system peacetime readiness and wartime utilization requirements. [DoD Directive (DoDD) 5000.39.]

[2]The evolution of acquisition policy implementation can be characterized as follows: Blue Ribbon Defense Panel/Laird-Packard era three-milestone system; Commission on Government Procurement/Office of Management and Budget and Office of Federal Procurement Policy (OMB-OFPP) Circular A-109/Carter-Brown-Perry era four-milestone system; and the Weinberger-Carlucci era's "Acquisition Improvement Program" Milestone-0-subsumed-in-Program Objectives Memorandum (POM), Milestone-2-sometime-later, Milestone-3-delegated-to-Services-if-all-goes-well. The current direction is based on DoD initiatives for improving the planning, programming and budgeting system (PPBS) and the acquisition process (Refs. 1 and 2) and current DoDD 5000.1, DoD Instruction (DoDI) 5000.2, and DoDD 5000.39 (Refs. 3-5).

of the DoD acquisition process has shifted from concept formulation/contract definition and total package procurement that was practiced during the McNamara era to incremental or milestone decision-making. Currently there is a strong and continued policy commitment to the milestone approach in system acquisition decision-making even though the perfect set of milestones may never be found.

Equally important to the commitment to the milestone approach has been the emphasis placed on long-term plans on which to base stable acquisition programs. [The best known such plan is the extended planning annex to the Five-Year Defense Program (FYDP)]. Although not as visible as changes to the acquisition process itself, efforts have been made to emphasize the integrated logistics support (ILS) of defense systems -- primarily during the system design phase -- with an emerging emphasis on life cycle management.

From the point of view of C^3 acquisition management, three other motivating factors should be noted. The Defense Science Board identified the need for a single organization to guide the acquisition of not only communications systems but also of command and control (C^2) systems, including communications, using an evolutionary acquisition strategy.[3] The approach to tailoring acquisition strategy to evolve C^3 systems was further studied[4] and addressed in the most recent revision of DoDI 5000.2, which states "evolutionary development and acquisition of command and control systems" should be considered

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[3]See the Defense Science Board report on "Command and Control Systems Management." It focuses on the command and control relationship to communications (Ref. 6).

[4]The Armed Forces Communications and Electronics Association (AFCEA) studied the acquisition process as related to C^3 systems (Ref. 7). Since C^3 systems involve human interaction more than other major weapon systems, the AFCEA recommended that C^3 systems be acquired in an evolutionary manner consistent with the ability of the commander to utilize C^3 systems technology.

in planning major system acquisitions.[5] Finally, the ability to achieve an approach to management of joint C^2 systems was recognized by the JCS in its tasking of DCA to prepare a C^2 Five Year Summary Plan.[6] The fundamental problems facing DCA have been the development of an approach to strengthen the link between planning for C^3 systems by OSD, JCS, and the Services and the subsequent implementation through the PPBS of acquisition and support of C^3 systems by DCA and the Services.

With these problems in mind, the DCA in 1982 began development of a DCA corporate planning and integration strategy examining approaches to the management of threat assessment, requirements analysis, five-year planning, architecture, and ILS.[7] The results of these efforts were used as the foundation for the development of an overall DCA acquisition planning process in 1983.

This report, then, documents the development of a DCA acquisition planning process. The Logistics Management Institute was asked to assist in maintaining the momentum generated by the 1981 DCA reorganization by (1) defining

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[5]DoDI 5000.2 cites evolutionary acquisition of C^3 systems as an acquisition management principle. Defense Acquisition Circular 76-43 (Ref. 8) provides more detailed guidance to the contracting community through the Defense Acquisition Regulatory Systems.

[6]Joint Chiefs of Staff Memorandum SM-7-82 (Ref. 9) provides "Policy and Procedures for Management of Joint Command and Control Systems," and requires the preparation of the C^2 Five-Year Summary Plan (C^2FYSP) to implement guidance (Ref. 10) for JCS to "take the lead to develop Defense-wide plans that highlight cross-service, cross-command, cross-program and international requirements." DCA, under tasking to JCS, is to assist in these efforts (Refs. 11 and 12).

[7]The initiative that emerged from the 1981 DCA Director's Goals and Objectives (Ref. 13) has evolved consistent with current DCA Director's Planning Guidance (Ref. 14) and the DCA charter (Ref. 15). During 1982 and 1983, numerous studies were undertaken under the direction of Deputy Director, Corporate Planning and Integration (Refs. 16-27).

the DCA acquisition planning process and (2) making recommendations for improving C^3 systems supportability and life cycle cost (LCC) management capabilities. The report describes the DCA acquisition planning process that has emerged, including its principal elements, discusses the status of the implementation of that process, and makes recommendations for its further development.

2. THE DCA ACQUISITION PLANNING PROCESS

Acquisition planning at DCA should be mission-oriented, that is, it should be a process for acquiring C^3 systems that are responsive to all mission needs. Through analyses of DoD and DCA mission areas, the DCA, the Military Services, and other Defense Agencies should develop long-term plans and implement them in the DoD FYDP and budget.[1] In addition, system acquisition and supportability principles should be applied throughout the process.

This chapter describes the DCA acquisition planning process and relates it to other DoD management processes; the principal elements of the process are then discussed in Chapter 3.

PROCESS DESCRIPTION

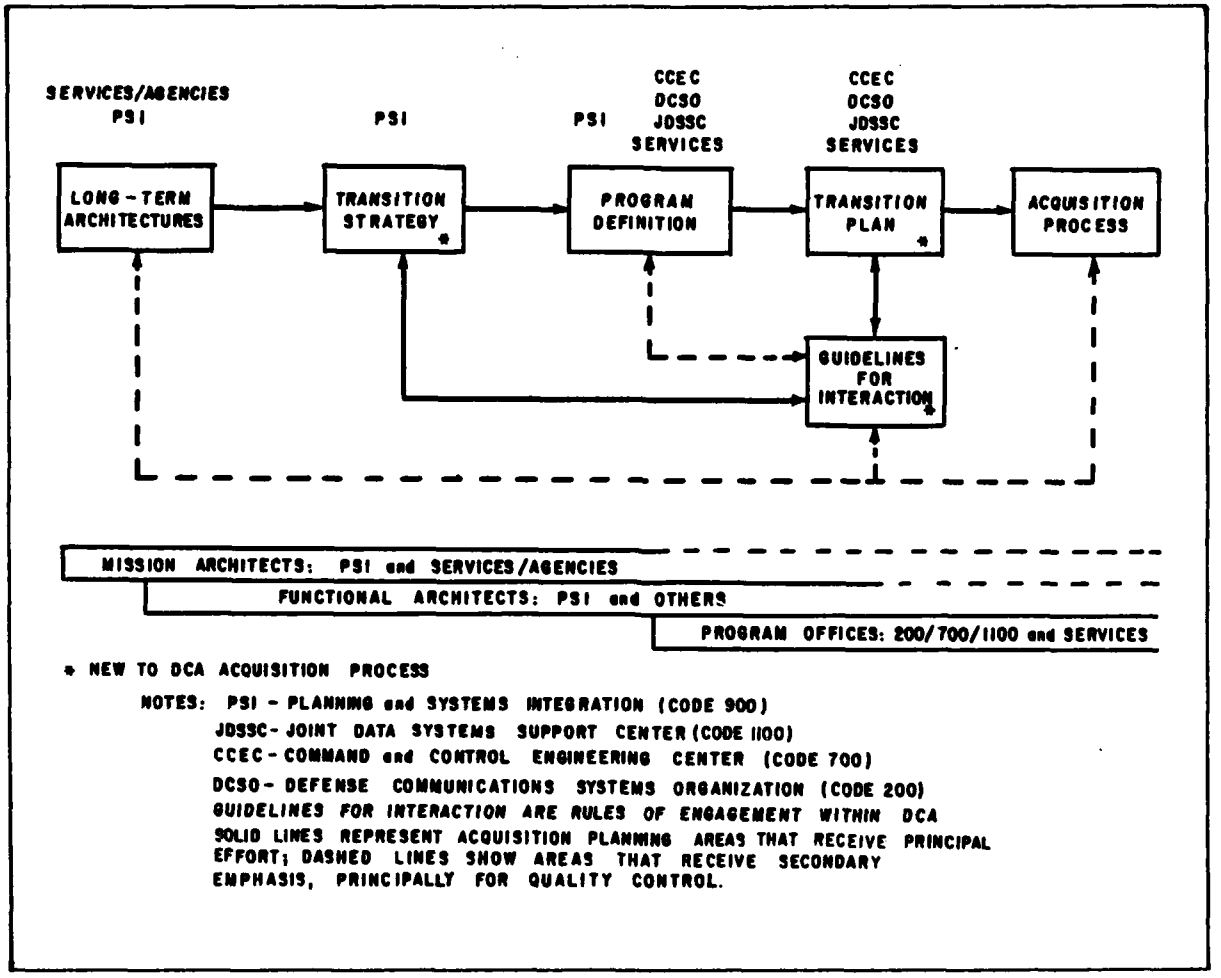
The DCA acquisition planning process is an approach in which long-term plans for C^3 systems are used (1) to guide the development of C^3 programs in both DCA, the Services, and other Defense Agencies; (2) to ensure consistency in system acquisition in DCA, the Services, and other Defense Agencies; (3) to define the supportability needed throughout the life cycle of C^3 systems; and (4) to structure decision-making on the basis of life cycle costs.

The DCA acquisition planning process is shown in Figure 2-1. It consists of the logical flow of DCA long-term planning into defining DCA, Service, and other Defense Agency programs that are executed through the system acquisition process; a structure for implementation based on continual assessment of C^3 capability within DoD mission areas; and a definition of the functions and responsibilities of DCA personnel in system acquisition, supportability, C^3

[1] DCA works closely with the Defense Intelligence Agency, Defense Nuclear Agency, Defense Advanced Research Projects Agency, National Security Agency, and occasionally Defense Logistics Agency on C^3 plans and programs.

architecture, requirements analyses, threat assessment, five-year planning and prioritization, and in the development and application of supporting management tools, including LCC and management information systems (MIS).

FIGURE 2-1. DCA ACQUISITION PLANNING PROCESS



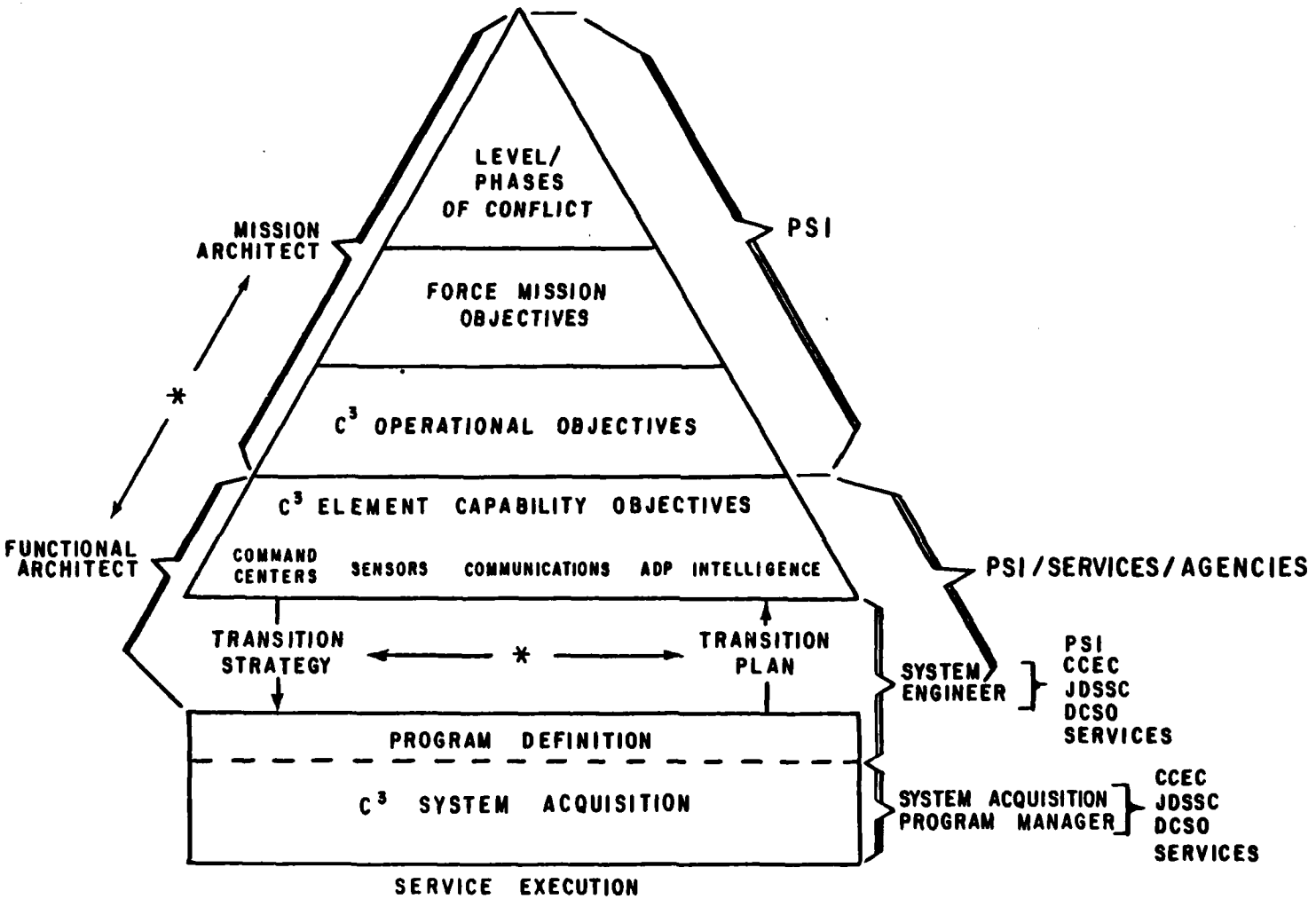
The process, as shown in Figure 2-1, emphasizes the DCA role prior to the initiation and execution of C^3 systems acquisition. This mission analysis role produces C^3 plans and programs that consider current C^3 systems and candidate improvements. Long-term C^3 planning includes recommendations based on mission analysis, a long-term C^3 architecture that incorporates the

recommended system improvements with current systems, and a transition strategy for achieving the architectural objectives. The C^3 programs are defined to respond to specific requirements while ensuring consistency with C^3 architecture. C^3 programs include recommended five-year programs, program definitions (including procurement of current systems, modifications to those systems, and acquisition of new systems), and transition plans for achieving capability objectives.

Flexible guidelines for interaction are developed under the leadership of DCA agencywide integrators with the participation of personnel from DCA, the Services, and other agencies. The transition strategy, transition plan, and guidelines for interaction are all structured to encourage implementation of plans and programs by focusing management attention on interaction within DCA and between DCA and the Services and other agencies.

Implementation of the DCA acquisition planning process is shown in Figure 2-2. The mission architects' efforts are oriented toward developing C^3 operational objectives for strategic, tactical/theater, and Defense-wide C^3 missions; functional architects develop C^3 element capability objectives for the C^3 functions shown in the figure within a mission framework to be (1) consistent with emerging 15-year mission area plans being developed by the Under Secretary of Defense for Research and Engineering (USDR&E) and (2) related to phases of conflict and force mission objectives [mission objectives of the forces, e.g., intercontinental ballistic missiles (ICBMs), ballistic-missile submarines (SSBNs), etc.] within the mission area. Functional architects also develop a transition strategy for use in program definition. Through system engineering, the strategy evolves through program definition to be incorporated in a transition plan governing C^3 system acquisitions that are generally executed by the Services. Agencywide integration by DCA ensures consistency

FIGURE 2-2. ACQUISITION PLANNING PROCESS IMPLEMENTATION



* AGENCYWIDE INTEGRATORS

NOTES: PSI - PLANNING and SYSTEMS INTEGRATION
JDSSC - JOINT DATA SERVICES SUPPORT CENTER
DCSO - DEFENSE COMMUNICATIONS SYSTEMS ORGANIZATION
CCEC - COMMAND and CONTROL ENGINEERING CENTER

of the transition strategy with transition plans, and integration of DCA planning and programming with Service budgeting and implementation.

INTERFACE WITH OTHER DOD PROCESSES

DCA acquisition planning and programming activities must interface with the C^3 aspects of the DoD PPBS, the system acquisition process, and the JCS Joint Strategic Planning System (JSPS). In particular, development of C^3 architectures is a principal part of the planning function of the PPBS. Program definition products provide guidance to the Services for formulating their C^3 POMs and are a principal part of the DCA POM. The preparation of a C^2FYSP integrating DCA programs with those of the Services provides guidance for program development to be incorporated in the Joint Strategic Planning Document (JSPD). Transition plans include justification for new starts and guidelines for tailoring acquisition strategy consistent with DoDD 5000.1 and DoDI 5000.2 requirements.

3. PRINCIPAL ELEMENTS OF THE PROCESS

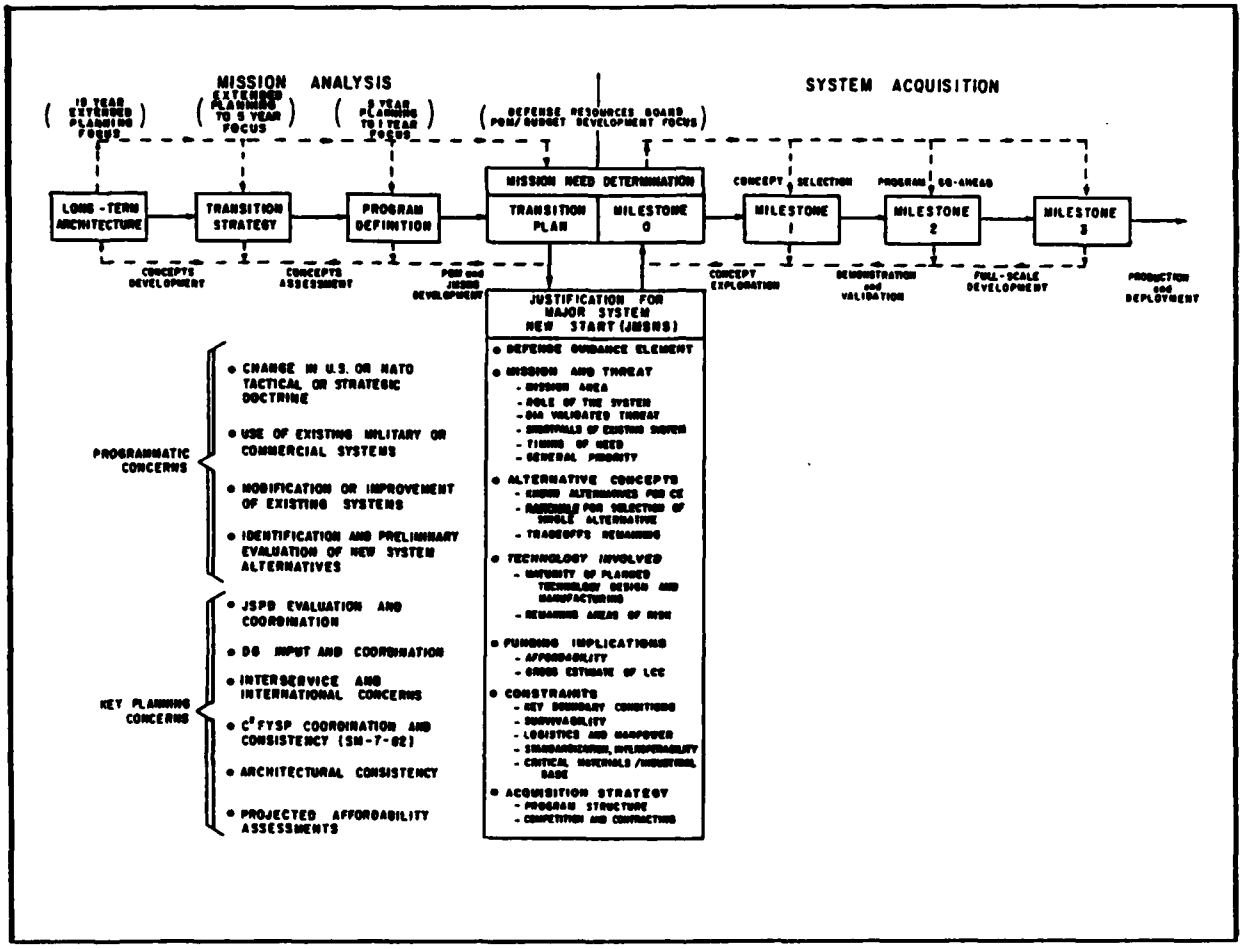
The DCA acquisition planning process has three elements: overall C^3 system acquisition, including mission analysis; C^3 supportability; and management processes for implementation. These elements are described in this chapter, and the functions and responsibilities for implementing the process are also addressed. The acquisition planning process specifically provides for:

- Mission analysis that covers all the C^3 missions and functions for which DCA is responsible and leads to an integrated DoD C^3 program
- Linking DCA long-term planning to DCA and Service C^3 programs and system acquisitions to respond to mission needs in an affordable manner and to ensure responsiveness to changes in national policy, threat, and technology
- Early and thorough consideration of supportability issues
- Definition of the roles of the discrete DCA centers, with explicit provisions for relating those centers to the Services in the areas of planning, programming, acquiring, operating, and supporting C^3 systems
- Program reviews, a cost data base and tracking system, and an acquisition and supportability MIS oriented toward life cycle management
- Timely analysis and supporting documentation consistent with DoD requirements to ensure that DCA C^3 planning will have an impact on DoD planning, programming, and budgeting.

SYSTEM ACQUISITION, INCLUDING MISSION ANALYSIS

The basic objective of the DCA acquisition planning process is to provide a well-structured approach in which all of the requirements of the PPBS are considered before and during the system acquisition process. The relationship between mission analysis and system acquisition is shown in Figure 3-1. That figure illustrates the program planning concerns that must be addressed before and during the acquisition of C^3 systems that are responsive to mission needs. Information required for decision-making by the DCA Director, the Defense

FIGURE 3-1. THE MISSION ANALYSIS TO SYSTEM ACQUISITION TRANSITION



Resources Board (DRB), and the Secretary of Defense in order to arrive at a Justification for Major Systems New Start (JMSNS) is also identified in Figure 3-1. The smooth and deliberate flow through all phases of the DCA acquisition planning process is designed to ensure that new acquisitions initiated during program definition are consistent with long-term plans, including architectures.

Mission Analysis

Mission analysis includes both long-term architecture and program definition and their implementation through transition strategies and plans. Architecture describes C^3 capabilities, characteristics, and generic systems

that, together, satisfy a set of mission-associated requirements and specify a set of future objectives (typically 10 to 20 years ahead). There are two kinds of C^3 architectures: mission and functional. Mission architectures state broad concepts and policies; establish references for functional architectures; respond to projected threats, C^3 functions to be performed, and desired performance characteristics; and identify capability objectives. Functional architectures describe the technical structure of large systems/programs, define methods or techniques that satisfy requisite capability objectives, provide feedback to mission architectures, and develop transition strategies. Currently, there are three mission architectures (strategic, tactical/theater, and Defense-wide) and five functional architectures [communications, command centers, automatic data processing (ADP), sensors, and intelligence] to be fully developed. In DCA, PSI has the primary responsibility for the development of long-term architecture and the transition strategy for its implementation. The transition strategy is generally prepared by the functional architect to guide program definition.

Program definition then describes C^3 system acquisitions to be initiated or improvements to be made to current C^3 programs based on system engineering assessments in response to specific requirements, including those that emerge from long-term architectures, mid-term program evolution, or near-term user needs. Program definition consists of scheduling, interfacing, and integrating a number of program elements from both DCA and the Services in an affordable manner. Within DCA, the Deputy Directors for the DCS Organization (DCSO), the CCEC, and the JDSSC (formerly the Command and Control Technical Center, the CCTC) in conjunction with the Services have primary responsibility for preparing program definition and the transition plan for its implementation. The transition plan is prepared by a system engineer or the

Director, DCSO, to structure the system acquisitions that implement the program.

System Acquisition

System acquisitions are directed, in accordance with DoDD 5000.1, by acquisition program managers who execute specific system acquisitions. Those program managers implement the overall transition plan and document program definition. Many of the acquisitions with which DCA is concerned are conducted by the Services. However, three major high-priority system acquisition programs are exemplary of those being conducted by DCA:

- The Defense Data Network (DDN), which is to provide the DoD with a survivable and secure packet switching service for critical ADP (query/response, interactive, and bulk) communications that is cost effective in lieu of AUTODIN II

- The Defense Switched Network (DSN), which is a telecommunications system that provides end-to-end common-user and dedicated telephone service for the DoD with later capability of incorporating data and other traffic (the DSN Plan has been approved by JCS and the OSD with direction to proceed with the supplemental plans and implementation)

- The Defense Satellite Communications Network (DSCS), which includes formulation of concepts, development of system/subsystem performance specifications, interface analysis, and testing and evaluation of space, ground, and control subsystems; and provides for a satellite communication (SATCOM) system simulation capability to support DSCS system engineering.

The transition plan prepared during program definition includes guidelines for tailoring acquisition strategy once the acquisition program manager has been assigned.

Effort to influence the tailoring of acquisition strategy for C^3 to an evolutionary approach is recognized as a management principle in DoDI 5000.2. This approach may have specific value in C^3 acquisitions to achieve enhancement of baseline capability and may bear on transition strategy regarding architectural evolution. It will, however, demand intensive management and coordination by DCA to maintain control of the system.

SUPPORTABILITY

The second major element of the DCA acquisition planning process is C^3 supportability. It is as important as cost and operational effectiveness in system acquisition, and according to DoDD 5000.39, it is to be considered early in mission analysis (including architecture) and throughout the life cycle of a system, consistent with acquisition policy described in DoDD 5000.1.

Supportability considerations, including readiness, generally appropriate to the preacquisition phases of the DCA acquisition planning process are shown in Table 3-1. Given the approximately 15-year period over which the planning framework is constructed, supportability considerations, including impact on affordability, must be incorporated into the DCA mission planning before the limitations on information precision are resolved.

The greatest opportunity to influence supportability occurs at the time that the long-term architecture is being converted to a transition strategy. Thus, a more extensive treatment of supportability, especially supportability objectives, appears warranted during the architectural phase so that transition strategies can be developed in a meaningful way. In this regard, supportability capability objectives for strategic C^3 systems have been prepared to demonstrate the approach to treating supportability during architecture (Ref. 25).

Supportability considerations during program definition focus on ILS. Supporting documentation for new system acquisitions, such as JMSNS, is embodied in the transition plan. This procedure sets the stage for system-level ILS planning once the acquisition has begun.

MANAGEMENT PROCESSES

In order to implement the DCA acquisition planning process, management information and decision support systems must be available to track the flow

TABLE 3-1. SUPPORTABILITY IN DCA ACQUISITION PLANNING

LONG-TERM ARCHITECTURE (10-15 Years)	TRANSITION STRATEGY (Architecture Emphasis) (5-10 Years)	PROGRAM DEFINITION (POM-5 Years)	TRANSITION PLAN (Program Emphasis) (POM YEAR)
Macrofeasibility and macro-economic tradeoffs	Supportability cost "drivers" and effectiveness "drivers" of alternative generic systems	Supportability goals derived from baseline assessments of current generic systems	Further ILS tradeoffs remaining - resource requirements are adequate for study and demonstration
Technology potential for enhancing readiness and support-ability and reducing costs	Platform/geographic support cost sensitivities	Development of support concepts and alternatives for new systems	Support technology risks remaining and plan for resolving them
Robotics - man/machine balances; RPVs - reusable vs. expendable platforms	Clear delineation of reliability/ maintainability/supportability/ system effectiveness requirements	Focus on ILS elements of alterna-tive systems concepts	Clear identification of support, readiness, and cost goals vis-a-vis existing systems
Emerging civilian infrastructures and pricing/integrity/support structures	Assessment of technology risk implications in meeting support-ability objectives	Extensive tradeoffs of support-ability vis-a-vis system design	Preliminary assessment of critical Operational Test and Evaluation (OT&E) needs and sensitivities
Clear scoping of useful system "life times" for evaluation of investment alternatives	Clear recognition that ILS is as important as other aspects of system design	Scoping of acquisition strategy considerations from the stand-point of logistic support	Service implementation of ILS management for effective program execution
	International/interservice issues identified	International/interservice issues resolved	

of resources from initial planning through operating and support. Such management processes must provide the DCA Director with regular visibility on DCA activities through a program review process that includes a review of program cost and acquisition management information. The cost framework includes LCC capability and supports life cycle management of C^3 programs. Such a framework has been developed for implementation (Ref. 23). Similarly an acquisition planning MIS must be acquired to implement the functional description of DCA acquisition planning documentation (Ref. 24).

Life Cycle Cost Management

In the design, evaluation, and management of C^3 systems, DCA needs LCC information to ensure that the most cost-effective C^3 systems are acquired and supported. To meet that broad objective, DCA needs to estimate and monitor the LCC of its proposed architectures, programs, and systems in support of its internal management decision-making processes.

The DCA needs cost estimates and analyses (1) to choose between alternative system design and support concepts; (2) to assess the affordability of proposed architectures, programs, and systems; and (3) to control costs of DCA-operated systems and internal activities. The cost information user community in DCA consists of mission and functional architects, system engineers, program managers, and DCA corporate managers/agencywide integrators. These user groups have distinctly different needs for cost information since they focus on different aspects of the DCA acquisition planning process. The general and specific capabilities needed to support each user group are illustrated in Table 3-2.

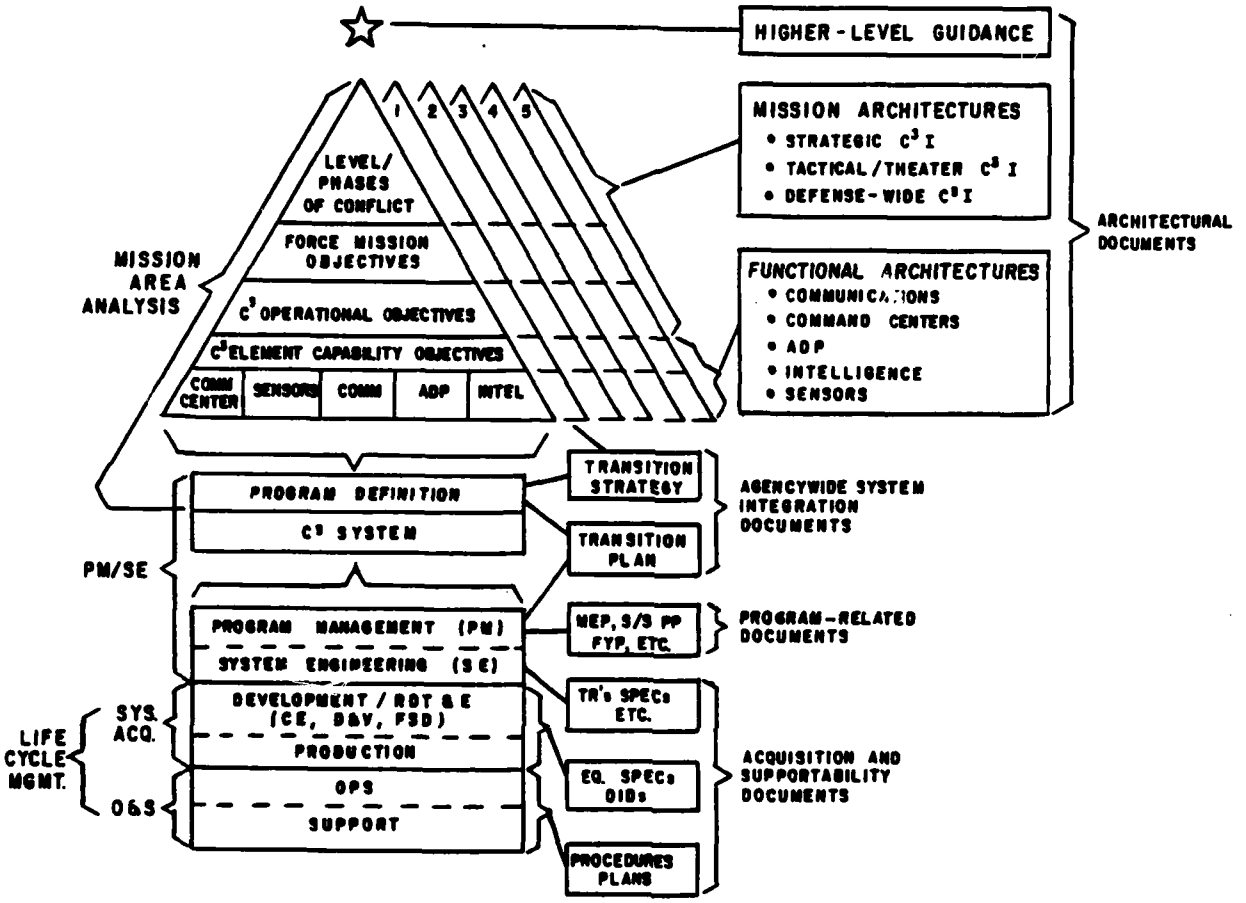
Acquisition Planning Management Information System

The evolving functional description of the DCA acquisition planning MIS consists of four basic documents as shown in Figure 3-2. These documents

TABLE 3-2. LCC CAPABILITIES OBJECTIVES BY USER GROUP

LCC CAPABILITIES OBJECTIVES	USER GROUP RELEVANCE			
	ARCHITECTS	SYSTEM ENGINEERS	PROGRAM MANAGERS	CORPORATE MANAGEMENT/ AGENCYWIDE INTEGRATORS
1. Advanced Technology System Cost Estimating	X	X	X	
2. Independent Cost Estimating				X
3. Quality Assurance Cost Reviews				X
4. Economic Analyses	X	X	X	X
Funding Requirements Estimating				
5. - Extended Planning (15 years)	X			
6. - Five-Year Planning/ Programming		X	X	
7. - One-Year Planning			X	
8. Acquisition Management Support Estimating, Cost/Schedule/Performance Trade-Offs, Level of Repair Analyses, Design to Cost, Reliability Improvement Warranties, Manpower Requirements, Training, Value Engineering, Logistics Support Analyses, etc.			X	
9. Program Cost Tracking			X	X
10. Special Studies and Analyses				X

FIGURE 3-2. FRAMEWORK FOR MISSION-ORIENTED ACQUISITION PLANNING DOCUMENTATION



include architectural documents primarily oriented to mission area analysis and planning, program-related documents oriented to program definition and system engineering, acquisition and supportability documents related to the system acquisition life cycle management process, and agencywide integration documentation ensuring integration of mission activities within DCA. Documents produced as part of the process should be automated and distributed throughout DCA.

FUNCTIONS AND RESPONSIBILITIES

The DCA acquisition planning process is carried out by four major groups of DCA personnel: architects, who are responsible for mission and functional

long-term planning; system engineers, who are concerned with timing and phasing current and proposed programs in order to provide program definition; program managers, who are responsible for operating and executing specific acquisition programs; and DCA agencywide integrators, who are concerned with bringing together resources for successful program implementation and with providing corporate management. The functions and responsibilities within DCA in support of the acquisition planning process are shown in Table 3-3. Eight functions are addressed, and the responsibilities of architects, system engineers, program managers, and agencywide integrators are indicated for each function.

TABLE 3-3. FUNCTIONS AND RESPONSIBILITIES WITHIN DCA TO ACCOMPLISH MISSION-ORIENTED ACQUISITION PLANNING

RESPONSIBILITY / FUNCTION	ARCHITECT (Mission and Functional Architects; e.g., J300, J700 or J800)	PROGRAM DEFINITION (System Engineers and Director, DCSO; MEECN, NCS)	SYSTEM ACQUISITION (Program Managers; e.g., DSN/DDN)	AGENCYWIDE INTEGRATION (Financial and Process Integrators; e.g., Integrated Planning System)
SYSTEM ACQUISITION	Provide architectural analyses as part of mission area analysis - Capability objectives - Functional alternatives Prepare Transition Strategy	Provide tradeoff analyses among system alternatives Prepare Transition Plan	Provide tradeoff analysis among subsystems Prepare tailored acquisition strategy and program plans within affordability constraints	Provide guidance and policy - RDT&E & Procurement Funds - DoDD 5000.1
SUPPORTABILITY	Develop supportability aspects of mission support including logistics implications of functional architectures	Coordinate and integrate ILS plans consistent with supportability architecture	Develop and implement ILS plans for specific system acquisitions	Provide guidance and policy - O&M Funds - DoDD 5000.39
FIVE-YEAR PLANNING (FYP)	Review FYP for consistency with architecture	Develop program master plan (e.g., MEECN master plan), program plans, 5-year programs within affordability constraints	Develop POM inputs for system acquisition programs	Develop summary plan (e.g., C^2 FYDP) to achieve resource aggregation within mission structure Assure integrated 5-year plan
ARCHITECTURE	Identify long-term capability objectives and affordability Prepare mission and functional architectures and transition strategy Incorporate feedback from programs and acquisition/ operations	Integrate and assess all appropriate transition strategies Provide feedback to architects (practicality of new systems concepts)	Integrate and assess all appropriate transition plans Provide feedback to archs. (cost, schedule, performance, supportability actuals vs. goals)	Determine resource balance and affordability of internal agency programs
REQUIREMENTS ANALYSIS	Develop architectural evolution/long-term requirements - New policy - Technological opportunity Integrate requirements at architectural level	Develop baseline enhancement/mid-term requirements Integrate architectural baseline requirements at program level	Develop CINC initiative/ near-term requirements Integrate requirements for each system acquisition and tradeoff practical constraints for requirements satisfaction	Integrate requirements and validate and prioritize Evolve hierarchy of requirements and disseminate; provide realistic reference baseline
THREAT ASSESSMENT	Use threat projections for vulnerability assessments	Identify program-level intelligence drivers	Assess system acquisition threat parameters in detail	Integrate threat impact hierarchically throughout process
LIFE CYCLE COST	Use broad-measure LCC estimation (e.g., CERs) tools	Use both CERs and more rigorous LCC tools	Use rigorous LCC tools tailored to system acquisition work breakdown structure	Assure LCC are consistent, validated, and integrated Assist in specifying models and data bases
MANAGEMENT INFORMATION	Provide architectural analyses Support DCA MIS architecture development	Provide program tradeoffs Support DCA MIS program definition	Provide program plans Conduct MIS acquisition	Assure MIS are consistent, validated, and integrated Assist in specifying MIS and organizational automation

4. IMPLEMENTING THE PROCESS

Implementation of the DCA acquisition planning process has begun with a prototype demonstration of the process for the Minimum Essential Emergency Communications Network (MEECN) (Ref. 28). Additionally, a master plan for full implementation of the DCA acquisition process has been outlined. This chapter discusses the effectiveness of the MEECN demonstration and the overall DCA acquisition planning master plan.

MEECN INTEGRATION - PROTOTYPE DEMONSTRATION EFFORT

Background

The DCA generates numerous planning documents that encompass the full range of long-, mid-, and near-term periods. These documents are intended to influence the DCA POM as well as Services/Agencies POMs for limited DoD C^3 resources. They are submitted to the same audiences as the respective POMs (e.g., OSD C^3/Intelligence (C^3I), JCS C^3 Systems (C^3S), Services, CINCs, etc.). Many are developed unilaterally and released or submitted with inadequate coordination or collaboration with DCA.

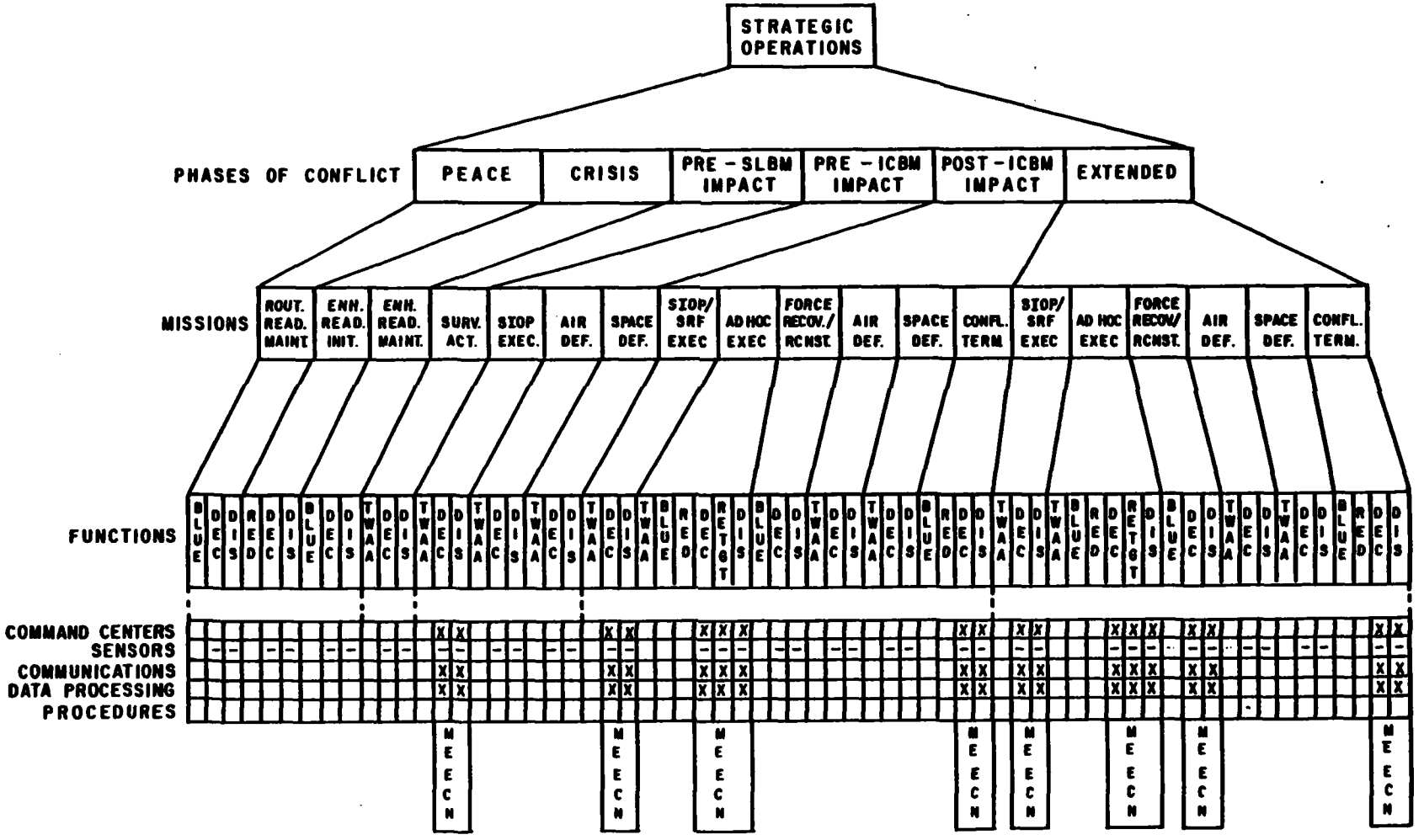
During the development of the Nuclear Weapons Employment and Acquisition Master Plan (NWEAMP), it became apparent that significant realignment of current C^3 programs and initiation of new ones would be in order. However, the complexity of that effort indicated that it was a major DCA-wide (as well as DoD-wide) integration issue. The DCA agreed to initiate an integration approach to (1) integrate NWEAMP results with current C^3 programs; and (2) ensure that new C^3 programs initiated and implemented by engineering directorates are in agreement with long-term architectures.

In order to demonstrate the integration approach, MEECN was chosen because it represents (1) an important strategic C^3 capability; (2) a mature, well-defined program definition effort that elicits strong interest in DCA, JCS, OSD, and the Services; and (3) a program with sufficient DCA-wide involvement to demonstrate all of the aspects of a DCA integration approach. In this regard, such an integration effort would involve architectural, programmatic, engineering, operational, and comptroller personnel working with the MEECN system engineer in a variety of ways in the preparation of the MEECN Master Plan (MMP) to be published in 1984.

The MMP is published annually (Refs. 28-31) and presents recommendations, which when approved by the JCS, are provided to the Services and Defense Agencies primarily for guidance in formulating their respective POM submissions. The MMP consists of two documents, the Master Plan and the Analysis and Supporting Data (ASD). The Master Plan, which cites current and long-term deficiencies expected during stressed conditions and recommends system improvements and program developments to overcome those deficiencies, is based on the results of the system engineering analysis and test and evaluation (T&E). The ASD, which reflects the results of system engineering analysis and T&E conducted by the DCA MEECN Engineering Division, is based on the most recent Defense Guidance (DG), technical developments, and Defense Intelligence Agency (DIA) threat estimates.

The basic integration approach is to (1) develop a long-term portion of the MMP and (2) orient the 1987 MMP to the structure of the strategic C^2 FYSP as shown in Figure 4-1. Efforts primarily involving PSI and CCEC personnel in DCA have been underway during the past year. While much progress has been made, much remains to be done.

FIGURE 4-1. MISSION PLANNING APPLIED TO THE MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK (MEECN)



NOTES FOR FIGURE 4-1

The C^3 mission and functions shown in the figure are those used in the Strategic C^2FYSP

MISSIONS

(Force Mission Objectives)

- Readiness (Maintain routine-readiness and initiate/maintain enhanced readiness)
- Survival Actions
- SIOP/SRF Execution (Execute Single Integrated Operational Plan/Strategic Reserve Forces)
- Dynamic Force Management (Ad Hoc Execution and Force Recovery/Reconstitution)
- Air Defense
- Space Defense

FUNCTIONS

(C^3 Operational Objectives)

- Red Status Monitoring & Strike Assessment (RED)
- Blue Status Monitoring & Damage Assessment (BLUE)
- Tactical Warning (TW)
- Attack Assessment (AA)
- Decision-Making (DEC)
- Dissemination of Execution Order[1] (DIS)
- Retargeting & Reprogramming[2] (RETGT)
- Reconstitution of Forces (RCNST)

[1]Includes Emergency Action Message (EAM)

[2]The 1984 MMP will not consider the retargeting/reprogramming function (RETGT) during the extended phase of conflict.

Accomplishments

The results of the MEECN integration effort are proving to be of major benefit to all engineering activities within DCA. To date, the prototype demonstration effort has resulted in tangible integration of engineering efforts with architecture. A cooperative approach to integrate DCA-wide efforts is evolving as an outgrowth of the MEECN demonstration. A transition strategy for MEECN program definition and an initial MEECN transition plan have been prepared (Refs. 32 and 33). The accomplishments underway are described below.

Strengthened Long-Term Input to the MMP. The long-term input to the MMP is being strengthened by coordinating the efforts of the MEECN Engineering Division in CCEC with architectural efforts, with PSI being responsible for providing long-term architectural guidance for the MMP. Some specific benefits have been realized even before completion of the MMP. For example, implementation of NWEAMP recommendations has begun through their correlation with recommendations contained in the MMP. Specifically, the basic capability objectives and system improvements included in NWEAMP are being explicitly considered by the MEECN system engineer. Consequently, a broader definition of the function of disseminating EAMs in all phases of conflict as reflected in the NWEAMP is being better integrated into the MEECN role as related to the Strategic Connectivity Program. Furthermore, a coordinated set of system improvements will be evaluated for MEECN to ensure that implementation of those selected improvements is in agreement with long-term architectures.

Reinforcing Acquisition Management Doctrine. Consistent with a strengthened long-term input, the MMP will be oriented to a life cycle management approach and will address LCC of recommended systems and improvements.

The NWEAMP affordability estimates are being tailored and extended for structuring MEECN consistent with agreed-to basic capability objectives. MEECN supportability is being recognized as a major program planning factor, and a MEECN concept of logistics support is being developed consistent with the results of the NWEAMP Logistics Working Group. The MEECN alternatives are being analyzed to provide (1) further validation of alternative evaluation models, (2) correlation of model results regarding candidate system improvements, and (3) identification of potential opportunities for cost savings. Also, MEECN supporting systems (i.e., DCS systems) that are survivable will be analyzed.

Improved Working Relationships. MEECN integration has resulted in the development of a constructive dialogue and positive working relationship between PSI and CCEC personnel. In particular, an action-officer team approach to addressing the MEECN long-term program ensures that MEECN initiatives are in agreement with long-term architectures and that implementation of NWEAMP recommendations is proceeding. Finally, the MEECN integration effort is providing demonstration and validation of the DCA acquisition planning process and feedback to further improve the process.

REMAINING ISSUES

Implementation of DCA acquisition planning must proceed on a program-by-program basis as well as at the Agency level with an overall acquisition master plan.

MEECN Issues

Remaining issues to be resolved in developing the MMP in 1984 include agreeing on timing and pacing factors included in MEECN-related transition strategy and incorporated throughout the MMP; completing the initial LCC chapter of the MMP; verifying evaluation models; conducting program

tradeoffs among long-term and mid-term (advanced MEECN) system alternatives; developing the initial logistics support concept; and developing the transition plan. In 1985, the issues that must be resolved include completion of the revised transition strategy with more comprehensive PSI-wide participation; completion of the development of the LCC data base and logistics support concept and incorporating them in the MEECN life cycle management process; development of a more thorough treatment of the contribution of MEECN supporting systems (i.e., DCS systems); follow-through on dissemination of the transition plan through the DoD/DCA acquisition MIS; and acquisition implementation via successive refinement of technical specifications for specific MEECN systems and MEECN supporting systems to be acquired.

Overall Acquisition Planning Issues

Four remaining issues relate to the overall DCA acquisition planning implementation. First, the specific responsibilities of DCA acquisition planning personnel must be further developed. The roles of DCA architects, system engineers, program managers, and corporate management/agencywide integrators in system acquisition, supportability, requirements analysis, threat assessment, five-year planning, LCC, and MIS functions must be more explicitly defined.

Second, the emphasis within the acquisition planning process must be clarified. For example, should long-term planning and architecture drive all mid-term planning and program definition or should program definition primarily respond to urgent requirements (e.g., CINC initiatives) that should take precedence and only be "cross-checked" with architecture? As a different example, should cost, supportability, and other acquisition management topics be fully and routinely integrated in a mature acquisition management process or should an acquisition management topic be considered only when there is a specific need for a management decision?

Third, as a long-term capability objective, the acquisition planning process itself should evolve into a mature acquisition management system. Specific acquisition planning elements should be developed and implemented through DCA instructions. These elements include the system acquisition and supportability functions in the near-term and other functional elements of the process soon after. The concept of agencywide acquisition planning should be broadly disseminated to all personnel within the agency.

Finally, implementation should proceed on a program-by-program basis. The MEECN integration demonstration should be completed and other demonstrations should be undertaken.

5. RECOMMENDATIONS

The recommendations presented here are key to further developing and implementing the DCA acquisition planning process. In fact, further development and implementation should be conducted in accordance with a fully developed master plan for evolving the DCA acquisition planning process as outlined in this report. That Master Plan should identify the long-term needs and how to meet them. When agreed upon, the Master Plan should be implemented by specific implementing instructions and agencywide programs. We recommend the development of the Master Plan as a major first step.

In the near-term, we have four major recommendations. First, system acquisition and supportability management should be implemented within DCA through specific instructions identifying functions, responsibilities, and relationships between and among DCA architects, system engineers, program managers, and corporate management/agencywide integrators. These instructions should reflect the importance of implementing the results of long-term planning in the definition of DCA programs, which can then be implemented through DCA and the Services.

Second, we recommend that the MEECN integration demonstration be completed and that a second integration demonstration be undertaken on a program more broadly applicable throughout DCA and to the modernization of the DCS. The Defense Switched Network (DSN) program is specifically recommended as one that presents an opportunity for coupling major approved architectural efforts such as the World-Wide Digital System Architecture with the definition of key DCS programs to achieve integration of Defense-wide C^3 programs to meet strategic and tactical theater C^3 needs and to tailor a DSN acquisition strategy with the participation of the Services.

Third, specific acquisition planning development programs should be undertaken to evolve the DCA acquisition planning process. Programs to improve the system acquisition and supportability functions should be undertaken to (1) strengthen mission analysis, particularly by integrating architectures and linking them to program definition; (2) strengthen the bridge from mission analysis to specific acquisitions involving DCA and the Services; and (3) address supportability during the preacquisition process in order to structure ILS planning for C^3 systems by DCA and the Services. Additionally, LCC and MIS programs should be undertaken, with specific emphasis placed on implementing the DCA LCC Management Master Plan (Ref. 34) as part of a mature DCA acquisition management framework. Programs in requirements analysis, threat assessment, and five-year planning should also be undertaken.

Finally, an agencywide integration staff should ensure that demonstration efforts are kept on track, that acquisition management doctrine is reinforced by applying it to on-going projects and especially to newly initiated tasks, and that the results of agencywide acquisition planning development programs are integrated into the DCA acquisition management framework.

REFERENCES

1. Deputy Secretary of Defense Memorandum for Secretaries of the Military Departments, et al., "Management of the DoD Planning, Programming and Budgeting System," March 27, 1981.

2. Deputy Secretary of Defense Memorandum for Secretaries of the Military Departments, et al., "Improving the Acquisition Process," April 30, 1981.

3. Department of Defense Directive Number 5000.1, "Major System Acquisitions," 29 March 1982.

4. Department of Defense Instruction 5000.2, "Major System Acquisition Procedures," March 8, 1983.

5. Department of Defense Directive Number 5000.39, "Acquisition and Management of Integrated Logistic Support for Systems and Equipment," 17 November 1983.

6. Report of the Defense Science Board on "Command and Control Systems Management," Under Secretary of Defense for Research and Engineering, July 1978.

7. "Command & Control (C^2) System Acquisition Study Final Briefing," Armed Forces Communications and Electronics Association, Burke, VA, 16 July 1982; Final Report, 1 September 1982.

8. Defense Acquisition Circular No. 76-43, March 22, 1983.

9. Memorandum from Joint Chiefs of Staff for Chiefs of Staff, et al., "Policy and Procedures for Management of Joint Command and Control Systems," Memorandum No. SM-7-82, 11 January 1982.

10. Memorandum by the Deputy Secretary of Defense, "The Planning Phase of the DoD PPB System," 12 June 1981.

11. "C^2 Five Year Summary Plan -- Annotated Overview," The MITRE Corporation, MITRE C^3/I Operations, October 1982.

12. "Strategic C^2 Five Year Summary Plan (U)," Annotated Summary, The MITRE Corporation, MITRE C^3 Division, October 1982, Secret; "Command and Control Five Year Summary Plan: Strategic Portion (U)," The MITRE Corporation, MITRE C^3 Division, June 1983, Secret.

13. "DCA Goals and Objectives," Defense Communications Agency, unpublished memorandum report, July 15, 1981.

14. "Director's Planning Guidance, FY 1986-90," Defense Communications Agency Corporate Planning Division (J610), October 1983.

15. Department of Defense Directive 5105.19, "Defense Communications Agency," August 10, 1978.

16. "1982 Final Report, Integration of C^3 Architectures," International Business Machines Corporation, Federal Systems Division, December 1982.

17. "ILS Management at DCA," Lucas J. Bragg and Fred L. Adler, Logistics Management Institute Report DC201, 4 November 1982.

18. "An Overview of DCA C^3 Programs: Preparation Process and Sample Document (U)," S. N. Goldstein, The MITRE Corporation, MITRE C^3 Division, 15 November 1982, Secret.

19. "Status of the Review and Evaluation of the DCA Process for Developing Requirements," George J. McPherson, Jr., The MITRE Corporation, MITRE C^3 Division, December 1982.

20. "DCA Threat Processes (U)," Steven D. Greiner, The MITRE Corporation, MITRE C^3 Division, December 1982, Secret.

21. "Phase II Final Report, Integration of C^3 Architectures," International Business Machines Corporation, Federal Systems Division, January 1984.

22. "System Acquisition and Supportability Management at the Defense Communication Agency," Fred L. Adler, C. Bruce Baird, and Joseph S. Domin, Logistics Management Institute Working Note DC301-1, May 1983.

23. "Life Cycle Cost Master Plan (Draft) for the Defense Communications Agency," Joseph S. Domin and Fred L. Adler, Logistics Management Institute Working Note DC301-3, January 1984.

24. "Mission-Oriented Acquisition Planning at the Defense Communications Agency," Fred L. Adler and Joseph S. Domin, Logistics Management Institute Working Note DC301-2, January 1984.

25. "Supportability Capability Objectives for Defense Communications Agency Command, Control, and Communications Systems," Kenneth H. Ward and Fred L. Adler, Logistics Management Institute Working Note DC301-4, January 1984.

26. "An Overview of DCA C^3 Programs (U)," S. N. Goldstein and G. J. McPherson, Jr., Draft Material for Section 3, The MITRE Corporation, MITRE C^3 Division, May 1983, Secret.

27. "Guidance for Producing Five Year Planning and Programming Documents Within DCA," Draft Working Paper, The MITRE Corporation, MITRE C^3 Division, November 1983.

28. "Descriptions of MEECN and MEECN Supporting Systems (U)," Defense Communications Agency, Command and Control Technical Center, TM 178-82, 15 April 1982, Secret.

29. "FY85-94 Minimum Essential Emergency Communications Network (MEECN) Master Plan," Defense Communications Agency, Command and Control Technical Center, TM 280-82, 1 September 1982.

30. "FY84-93 Minimum Essential Emergency Communications Network (MEECN) Master Plan, Defense Communications Agency, Command and Control Technical Center, TM 220-82, 15 May 1982.

31. "FY86-95 Minimum Essential Emergency Communications Network (MEECN) Master Plan (Draft)," Defense Communications Agency, Command and Control Technical Center, 13 May 1983.

32. "MEECN Transition Strategy (U)," P. Hoch, Draft Working Paper, International Business Machines Corporation, Federal Systems Division, January 1984, Secret.

33. "Transition Plan for MEECN (U)," Hans Ulander, Draft Working Paper, International Business Machines Corporation, Federal Systems Division, 31 January 1984, Secret.

34. "Life Cycle Cost Management Master Plan for the Defense Communications Agency," Joseph S. Domin and Fred L. Adler, Logistics Management Institute Report DC301-B, February 1984.

GLOSSARY OF ACRONYMS

AA	-	Attack Assessment
ADP	-	Automatic Data Processing
AFCEA	-	Armed Forces Communications and Electronics Association
ASD	-	Analyses and Supporting Data
C^2	-	Command and Control
C^3	-	Command, Control, and Communications
C^3/I	-	C^3/Intelligence
C^3S	-	C^3 Systems
CCEC	-	Command and Control Engineering Center
CCTC	-	Command and Control Technical Center (now JDSSC)
C^2FYSP	-	Command and Control Five Year Summary Plan
DCA	-	Defense Communications Agency
DCS	-	Defense Communications System
DCSO	-	Defense Communications System Organization
DDN	-	Defense Data Network
DEC	-	Decision Making
DG	-	Defense Guidance
DIA	-	Defense Intelligence Agency
DIS	-	Dissemination of Execution Order
DoD	-	Department of Defense
DoDD	-	Department of Defense Directive
DoDI	-	Department of Defense Instruction
DRB	-	Defense Resources Board
DSCS	-	Defense Satellite Communications Network
DSN	-	Defense Switched Network
EAM	-	Emergency Action Message
FYDP	-	Five Year Defense Program
ICBM	-	Intercontinental Ballestic Missile
ILS	-	Integrated Logistics System
JCS	-	Joint Chiefs of Staff
JDSSC	-	Joint Data Systems Support Center
JMSNS	-	Justification for Major System New Starts

JSPD	-	Joint Strategic Planning Document
JSPS	-	Joint Strategic Planning System
LCC	-	Life Cycle Cost
MEECN	-	Minimal Essential Emergency Communications Network
MIS	-	Management Information System
MMP	-	MEECN Master Plan
NWEAMP	-	Nuclear Weapons Employment and Acquisition Master Plan
OFPP	-	Office of Federal Procurement Policy
OMB	-	Office of Management and Budget
OSD	-	Office of the Secretary of Defense
OT&E	-	Operational Test and Evaluation
POM	-	Program Objectives Memorandum
PPBS	-	Planning, Programming, and Budgeting System
PSI	-	Planning and Systems Integration
RCNST	-	Reconstitution of Forces
RETGT	-	Retargeting and Reprogramming
SATCOM	-	Satellite Communications
SSBN	-	Ballistic Missile Submarine
T&E	-	Test and Evaluation
TW	-	Tactical Warning
USDR&E	-	Under Secretary of Defense for Research and Engineering

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System Acquisition	Life Cycle Cost
Supportability	Cost Estimating and Analysis
Integrated Logistics Support (ILS)	Management Information Systems

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The Defense Communications Agency (DCA) has evolved from functioning simply as primary manager and operator of the Defense Communications System to providing command, control, and communications (C^3) mission analysis, long-term planning, and systems engineering and integration suppc To accommodate DCA's DCA's enhanced role, DCA tasked LMI to (1) define the acquisition planning process, including supportability, while (2) evaluating the effectiveness of the process as applied within DCA on a demonstration basis.

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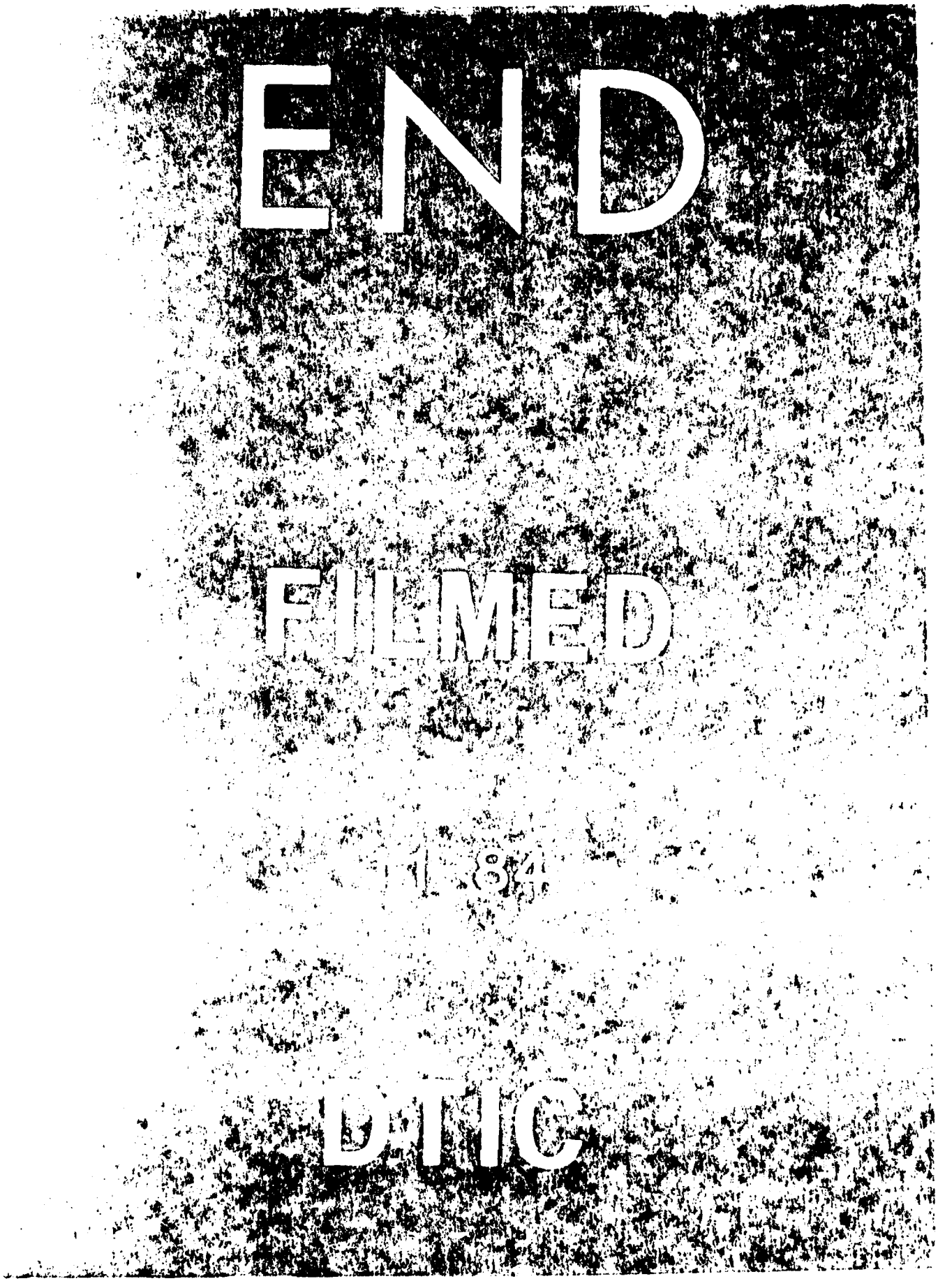
Acquisition planning at DCA should be mission-oriented — that is, it should be a process for acquiring C^3 systems that are responsive to all mission mission needs. Through analysis of Department of Defense (DoD) and DCA mission areas, long-term plans should be developed and then implemented in the DoD Five Year Defense Program and budget by DCA, the Military Services and other Defense Agencies. In addition, system acquisition and supportability principles should be applied throughout the process. The process specifically provides for mission analysis that covers all the C^3 missions and functions for which DCA is responsible; linking DCA long-term planning to DCA, Service, and Defense Agency C^3 programs and system acquisitions; early and thorough considerations of supportability issues; program reviews, a cost data base and tracking system, and an acquisition and supportability management information system oriented toward life cycle management; and timely provision of analysis and supporting documentation.

DCA is demonstrating this acquisition planning process in the development of the Minimum Essential Emergency Communications Network (MEECN) Master Plan.

We recommend that DCA implement the acquisition planning process by means of specific instructions and programs for improving system acquisition and supportability in such areas as life cycle costing, management information systems, threat assessment, and requirements analysis. These programs can be conducted through a second demonstration and through applications to ongoing DCA projects. The costs of such programs are modest in relation to total C^3 costs and to the savings that should result from improved management decisions.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